

Protection and Connection

Transfer, change-over and bypass switches Securing your power to perform

Videos

Promotional video:





With ABB transfer switches, you are never left in the dark

Installation of accessories - How to?













Motorized transfer switches OTM 40...125 A

Motorized transfer switches OTM 160...800 A

Motorized transfer switches OTM 1000...3200 A

Additional information

Manual change-over switches Ordering information for OT16...OT125_C







OT100...125F3C

Open transition

Simple I-O-II –operation where the handle is padlockable in O-position and door interlock available in the I- and II-positions (and when padlocked). Din-rail or base mounting.



Manual change-over switches, open transition, OT16...OT125_C Handle and shaft not included. See recommended accessories.

Rated current and power		ted current and power				
No	AC-21A/AC	1A/AC-22A AC-23A				Weight/
of poles	≤ 415V I[A]	400V S[kVA]	400415V I[A]/P[kW]	Туре	Order number	unit [kg]
3	16	11	16/7.5	OT16F3C	1SCA104816R1001	0.25
ļ	16	11	16/7.5	OT16F4C	1SCA104831R1001	0.31
}	25	17	20/9	OT25F3C	1SCA104863R1001	0.25
	25	17	20/9	OT25F4C	1SCA104877R1001	0.31
	40	27	23/11	OT40F3C	1SCA104913R1001	0.25
	40	27	23/11	OT40F4C	1SCA104934R1001	0.31
	63	43	45/22	0T63F3C	1SCA105338R1001	0.64
	63	43	45/22	0T63F4C	1SCA105369R1001	0.70
	80	55	75/37	OT80F3C	1SCA105402R1001	0.64
1	80	55	75/37	OT80F4C	1SCA105418R1001	0.70
	100	70	80/37	0T100F3C	1SCA105008R1001	0.90
	100	70	80/37	0T100F4C	1SCA105019R1001	1.18
	125	86	90/45	0T125F3C	1SCA105037R1001	0.90
	125	86	90/45	0T125F4C	1SCA105054R1001	1.18

Cable cross section of the change-over switched	Cable	e cross	section	of	the	change-over	switche
---	-------	---------	---------	----	-----	-------------	---------

Suitable for switches	Cable cross section [mm²]
OT1640F_C	0.75 10
0T6380F_C	1.5 35
OT100125F_C	10 70

Re	ecommended	accessories:	Handles	and	shaft

Suitable for switches	Operating type	Handle type	Order number	Shaft type	Order number
OT1640F_C	Direct operation	OHBS3	1SCA108320R1001	-	-
OT63125F_C	Direct operation	OHBS9	1SCA108665R1001	-	-
OT16125F_C	Selector handle (external)	OHBS2AJE011	1SCA105220R1001	0XS6X120	1SCA101654R1001
0T16125F_C	Pistol handle (external)	OHB45J6E311	1SCA022817R2130	0XP6X170	1SCA108224R1001





1 Roll over the picture to zoom in.



2 Click on the product order code to obtain detailed information and agreements.





Transfer, change-over and bypass switches | 1SCC303003C0201 | 19

Transfer, change-over and bypass switches Securing your power to perform

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A secure power supply is essential to any application relying on electricity. We offer a full range of smart, safe and reliable change-over switches for your critical applications.



Comprehensive offering

ABB offers a wide variety of switches to cover all your needs. A complete range from 16 to 3200 Amperes in manual, remote and automatic switches is further enhanced by vast amounts of additional accessories ranging from advanced controllers to auxiliary contacts.



Reliable performance

ABB change-over, bypass and transfer switches are designed, built and tested for the best possible performance. Switches are designed to be virtually maintenance free across their entire extended lifespan and offer reliable performance in any and all possible circumstances. Durability has been ensured by testing switches against the IEC 60947-6-1 standard.



Smart and compact design

All switches by have been designed for easy and cost-efficient installation, maintenance and use. Their modular design and smaller dimensions enable installation into smaller enclosures saving precious space and significantly reducing material, handling and installation costs. The simple design also makes use easy even without previous experience or training.



Safe operations

ABB change-over, bypass and transfer switches come equipped with a comprehensive range of inbuilt safety features such as mechanical interlock. All motorized and automatic switches can also be operated manually in emergency situations, but can also be padlocked when the handle is removed to prevent unwanted manual or remote operations or enable safe maintenance work.



ABB product support

All our switches have been built to the highest standards and are always supported by our dedicated and skilled worldwide service network. If you ever find yourself in need of immediate service or assistance, don't hesitate to get in touch with us. With a product by ABB you are never alone.

A smooth and safe transition from one power source to another is of the utmost importance. In case of power source failure, whether planned or unplanned, a rapid switch to back-up power is often crucial.



To meet any and all of your change-over, bypass and transfer needs, we offer a wide variety of switches ranging from 16 to 3200 Amperes. ABB's range includes switches that allow you to transfer from one source to another manually, remotely or automatically.



ABB Change-over Switches for applications in all walks of life

Back up power for industrial applications

- Power plants
- Data centers
- Production plants
- Farming facilities



Critical lighting and air conditioning for mass transportation hubs

- Airport runways
- Underground railways
- Car parks

Ensured continuity of public services

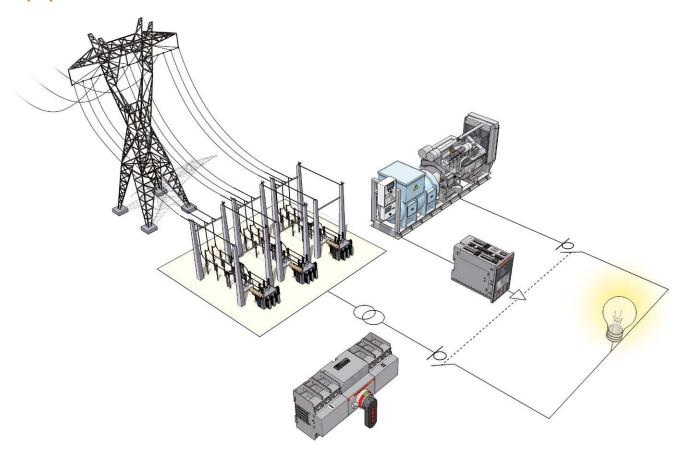
- Water pumping stations
- Sewage treatment plants
- Telecommunications



Buildings (back up power, lighting, sprinklers, elevators etc.)

- Hospitals
- Shops and malls
- Hotels and restaurants
- Sport stadiums and arenas
- Private residences

Ensuring a constant power supply is critical in typical change-over switch applications

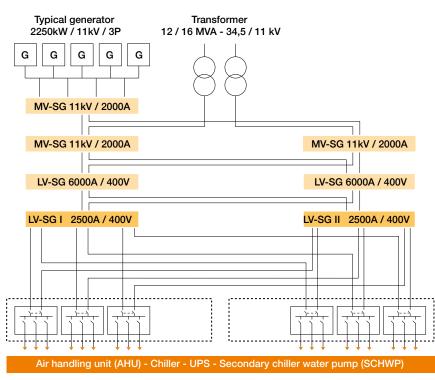


Use in critical applications

The most typical application for changeover switches is utility and stand-by generating set applications where change-over switches commutate between two sources. Often the back-up power source is a stand-by generator set. These generator sets (Gen-sets) are a fundamental part of many Critical Power applications where a constant and reliable source of electrical energy is required.

Ensuring back-up power

Change-over switches are used to switch from the grid to the back-up in case of a failure in the primary energy source. They are typically dedicated switching devices, consisting of two mechanically interlocked switch-disconnectors and a motor operator for electrical operation. The switching device may also have an integrated automatic control unit, enabling fully automatic operations.



Applications for change-over switches are not always between utility and generating set. They are also used to provide secondary supply for e.g. air handling units, chillers and water pumps.



Manual change-over switches Open, fast and closed transition from 16 to 3200 Amperes

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ABB's manual change-over switches provide high performance in a compact package, even in the most heavy duty applications.

Manual change-over switches The growing importance of a secure power supply

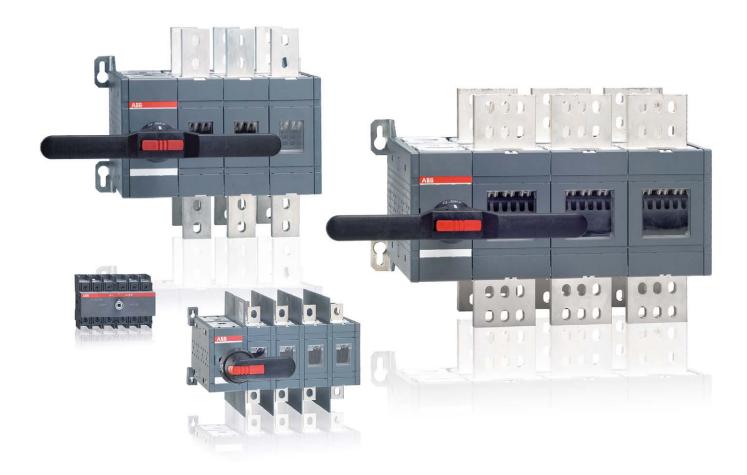


ABB offers a wide variety of manual change-over switches, from 16 to 3200 Amperes in range. Manual change-over switches are available with three different transition types; Open, fast or closed.



Heavy duty performance

Change-over switches by ABB are extremely well suited for heavy duty applications. They are equipped with CTI (comparative tracking index) of over 600 V, making them great for use in tropical environments.



Modular and flexible

The modular and flexible construction, which can even include an adjustable periscopic shaft, allows for different arrangements of the poles and handle, providing you with the opportunity to create unique space saving solutions for your customers.



Real one pole construction

Our switches come with a real one pole construction in even higher ratings (one line per power line), creating savings in terms of energy consumption by reducing power loss. A single terminal per pole across the entire range also eliminates the need to use additional fixing sets to do connections.



UL/CSA certified performance

To complement our wide range of manual change-over switches, we also offer open transition manual change-over switches designed according to UL/CSA certification standards in a power range from 30 to 800 Amperes.

Manual change-over switches From 16 to 3200 Amperes







Manual operation, change-ov	er switches 16-125A								
Types	OT16 _C	0T16 _C 0T25 _C			OT63 _C		OT100 _C		
	OT25 _0					0T125 _	0T125 _C		
	0T40 _C		•••••		•		••••••	***************************************	
I _{th} /A	25	32	40	63	80	115	125		
I _e /AC-22A, < 415V	16	25	40	63	80	100	125		
I _e /AC-23A, < 415V	16	20	23	45	75	80	90		









Manual operation, change-over	switches 160-800A											
Types		OT160 _C		0T160	OT160_W _C		0T315	0T315 _C		OT630 _C		
			OT200_W_C OT250_W_C		0T400	_C	C	OT800 _C		•		
										•		
I _{th} /A	160	200	250	160	200	250	315	400	6	30	800	
I _e /AC-22A, < 415V	160	200	250	160	200	250	315	400	6	30	800	
I _e /AC-23A, < 415V	160	200	250	160	200	250	315	400	6	30	800	
I _e /AC-31B, < 415V	160	200	250	160	200	250	315	400	6	30	800	•••••









Manual operation, change-over	switches 1000-3200A						
Types	0T1000 _C 0T1250 _C		OT1600 _C	OT2000 _0)	OT3200 _C	
				0T2500 _0	;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;		
I _{th} /A	1000	1250	1600	2000	2500	3200	
I _e /AC-22A, < 415V	1000	1250	1600		-		
I _e /AC-23A, < 415V	1000	1250	1250				
I _e /AC-21B, < 415V		•		2000	2500	3200	
I _e /AC-31B, < 415V	1000	1250	1600	2000	2000		















UL/CSA	manual	change	e-over	switches.	30-800 A
UL/ UUA	manuai	unany	C-OVCI	SWILLIIG	1 000 A

Types	OT30_C	OT60_C	OT100_C	0T200_C	OT400_C	OT600_C	OT800_C
Current, general use	30	60	100	200	400	600	800
UL98, 600 V	30	60	100	200	400	600	800
I _e /AC-22A, < 415V	40	63	100	250	400	800	800

Manual change-over switches Type codes and pole configuration table

Type codes

Understanding the type code keys below will help you quickly identify the correct product for your needs. The simple naming system allows you to see the products type, Ampere rating, standard classification and number of poles, all in one glance.

Explanation of the types OT16..125_C

Option:	OT40	F	3	С
Position:	1	2	3	4
1	Brand and Swit	tch size / Ampere	e rating	
2	IEC			
3	Number of the			
	3: 3-poles			
	4: 4-poles			
4	Change over sv	witch		
	C: I-0-II -opera			-

Explanation of the types OT160...3200_C

Option:	OT250	Ε	03	C	-	Р
Position:	1	2	3	4	5	6
1	Brand and Switc	h size /	Ampere ra	ting		
2	Standard					
	E: IEC					
	U: UL					
3	Number of the po	oles				
	03: 12					
	04: 13					
	22: 33					
4	Change-over sw	itch				
5	Operation type					
	Standard chang					
	L: Closed transit				II	
	F: Fast transition	change	over swith	nc I-0-II		
6	Included handle					
	_(blank): Handle		not include	ed		
	P: Pistol handle -					
	K: Direct mounte	d hand	е			

Pole configuration table

The various placing options of the operating mechanism in relation to the 3 or 4 poles is illustrated below. The operating mechanism may be placed at the end of the switch or between poles.

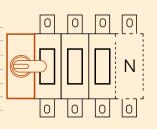
For example:

03: (Without N) 3-poles, operating mechanism at the left end of the switch* 04: (Including N) 4-poles, operating mechanism at the left end of the switch* 12: (Without N) 3-poles, operating mechanism between the poles** 22: (Including N) 4-poles, operating mechanism between the poles**

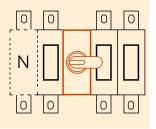
30: 3-poles, operating mechanism at the right end of the switch

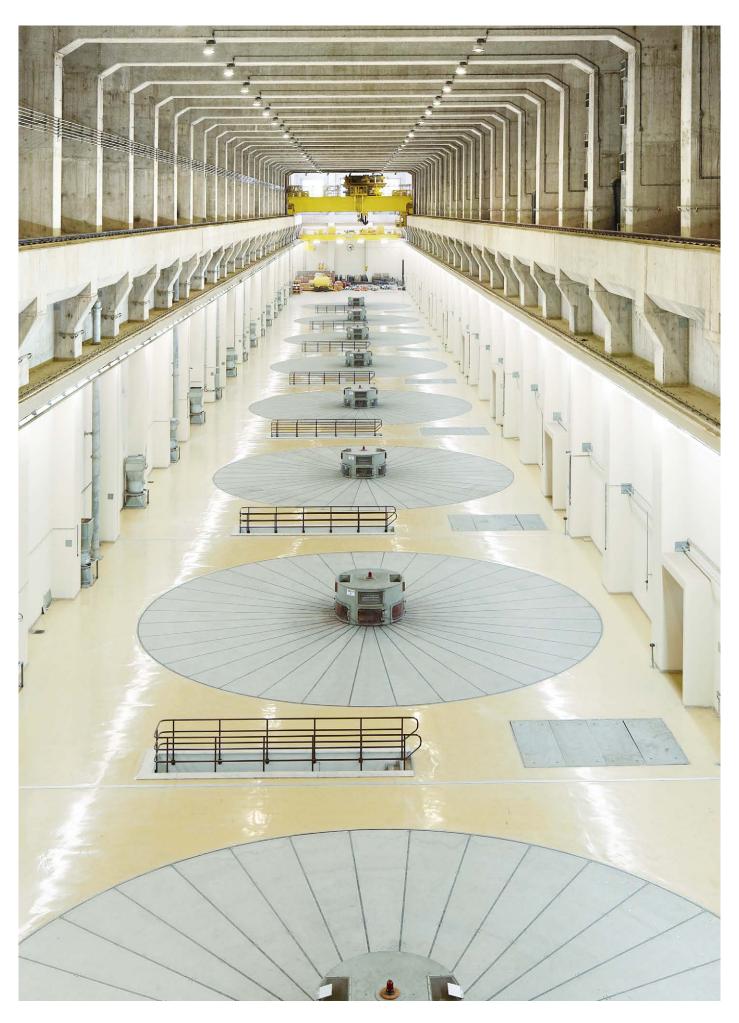
40: 4-poles, operating mechanism at the right end of the switch

*Configuration 03 & 04:



**Configuration 12 & 22:





Manual change-over switches Technical data for OT40...125_C

Manual change-over switches

				Switch	,	•	•	:	:	:
Data according to IEC 60947-3				OT16_	OT25_	OT40_	OT63_	OT80_	OT100_	OT125_
Rated insulation voltage and rated operational voltage AC20/DC20		Pollution degree 3	V	750	750	750	750	750	750	750
Dielectric strength		50 Hz 1min.	kV	6	6	6	6	6	6	6
Rated impulse withstand voltage			kV	8	8	8	8	8	8	8
Rated thermal current and rated	/ ambient 40°C	In open air	Α	25	32	40	63	80	115	125
pperational current AC20/DC20	/ ambient 40°C	In enclosure	Α	25	32	40	63	80	115	125
	/ ambient 60°C	In enclosure	Α	20	25	32	50	63	80	100
.with minimum conductor cross section		Cu	mm ²	4	6	10	16	25	35	50
Rated operational current, AC-21A		up to 500 V	Α	16	25	40	63	80	100	125
, ,		690 V	A	16	25	40	63	80	100	125
Rated operational current, AC-22A		up to 500 V	Α	16	25	40	63	80	100	125
		690 V	Α	16	25	40	63	80	100	125
Rated operational current, AC-23A		up to 415 V	Α	16	20	23	45	75	80	90
nation operational outrons, No 2011		440 V	Α	16	20	23	45	65	65	78
		500 V	Α	16	20	23	45	58	60	70
		690 V	Α	10	11	12	20	20	40	50
Rated operational current / poles in series, DC-21A		up to 48 V ¹⁾	A	16/1	25/1	32/1	63/1	80/1	100/1	125/1
natod oporational ourroint / poles ill series, DO-21A		110 V	A	16/2	25/2	32/1	63/2	80/2	100/1	125/1
		220 V	A	16/3	25/2	32/2	63/4	63/4	100/2	100/4
		440 V	A	16/4	16/4	16/4	16/4	16/4	100/4	100/4
		÷	÷			÷		÷		
Dated apprehing a current / pales in assign DC 200		500 V	Α	16/4	16/4	16/4	16/4	16/4	100/1	105/1
Rated operational current / poles in series, DC-22A		up to 48 V ¹⁾	Α	16/1	25/1	32/1	63/1	80/1	100/1	125/1
		110 V	A	16/2	25/2	32/2	63/2	80/2	100/2	125/2
		220 V	Α	16/3	25/3	32/4	45/4	45/4	63/4	80/4
		440 V	A	10/4	10/4	10/4	10/4	10/4		
Rated operational current / poles in series, DC-23A		up to 48 V ¹⁾	A	16/1	25/1	32/1	63/1	80/1	100/1	125/1
		110 V	ļΑ	16/2	25/2	32/2	63/2	80/2	100/2	125/2
		220 V	A	16/4	25/4	32/4	45/4	45/4	63/4	63/4
		440 V	Α	10/4	10/4	10/4	10/4	10/4	<u>.</u>	<u> </u>
Rated operational power, AC-23A ²⁾		230 V	kW	3	4	5,5	11	22	22	22
The kW-ratings are accurate for 3-phase		400 V	kW	7.5	9	11	22	37	37	45
1500 R.P.M. standard asychronous motors		415 V	kW	7.5	9	11	22	37	37	45
		500 V	kW	7.5	9	11	22	37	37	45
		690 V	kW	7.5	9	11	15	18.5	37	45
Rated breaking capacity in category AC-23		up to 415 V	Α	128	160	184	360	640	640	720
		500 V	Α	128	160	184	360	464	480	560
		690 V	Α	80	88	96	160	160	320	400
Rated conditional short-circuit current I (r.m.s.) and	I _a (r.m.s.) 50 kA, 415 V	î (peak)	kA	6.5	6.5	6.5	13	13	16.5	16.5
corresponding max. allowed cut-off current î _c (peak)	Max. OFA_ fuse size	gG/aM	A/A	40/32	40/32	40/32	100/80	100/80	125/125	125/125
value. The cut-off current î refers to values listed by	I _s (r.m.s.) 100 kA, 500 V	î (peak)	kA				17	17		
fuse manufacturers (single phase test acc. to IEC60269).	Max. OFA_ fuse size	gG/aM	Α				100/80	100/80		
Rated short-time withstand current	I(r.m.s.)	690 V 1s	kA	0.5	0.5	0.5	1	1.5	2.5	2.5
Rated short-time making capacity ³⁾	I _{cm} (peak)	690 V	kA	0.7	0.7	0.7	1.4	2.1	3.6	3.6
Power loss / pole	With rated current	030 V	W	0.3	0.6	1.6	2.8	4.5	4.0	6.3
Mechanical endurance	Number of oper. cycles ⁴⁾	<u> </u>	Cycles	10 000	10 000	10 000	10 000	10 000	10 000	10 000
Cable size	Cu-wire size suitable	<u>.</u>	mm ²	0.75-10	0.75-10	0.75-10	1.5-35	1.5-35	10-70	10-70
OUDIO SIZE	for terminal clamps	-	÷		÷	18-8	÷	÷	÷	8-00
Torminal tightaning torque		<u>.</u>	AWG	18-8	18-8	4	14-4	14-4	8-00	•
Terminal tightening torque	Counter torque required Typical for 3-pole switches		Nm	0.8	0.8	0.8	2	2	6 2	6 2
Operating torque		<u> </u>	Nm		1	1	1.2	1.2		
Weight without accessories	3-pole switch	:	kg	0.25	0.25	0.25	0.64	0.64	0.90	0.90
Data according to III FOC (1.1.1.1)	4-pole switch		kg	0.31	0.31	0.31	0.70	0.70	1.18	1.18
Data according to UL508 (Listed)	:	:	: .	10	: 05	. 10		: 00	:	:
Current			Α	16	25	40	60	80		
Horsepower, 3-phase		200 V	HP	3	7.5	10	15	20		
		208 V	HP	3	7.5	10	15	20	į	į
		240 V	HP	5	7.5	10	15	20		į
		480 V	HP	10	15	20	30	40		
		600 V	HP	10	20	25	30	40	:	:

Below 48 V, two poles in parallel up to OT80 are recommended particularly in polluted atmosphere
 These values are given for guidance and may vary according to the motor manufacturer
 Short circuit duration >50ms, without fuse protection
 Operating cycle: O - I - O - II - O

Manual change-over switches Technical data for OT160...800_C

Manual change-over switches

				Switch s	ize					
Data according to IEC 60947-3				OT_160_	OT_200_	OT_250_	OT_315_	OT_400_	OT_630_	OT_800_
Rated insulation voltage and rated operational voltage AC20/DC20		Pollution degree 3	V	1 000	1 000	1 000	1 000	1 000	1 000	1 000
Dielectric strength		50 Hz 1min.	kV	10	10	10	10	10	10	10
Rated impulse withstand voltage			kV	12	12	12	12	12	12	12
Rated thermal current and	/ ambient 40°C	In open air	Α	160	200	250	315	400	630	800
rated operational current AC20/DC20	/ ambient 40°C	In enclosure	A	160	200	250	315	400	630	800
with minimum conductor cross section		Cu	mm ²	70	95	120	185	240	2x185	2x240
Rated operational current, AC-21A		up to 500 V	Α	160	200	250	315	400	630	800
		690 V	Α	160	200	250	315	400	630	800
Rated operational current, AC-22A		up to 500 V	Α	160	200	250	315	400	630	800
, ,		690 V	Α	160	200	250	315	400	630	800
Rated operational current, AC-23A		up to 415 V	Α	160	200	250	315	400	630	800
		440 V	Α	160	200	250	315	400	630	800
		500 V	Α	160	200	250	315	400	630	800
		690 V	Α	160	200	250	315	400	630	800
Rated operational current /		≤ 110 V	. /\ . A	160/2	200/2	250/2	315/1 ¹⁾	400/11)	630/1	800/1
poles in series, DC-21A ⁶⁾		220 V	Α	160/2	200/2	250/2	315/2 ¹⁾	400/21)	630/1	800/1
		440 V	A	160/2	200/2	230/3	315/3	360/3	630/2	720/2
		660 V	Α	160/4	200/3	200/4	315/4	315/4	630/41)	630/41)
Rated operational power, AC-23A ²⁾		230 V	kW	45	60	75	100	132	200	250
The kW-ratings are accurate		400 V	kW	90	110	140	160	220	355	450
for 3-phase 1500 R.P.M. standard		400 V 415 V	kW	90	110	145	180	230	355	450
asychronous motors		500 V	kW	110	132	170	220	280	400	560
		÷	÷		÷	÷	÷	÷	÷	÷
Datad broading appoint		690 V	kW	160	200	250	315	400	630	800
Rated breaking capacity in category AC-23		up to 415 V	Α	1 280	1 600	2 000	2 520	3 200	5 040	6 400
		500 V	A	1 280	1 600	2 000	2 520	3 200	5 040	6 400
		690 V	Α	1 280	1 600	2 000	2 520	3 200	5 040	6 400
Rated conditional short-circuit current	I _n (r.m.s.) 80 kA, 415 V	î¸ (peak)	kA	40.5	40.5	40.5	59	59	83.5	83.5
I (r.m.s.) and cut-off current î (peak)	Max. OFA_ fuse size	gG/aM	A/A	355/315	355/315	355/315	500/500	500/500	800/1 000	800/1 000
value. The cut-off current î refers to	I _n (r.m.s.) 100 kA, 500 V	î (peak)	kA	40.5	40.5	40.5	61.5	61.5	90	90
values listed by fuse manufacturers	Max. OFA_ fuse size	gG/aM	A	315/315	315/315	315/315	500/450	500/450	800/800	800/800
(single phase test acc. to IEC60269).	I _n (r.m.s.) 80 kA, 690 V		kA	40.5	40.5	40.5	59	59	83.5	83.5
	Max. OFA_ fuse size	î _c (peak) gG/aM	A	355/315	355/315	355/315	500/500	500/500	800/1 000	800/1 000
Dated short time withstand surrent	· 		·	15					38	38
Rated short-time withstand current	I _{cw} (r.m.s.)	;	kA		15	15	31	31	;	:
		690 V 0.25s	÷	15	15	15	24	24	36	36
		690 V 1s	kA	8	8	8	15	15	20	20
Rated short-time making capacity ³⁾	I _{cm} (peak) ⁴⁾	690 V	kA	30	30	30	65	65	80	80
Power loss / pole	With rated current		W	2.4	4	6.5	6.5	10	25	40
Mechanical endurance	Number of oper. cycles ⁵⁾		Cycles	8 000	8 000	8 000	8 000	8 000	5 000	5 000
Terminal bolt size	Metric thread diameter x length		mm	M8x25	M8x25	M8x25	M10x30	M10x30	M12x40	M12x40
Terminal tightening torque	Counter torque required		Nm	15-22	15-22	15-22	30-44	30-44	50-75	50-75
Operating torque	3-pole change-over	···· <u>·</u>	Nm	7	7	7	16	16	27	27
	switches				<u>.</u>					<u>:</u>
Weight without accessories	Manual change-over	3-poles	kg	2.5	2.5	2.5	4.7	4.7	12.8	12.8
	switches	4-poles	kg	3.2	3.2	3.2	5.8	5.8	15.6	15.6
Data according to IEC 60947-6-1	7	:	:	DO.	. DO	DO	: DO	. DO	DO	. DO
Class of equipment				PC	PC	PC	PC	PC	PC	PC
Rated short-time withstand current	I _{cw} (r.m.s.)	690 V 0.1s	kA	15	15	15	25	25	38	38
Rated operational current, AC-31B		up to 415 V	Α	160	200	250	315	400	630	800
Rated operational current, AC-33B		up to 415 V	: A	160	200	250	315	400	630	800

¹⁾ Utilization category B

These values are given for guidance and may vary acc. to the motor manufacturer

³⁾ Short circuit duration > 50ms, without fuse protection

<sup>Nort circuit duration > 50fms, without fuse protection

Max. distance from switch frame to nearest busbar / cable support 150 mm

Operating cycle: O - I - O - II - O

Further ratings on request

1000 V ratings on request</sup>

Manual change-over switches Technical data for OT1000...3200_C

Manual change-over switches

				Switch size	, OT_				
Data according to IEC 60947-3				OT_1000_	OT_1250_	OT_1600_	OT_2000_	OT_2500_	OT_3200
Rated insulation voltage and rated operational voltage AC20/DC20		Pollution degree 3	V	1 000	1 000	1 000	1 000	1 000	1 000
Dielectric strength		50 Hz 1min.	kV	10	10	10	10	10	10
Rated impulse withstand voltage		Ī	kV	12	12	12	12	12	12
Rated thermal current and	/ ambient 40°C	In open air	Α	1 000	1 250	1 600	2 000	2 500	3 200
rated operational current AC20/DC20	/ ambient 40°C	In enclosure	Α						
.with minimum conductor cross section		Cu	mm ²	2x300	2x400	2x500	3x500	4x500	4x1000
Rated operational current, AC-21A		up to 500 V	Α	1 000	1 250	1 600	2 0005)	2 500 ⁵⁾	3 2005)
		690 V	Α	1 000	1 250	1 600	Ī		
Rated operational current, AC-22A		up to 500 V	Α	1 000	1 250	1 600			
		690 V	Α	1 000	1 250	1 600			
Rated operational current, AC-23A		up to 415 V	Α	1 000	1 250	1 250	<u>.</u>		
		440 V	Α	1 000	1 250	1 250			
		500 V	Α	1 000	1 250	1 250		İ	
		690 V	Α	1 000	1 250	1 250	<u> </u>		
Rated operational power, AC-23A1)	•	230 V	kW	315	400	400	.	··•	
The kW-ratings are accurate		400 V	kW	560	710	710	•	•	i
or 3-phase 1500 R.P.M. standard		415 V	kW	560	710	710	: :	ŀ	
asychronous motors		500 V	kW	710	900	900			
		690 V	kW	1 000	1 200	1 200		ł	į
Rated breaking capacity n category AC-23	. <u>.</u>	up to 415 V	A	10 000	10 000	10 000			
3. ,		500 V	Α	10 000	10 000	10 000		İ	•
		690 V	Α	10 000	10 000	10 000			
Rated conditional short-circuit current	I __ (r.m.s.) 80 kA, 415 V	î (peak)	kA	100	100	100	·		
(r.m.s.) and cut-off current î, (peak)	Max. OFA fuse size	gG/aM	A/A		1 250/1 250	÷	<u> </u>	İ	•
value. The cut-off current î refers to	I. (r.m.s.) 100 kA, 500 V	î (peak)	kA	106	106	106			
values listed by fuse manufacturers	Max. OFA fuse size	gG/aM	A		1 250/1 250		<u>:</u>	į	
single phase test acc. to IEC60269).	<u> </u>			ļ	<u>.</u>	; ;	<u>.</u>		
Rated short-time withstand current	I _{cw} (r.m.s.)	690 V 0.15s	kΑ	50	50	50	50	50	
		690 V 0.25s	kA	50	50	50	50	50	
		690 V 1s	kA	50	50	50	55	55	65
Rated short-time making capacity ²⁾	I _{cm} (peak) ³⁾	690 V	kA	92	92	92	110	110	143
Power loss / pole	With rated current		W	19	29	48	55	85	95
Mechanical endurance	Number of oper. cycles4)		Cycles	3 000	3 000	3 000	2 000	2 000	2 000
Terminal bolt size	Metric thread diameter x length		mm	M12x60	M12x60	M12x60	M12x60	M12x60	M12x100
Ferminal tightening torque	Counter torque required		Nm	50-75	50-75	50-75	50-75	50-75	50-75
Operating torque	3-pole change-over switches		Nm	78	78	78	78	78	80
Veight without accessories	Manual change-over	3-poles	kg	32.3	32.3	34.8	48	48	57
	switches	4-poles	kg	40.2	40.2	43.3	60	60	72
Data according to IEC 60947-6-1									
Class of equipment			į.	PC	PC	PC	PC	PC	
Rated short-time withstand current	I _{cw} (r.m.s.)	690 V 0.1s	kA	50	50	50	50	50	
Rated operational current, AC-31B		up to 415 V	Α	1 000	1 250	1 600	2 000	2 000	
Rated operational current, AC-33B		up to 415 V	Α	1 000	1 000	1 000		1	İ

¹⁾ These values are given for guidance and may vary acc. to the motor manufacturer

1000 V ratings on request

²⁾ Short circuit duration > 50ms, without fuse protection

 $^{^{\}mbox{\tiny 3)}}$ Max. distance from switch frame to nearest busbar / cable support 150 mm

⁴⁾ Operating cycle: O - I - O - II - O

⁵⁾ Category AC-21B, up to 415V

Manual change-over switches Technical data for UL/CSA switches OT30...100_C, OT200...800U_C

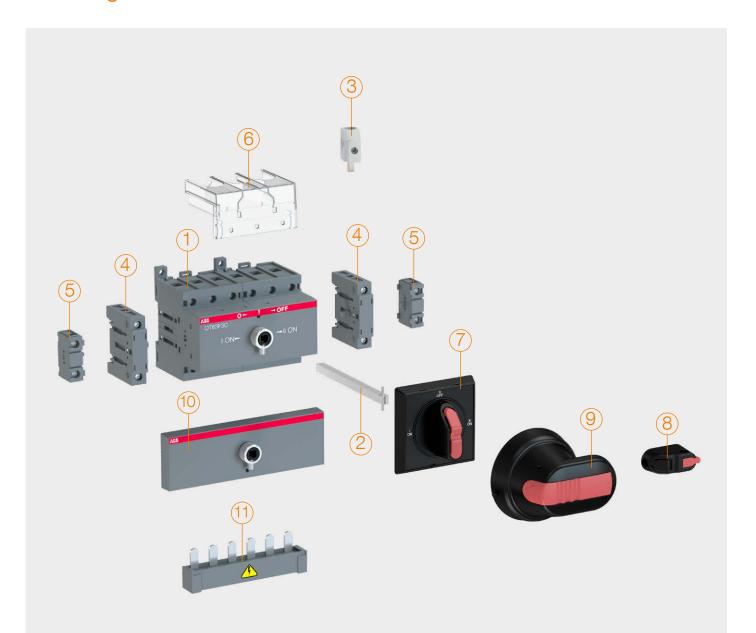
UL/CSA manual change-over switches

				Switch size						
Data according to UL and CSA				OT30_	OT60_	OT100_	OT200U_	OT400U_	OT600U_	_U008TO
Standards				UL98	UL98	UL98	UL98	UL98	UL98	UL98
				CSA 22.2#4	CSA 22.2#4	CSA 22.2#4	CSA 22.2#4	CSA 22.2#4	CSA 22.2#4	CSA 22.2#4
General use ratings, 1- or 3-phase			VΑ	600	600	600	600	600	600	600
ratings				30	60	100	200	400	600	800
Horsepower, 3-phase ratings		240V	HP	10	20	30	75	125	200	250
		480V	HP	20	40	50	150	250	450	500
		600V	HP	30	40	50	200	350	500	500
Short-circuit ratings	Required protection	Circuit breaker	kA				14	25	35	42
		Class J/L fuse	kA	50 / -	50 / -	50 / -	65/100	100	100	100
		fuse size	Α	60	150	150	400/200	600	800	800
		Class RK5 fuse	kA						100	
		fuse size	Α						600	
Data according to IEC 60947-3										
Rated insulation voltage and rated	Pollution degree 3		V	750	750	750	1 000	1 000	1 000	1 000
operational voltage AC20/DC20	Foliation degree 3		V	750	750	750	1 000	1 000	1 000	1 000
Dielectric strength	50 Hz 1min.		kV	6	6	6	10	10	10	10
Rated impulse withstand voltage			kV	8	8	8	12	12	12	12
Rated thermal current and rated operational current AC20/DC20	/ ambient 40°C	In open air	А	40	63	100	250	400	800	1600
with minimum conductor cross section		Cu	AWG/ mm ²	14 - 4	14 - 4	8 - 1/0	120	240	2x240	2x500
Rated operational current, AC-21A		up to 690 V	Α	40	63	100	250	400	800	1 600
Rated operational current, AC-22A		up to 500 V	Α	40	63	100	250	400	800	1 600
		690 V	Α	40	63	100	250	400	800	1 600
Rated operational current, AC-23A		up to 500 V	Α	40	63	60	250	400	800	1 250
		690 V	Α	40	40	40	250	400	800	1 250
Rated conditional short-circuit	I _s (r.m.s.) : 100 kA, 500 V	î¸ (peak)	kA	•	•	•	40.5	61.5	90	106
current I _p (r.m.s.) and	Max. OFA_ fuse size	gG/aM	Α				315/315	500/450	800/800	1 250/1 250
corresponding max. allowed	I, (r.m.s.): 80 kA, 690 V	î (peak)	kA			•	40.5	59	83,5	
cut-off current î _c peak value ¹⁾	Max. OFA_ fuse size	gG/aM	Α				355/315	500/500	800/1 000	
Rated short-time withstand current	I _{cw} (r.m.s.)	690V, 1s	kA	2.5	2.5	2.5	8	15	20	50
Rated short-circuit making capacity	I _{cm} (peak)	690V	kA	3.6	3.6	3.6	30	65	80	92
Mechanical endurance	Number of operating cycles ²⁾		Cycles	6000	6000	6000	8 000	8 000	5 000	3 000
Terminal bolt size	Metric thread diameter x length		mm				M8x25	M10x30	M12x40	M12x60
Terminal tightening torque	Counter torque required		Nm				1522	3044	5075	5075
Operating torque	3-pole switches		Nm	2	2	2	7	16	27	78
Weight without accessories	3-pole switch		kg	0.90	0.90	0.90	2.8	5.0	13.1	34.8
·	4-pole switch		kg	1.18	1.18	1.18	3.5	6.1	15.9	43.3
Data according to IEC 60947-6-1										
Class of equipment	(rm a)	600 V 0 10					PC 15	PC 25	PC 38	PC 50
Rated short-time withstand current	I _{cw} (r.m.s.)	690 V 0.1s								
Rated operational current, AC-31B		up to 415 V	Α				250	400	800	1 600
Rated operational current, AC-33B		up to 415 V	Α				250	400	800	1 000

¹⁾ The fuse in single-phase test according to IEC 60269

²⁾ Operating cycle: O - I - O - II - O

Manual change-over switches Ordering information for OT16...OT125_C



Manual change-over switch accessory guide

- Manual change-over switch
- Extended shaft
- 4. Fourth pole
- Terminal shroud
- 7. Selector handle, black or red/yellow
- Direct handle knob
- 9. Pistol handle, black or red/yellow

Please note that listed accessories are not automatically included in your order.

Manual change-over switches Ordering information for OT16...OT125F_C





OT63...80F3C



OT100...125F3C

Direct operation:



онвзз



OHBS9

External operation:



OHBS2AJE011



OHB45J6E311



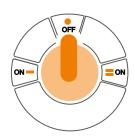
OZXA38



OZXA32

Open transition

Simple I-O-II -operation where the handle is padlockable in O-position and door interlock available in the I- and II-positions (and when padlocked). Din-rail or base mounting.



Manual change-over switches, open transition, OT16...OT125F_C

Handle and shaft not included. See recommended accessories.

Rated curre		current and power					
No.	AC-21A/AC	-22A	AC-23A			Weight/	
of poles	≤ 415 V I[A]	400V S[kVA]	400415V I[A]/P[kW]	Туре	Order number	unit [kg]	
3	16	11	16/7.5	OT16F3C	1SCA104816R1001	0.25	
4	16	11	16/7.5	OT16F4C	1SCA104831R1001	0.31	
3	25	17	20/9	OT25F3C	1SCA104863R1001	0.25	
4	25	17	20/9	OT25F4C	1SCA104877R1001	0.31	
3	40	27	23/11	OT40F3C	1SCA104913R1001	0.25	
4	40	27	23/11	OT40F4C	1SCA104934R1001	0.31	
3	63	43	45/22	0T63F3C	1SCA105338R1001	0.64	
4	63	43	45/22	OT63F4C	1SCA105369R1001	0.70	
3	80	55	75/37	OT80F3C	1SCA105402R1001	0.64	
4	80	55	75/37	OT80F4C	1SCA105418R1001	0.70	
3	100	70	80/37	0T100F3C	1SCA105008R1001	0.90	
4	100	70	80/37	0T100F4C	1SCA105019R1001	1.18	
3	125	86	90/45	0T125F3C	1SCA105037R1001	0.90	
4	125	86	90/45	0T125F4C	1SCA105054R1001	1.18	

Cable cross section of the change-over switches

Suitable for switches	Cable cross section [mm²]
OT1640F_C	0.75 10
OT6380F_C	1.5 35
OT100125F_C	10 70

Recommended accessories: Handles, shafts and parallel connection kit

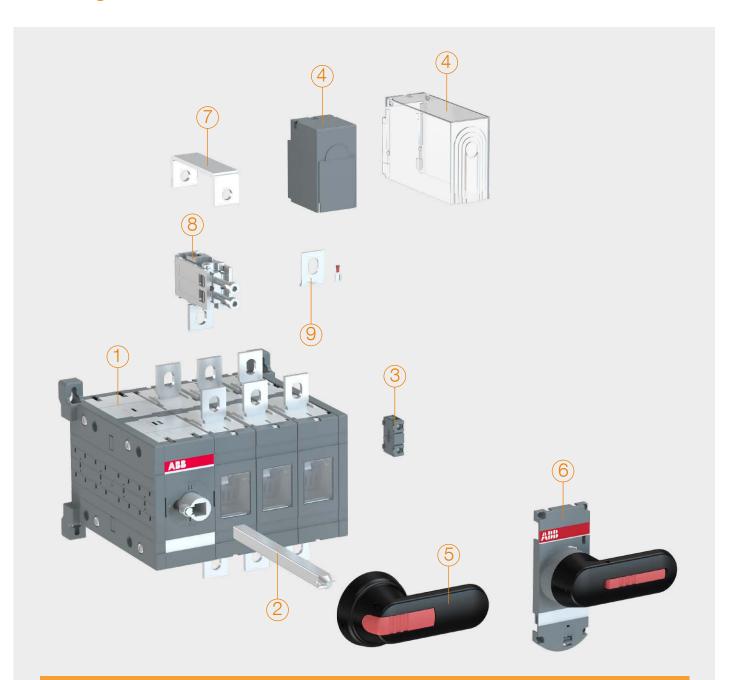
Suitable for switches	Operating type	Handle type	Order number	Shaft type	Order number
OT1640F_C	Direct operation	OHBS3	1SCA108320R1001	-	_
0T63125F_C	Direct operation	OHBS9	1SCA108665R1001	-	_
OT16125F_C	Selector handle (external)	OHBS2AJE011	1SCA105220R1001	0XS6X120	1SCA101654R1001
0T16125F_C	Pistol handle (external)	OHB45J6E311	1SCA022817R2130	0XP6X170	1SCA108224R1001

Parallel connection kits

Finger protected connection bars for parallel connection of the upper or lower terminals. The bars accept additional cables, the maximum size is stated below.

Suitable for switches	Cable cross section [mm²]	Туре	Order number	Units/ type [pcs]	Weight/ unit [kg]
0T1640F3C	6 (fine stranded), 10 (stranded)	OZXA33	1SCA022685R0310	1	0.02
OT1640F4C	6 (fine stranded), 10 (stranded)	OZXA32	1SCA022683R4110	1	0.03
OT6380F3C	25	OZXA38	1SCA022785R2140	1	0.06
OT6380F4C	25	OZXA39	1SCA022790R3820	1	0.09
0T100125F3C	50	OZXA40	1SCA022790R3910	1	0.16
OT100125F4C	50	OZXA41	1SCA022790R4040	1	0.24

Manual change-over switches Ordering information for OT160...OT800_C, OT200...OT600U_C



Manual change-over switch accessory guide

- Manual change-over switch
- Extended shaft
- 7. Bridging bar
- 3. Auxiliary contact

- 9. Voltage sensing connector
- Pistol handle

See next page for recommendations.

Manual change-over switches Ordering information for OT160...OT250_C



OT160...250E03CP



OT160...250E03WCP



OT160...250E04CP



OT160...250E04WCP



OT160...250E33CP



OT160...250E33WCP





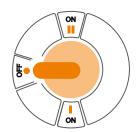
OHB65J6E011



OTZC13

Open transition

Simple I-O-II -operation where the handle is padlockable in O-position and door interlock available in the I- and II-positions (and when padlocked).



Manual change-over switches, open transition, OT160...OT250_CP

Delivered with a black plastic IP65 I-0-II pistol handle (see the table below), shaft and bolt set for the cable connection. 1000V versions available on request.

Rated curre		ed current and power					
No.	AC-21A/AC	AC-21A/AC-22A				Weight/	
of poles	≤ 415V 400V I[A] S[kVA]		400415V I[A]/P[kW]	Туре	Order number	unit [kg]	
Types -V	V: with wide ph	ase distance.					
3	160	110	160/90	OT160E03CP	1SCA022772R6510	3.3	
3	160	110	160/90	OT160E03WCP	1SCA022772R8210	3.6	
4	160	110	160/90	OT160E04CP	1SCA022775R9440	4.1	
4	160	110	160/90	OT160E04WCP	1SCA022775R0220	4.4	
3	200	135	200/110	OT200E03CP	1SCA022771R7520	3.3	
3	200	135	200/110	OT200E03WCP	1SCA022772R8720	3.6	
4	200	135	200/110	OT200E04CP	1SCA022771R7280	4.1	
4	200	135	200/110	OT200E04WCP	1SCA022775R0650	4.4	
3	250	170	250/140	0T250E03CP	1SCA022771R3450	3.3	
3	250	170	250/140	0T250E03WCP	1SCA022772R8300	3.6	
4	250	170	250/140	0T250E04CP	1SCA022775R4640	4.1	
4	250	170	250/140	OT250E04WCP	1SCA022775R0810	4.4	
4	250	170	250/140	0T250E13CP	1SCA022777R0330	4.1	
6	250	170	250/140	OT250E33CP	1SCA118551R1001	5.7	
6	250	170	250/140	0T250E33WCP	1SCA118608R1001	6.0	

Shafts, handle and bolt kits included as standard

Suitable for switches	Shaft	Handle	Bolt kit	
OT160250_C	OXP6x161	OHB65J6E011	M8x25	

Recommended accessories: Bridging bars

Bridging bars are an easy and cost-efficient way to make load side connections.

Suitable for switches	No. of poles	Туре	Order number	Units/ type pcs	Weight / unit
OT160250_C	3	OTZC13	1SCA022767R6910	3	0.5
OT160250_C	4	OTZC14	1SCA022767R7040	4	0.8

Manual change-over switches Ordering information for OT315...OT800_C

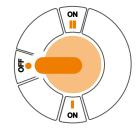


OT315...400E03CP



Rated current and power

Simple I-O-II -operation where the handle is padlockable in O-position and door interlock available in the I- and II-positions (and when padlocked).





OT315...400E13CP

Manual change-over switches, open transition, OT315...OT800_CP

Delivered with a black plastic IP65 I-0-II pistol handle (see the table below), shaft and bolt set for the cable connection.





OT630...800E03CP

No.	AC-21A/AC-22A		AC-23A		Weight/	
of poles	≤ 415V I[A]	400V S[kVA]	400415V I[A]/P[kW]	Туре	Order number	unit [kg]
Place of	f mechanism,	see the picture	S.	•	•	
3	315	215	315/160	0T315E03CP	1SCA022772R6780	5.9
3	315	215	315/160	0T315E12CP	1SCA022776R9910	5.9
4	315	215	315/160	0T315E04CP	1SCA022775R7150	7.1
4	315	215	315/160	0T315E13CP	1SCA022777R0410	7.1
6	315	215	315/160	0T315E33CP	1SCA118635R1001	9.5
3	400	275	400/220	0T400E03CP	1SCA022771R8500	5.9
3	400	275	400/220	0T400E12CP	1SCA022776R9590	5.9
4	400	275	400/220	OT400E04CP	1SCA022771R8680	7.1
4	400	275	400/220	OT400E13CP	1SCA022777R0500	7.1
6	400	275	400/220	0T400E33CP	1SCA118629R1001	9.5
3	630	435	630/355	OT630E03CP	1SCA022785R6050	17.7
3	630	435	630/355	OT630E12CP	1SCA022785R8690	17.7
4	630	435	630/355	OT630E04CP	1SCA022785R6130	21
4	630	435	630/355	OT630E13CP	1SCA022785R9070	21
6	630	435	630/355	OT630E33CP	1SCA118652R1001	27.6
3	800	550	800/450	OT800E03CP	1SCA022785R6300	17.7
3	800	550	800/450	OT800E12CP	1SCA022785R8850	17.7
4	800	550	800/450	OT800E04CP	1SCA022785R6210	21
4	800	550	800/450	OT800E13CP	1SCA022785R9230	21
6	800	550	800/450	OT800E33CP	1SCA118649R1001	27.6

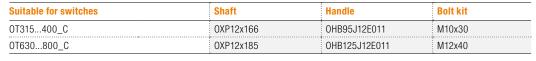


OT630...800E04CP

OT630...800E33CP

1000V versions available on request

Shafts, handle and bolt kits included as standard







OHB125J12E011

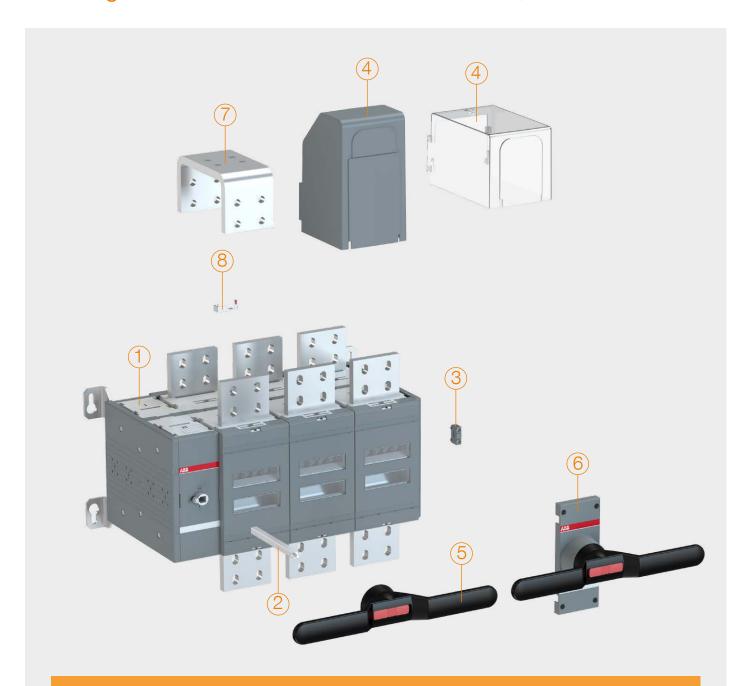


OTZC23

Recommended accessories: Bridging bars

Suitable for switches	No. of poles	Туре	Order number	Units/ type [pcs]	Weight/ unit [kg]
OT315400_C	3	OTZC23	1SCA022767R7120	3	0.6
OT315400_C	4	OTZC24	1SCA022767R7210	4	0.8
OT315400_C	3	OTZC33	1SCA022767R7020	3	1
OT315400_C	4	OTZC34	1SCA022767R7110	4	1.3

Manual change-over switches Ordering information for OT1000...OT3200_C, OT800U_C



Manual change-over switch accessory guide

- Pistol handle

- Auxiliary contact
- 7. Bridging bar
- 8. Voltage sensing connector

*) Optional handle types available. Please see Accessories for more details.

Manual change-over switches Ordering information for OT1000...OT3200E_C



OT1250E03CP



OT1000...1250E22CP



OT1600E03CP



OT2000...2500E03CP



OT3200E03CP





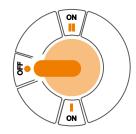
OHB200J12PE011



OTZC44

Open transition

Simple I-O-II -operation where the handle is padlockable in O-position and door interlock available in the I- and II-positions (and when padlocked).



Manual change-over switches, open transition, OT1000...OT3200_C

Delivered with a black plastic IP65 I-0-II pistol handle (see the table below), shaft and bolt set for the cable connection.

	Rated current ¹⁾ and power					
No.	AC-21A/A	C-22A	AC-23A	Туре		
of poles	≤ 415 V I[A]	400V S[kVA]	400415V I[A]/P[kW]		Order number	Weight/ unit [kg]
Place of	mechanism,	see the picture	S.	•		•
3	1000	680	1000/560	OT1000E03CP	1SCA022872R1680	48
4	1000	680	1000/560	OT1000E04CP	1SCA022872R1500	60
4	1000	680	1000/560	OT1000E22CP	1SCA103289R1001	60
3	1250	850	1250/710	0T1250E03CP	1SCA022872R0790	48
4	1250	850	1250/710	0T1250E04CP	1SCA022872R1250	60
4	1250	850	1250/710	0T1250E22CP	1SCA103311R1001	60
3	1600	1000	1250/710	OT1600E03CP	1SCA022872R1840	51
4	1600	1000	1250/710	OT1600E04CP	1SCA022872R2310	63
4	1600	1000	1250/710	OT1600E22CP	1SCA103303R1001	63
3	2000	1350		OT2000E03CP	1SCA103908R1001	70
4	2000	1350		0T2000E04CP	1SCA103912R1001	86
4	2000	1350		OT2000E22CP	1SCA103953R1001	86
3	2500	1700		0T2500E03CP	1SCA105615R1001	70
4	2500	1700		0T2500E04CP	1SCA103906R1001	86
4	2500	1700		0T2500E22CP	1SCA103902R1001	86
3	3200	2170		OT3200E03CP	1SCA129156R1001	79
4	3200	2170		0T3200E04CP	1SCA129158R1001	97
4	3200	2170		0T3200E22CP	1SCA131131R1001	97

¹⁾ OT2000...3200: Category AC-21B 1000V versions available on request

Shafts, handle and bolt kits included as standard

Suitable for switches	Shaft	Handle	Bolt kit
OT10002500_C	OXP12x185	OHB200J12PE011	M12x60
OT3200_C	OXP12x185	OHB200J12PE011	M12x100

Recommended accessories: Bridging bars

Suitable for switches	No. of poles	Туре	Order number	Units/ type [pcs]	Weight/ unit [kg]
OT10001250_C	4	OTZC44	1SCA022868R0800	4	5.6
OT1600_C	4	OTZC54	1SCA022767R1010	4	7.4
OT20002500_C	4	OTZC64	1SCA022868R1360	4	14.4
OT_3200E_C	4	OTZC74	1SCA128844R1001	4	18.7

Manual change-over switches Ordering information for OT160...OT800_CF



OT160...250E03CFP



OT160...250E03WCFP



OT315...400E13CFP



OT630...800E03CFP





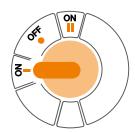
OHB65J6E69



OHB95J12E69

Fast transition

Faster I-O-II -operation with no padlocking opportunity or interlocking. 90° operating angle for fast switching and minimized OFF-time between transfer from I-II or II-I (as low as 20ms).



Manual change-over switches, fast transition, OT160...OT800_CF

Delivered with a black plastic IP65 I-0-II pistol handle (see the table below), shaft and bolt set for the cable connection. Handle not padlockable and no door interlocking.

No. of s poles I Place of me 3 1 4 1 4 1	I[A] echanism, see 160 160	400V S[kVA]	AC-23A 400415V I[A]/P[kW] Types -W: with 160/90 160/90 160/90	Type wide phase distance. OT160E03CFP OT160E03WCFP	1SCA106086R1001	Weight/ unit [kg] 3.3
of poles I Place of me 3 1 3 1 4 1 4 1	I(A) echanism, see 160 160 160 160	S[kVA] the pictures. 110 110 110	I[A]/P[kW] Types -W: with 160/90 160/90	wide phase distance. OT160E03CFP	1SCA106086R1001	unit [kg]
3 1 3 1 4 1 4 1	160 160 160 160	110 110 110	160/90 160/90	OT160E03CFP		3.3
3 1 4 1 4 1	160 160 160	110 110	160/90			3.3
4 1 4 1	160 160	110		OT160E03WCFP	100410040401001	
4 1	160		160/90		1SCA108484R1001	3.6
		110		OT160E04CFP	1SCA108489R1001	4.1
3 2	200		160/90	OT160E04WCFP	1SCA108492R1001	4.4
		135	200/110	OT200E03CFP	1SCA108520R1001	3.3
3 2	200	135	200/110	OT200E03WCFP	1SCA107578R1001	3.6
4 2	200	135	200/110	OT200E04CFP	1SCA108528R1001	4.1
4 2	200	135	200/110	OT200E04WCFP	1SCA108531R1001	4.4
3 2	250	170	250/140	OT250E03CFP	1SCA108591R1001	3.3
3 2	250	170	250/140	OT250E03WCFP	1SCA107577R1001	3.6
4 2	250	170	250/140	OT250E04CFP	1SCA108600R1001	4.1
4 2	250	170	250/140	OT250E04WCFP	1SCA108606R1001	4.4
3 3	315	215	315/160	OT315E03CFP	1SCA108629R1001	5.9
4 3	315	215	315/160	OT315E04CFP	1SCA114535R1001	7.1
3 4	400	275	400/220	OT400E03CFP	1SCA106360R1001	5.9
4 4	400	275	400/220	OT400E04CFP	1SCA108650R1001	7.1
3 6	630	435	630/355	OT630E03CFP	1SCA106915R1001	17.7
4 6	630	435	630/355	OT630E04CFP	1SCA108753R1001	21
3 8	800	550	800/450	OT800E03CFP	1SCA106916R1001	17.7
4 8	800	550	800/450	OT800E04CFP	1SCA106945R1001	21

Shafts, handle and bolt kits included as standard

charte, harare and bert kite metaded as etailed						
Suitable for switches	Shaft	Handle	Bolt kit			
OT160250_CF	0XP6x161	OHB65J6E69	M8x25			
OT315400_CF	0XP12x166	OHB95J12E69	M10x30			
0T630800_CF	0XP12x185	OHB145J12E69	M12x40			

Manual change-over switches Ordering information for OT160...OT800_CL



OT160...250E03CLP



OT160...250E03WCLP



OT315...400E03CLP



OT630...800E03CLP





OHB65J6E65



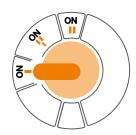
OHB95J12E65



OHB145J12E65

Closed transition

I - I+II - II -operation, or closed transition, means that there is no OFF-position. There is a I+II -position between I and II, in which both switches are closed simultaneously.



Manual change-over switches, closed transition, OT160...OT800_CL

Delivered with a black plastic IP65 I - I+II - II pistol handle (see the table below), shaft and bolt set for the cable connection.

	Rated current and power					
No.	AC-21A/AC-22A ≤ 415V 400V		AC-23A 400415V			Weight/ unit
poles	I[A]	S[kVA]	I[A]/P[kW]	Туре	Order number	[kg]
Place of	mechanism,	see the pict	ure. Types -W: wit	h wide phase distance.		
3	160	110	160/90	OT160E03CLP	1SCA108468R1001	3.3
3	160	110	160/90	OT160E03WCLP	1SCA108486R1001	3.6
4	160	110	160/90	OT160E04CLP	1SCA108491R1001	4.1
4	160	110	160/90	OT160E04WCLP	1SCA108494R1001	4.4
3	200	135	200/110	OT200E03CLP	1SCA108522R1001	3.3
3	200	135	200/110	OT200E03WCLP	1SCA108525R1001	3.6
4	200	135	200/110	OT200E04CLP	1SCA108530R1001	4.1
4	200	135	200/110	OT200E04WCLP	1SCA108532R1001	4.4
3	250	170	250/140	OT250E03CLP	1SCA108593R1001	3.3
3	250	170	250/140	OT250E03WCLP	1SCA107576R1001	3.6
4	250	170	250/140	OT250E04CLP	1SCA108605R1001	4.1
4	250	170	250/140	OT250E04WCLP	1SCA108607R1001	4.4
3	315	215	315/160	0T315E03CLP	1SCA108630R1001	5.9
4	315	215	315/160	OT315E04CLP	1SCA106404R1001	7.1
3	400	275	400/220	OT400E03CLP	1SCA108641R1001	5.9
4	400	275	400/220	OT400E04CLP	1SCA106405R1001	7.1
3	630	435	630/355	OT630E03CLP	1SCA106917R1001	17.7
4	630	435	630/355	OT630E04CLP	1SCA106947R1001	21
3	800	550	800/450	OT800E03CLP	1SCA106928R1001	17.7
4	800	550	800/450	OT800E04CLP	1SCA106952R1001	21

^{1) 1000...2500} available on request

Shafts, handles and bolt kits included as standard

Suitable for switches	Shaft	Handle	Bolt kit
0T160250_CL	OXP6x161	OHB65J6E65	M8x25
0T315400_CL	OXP12x166	OHB95J12E65	M10x30
0T630800_CL	OXP12x185	OHB145J12E65	M12x40

Manual change-over switches Ordering information for UL/CSA OT30...100_C, OT200...800U_C







OT200U03CP



OT400U04CP



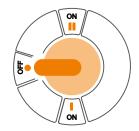
OT600U03CP



OT800U03CP

Open transition

Double-throw switch for use in optional standby system. Simple I-O-II -operation where the handle is padlockable in O-position and door interlock available in the I- and II-positions (and when padlocked).



UL/CSA manual change-over switches, open transition, OT30...100_C, OT200...800_C

The change-over switches are delivered with a black handle IP65, Nema type 1, 3R, 12, a shaft and a bolt set for the cable connection and a set of phase separators.

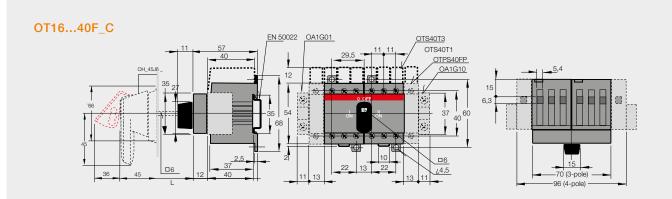
No. of poles	UL98 600V general use [A]	Rated current IEC60947-3 ≤ 415 V AC-21-22A [A]	Rated current IEC60947-6-1 ≤ 415V AC-31B/ AC-33B [A]	Туре	Order number	Units/ type [pcs]	Weight/ unit [kg]
3	30	40/40		OT30F3C	1SCA105071R1001	1	0.9
4	30	40/40		OT30F4C	1SCA146051R1001	1	1.18
3	60	63/63		OT60F3C	1SCA105078R1001	1	0.9
4	60	63/63		OT60F4C	1SCA146053R1001	1	1.18
3	100	100/80		0T100F3C	1SCA105008R1001	1	0.9
4	100	100/80		OT100F4C	1SCA105019R1001	1	1.2
3	200	250	250/250	0T200U03CP	1SCA022771R5910	1	3.6
4	200	250	250/250	0T200U04CP	1SCA022771R6210	1	4.4
3	400	400	400/400	0T400U03CP	1SCA022771R2810	1	6.2
4	400	400	400/400	0T400U04CP	1SCA022771R2300	1	8.1
3	600	800	800/800	0T600U03CP	1SCA022785R5320	1	17.9
4	600	800	800/800	OT600U04CP	1SCA022785R5410	1	21
3	800	800	1600/1000	OT800U03CP	1SCA104031R1001	1	51
4	800	800	1600/1000	OT800U04CP	1SCA104036R1001	1	63

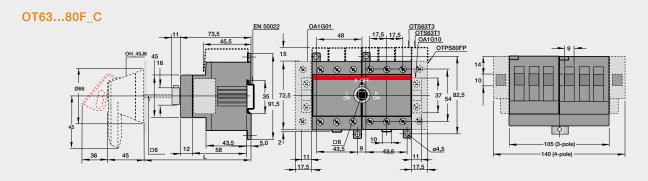
Shafts, handles and bolt kits included as standard

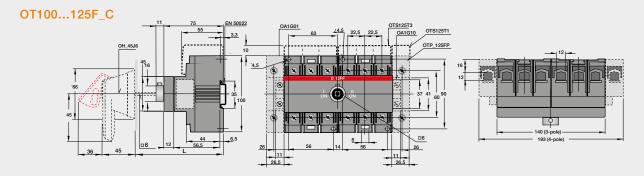
The handles are equipped with door interlock function in both I- and II-position and when padlocked. Padlocking possibility in O-position with 3 padlocks, bail dia Ø 5...10 mm. Indication I-O-II. Nema type 1, 3R, 12. OT30...100F_C Handle and Shaft are not included in standard delivery.

Suitable for switches	Shaft	Handle	Bolt kit
OT200U_	OXP6x161	OHB65J6E011	M8x25
OT400U_	0XP12x166	OHB95J12E011	M10x30
OT600U_	0XP12x185		M12x40
OT800U_	0XP12X185	OHB200J12PE011	M12x60

Modular change-over switches Dimensional drawings







OT16...40F_C

Selector handle OH S2AJE011

Selector Harr	Selector flatfule Off_SZAJEOTT				
Shaft 0XS6X_	Installation depth [mm]				
85	103114				
105	123134				
120	138149				
130	148159				

Pistol handle OH_45J6E311

Shaft OXS6X_	Installation depth [mm]
150	164175
170	184195
265	279290
400	414425

OT63...80F_C

Selector handle OH_S2AJE011

	-
Shaft 0XS6X_	Installation depth [mm]
85	121131
105	141151
120	156166
130	166176

Pistol handle OH_45J6E311

	~		
Shaft 0XS6X_	Installation depth [mm]		
150	183194		
170	203214		
265	298309		
400	433444		

OT100...125F_C

Selector handle OH_S2AJE011

Shaft OXS6X_	Installation depth [mm]
85	120130
105	140150
120	155165
130	165175

Pistol handle OH_45J6E311

Shaft OXS6X_	Installation depth [mm]
150	192206
170	212226
265	307321
400	442456

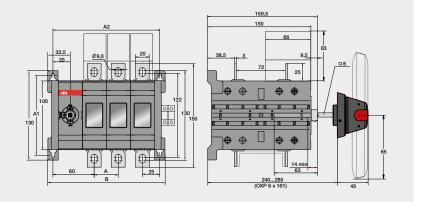
Manual change-over switches Dimensional drawings

OT160...OT250E03/04C_P

OT160-250_C

[mm]	E03	E04	E12	E13	E22	E23	E33	
Α	35	35	35	35	35	35	35	
A1	116	116	116	116	116	116	116	
A2	155	190	155	190	190	225	260	
В	170	205	170	205	205	240	275	

C000001 / OT160-250E02-04_C_ C /ES

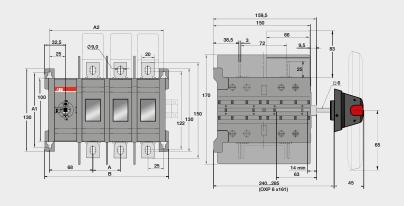


OT160...OT250E03/04WC_P

OT160-250_WC

[mm]	E03	E04
A	43	43
A1	116	116
A2	179	222
В	194	237

C000010 / OT160-250E_WC_ C /ES

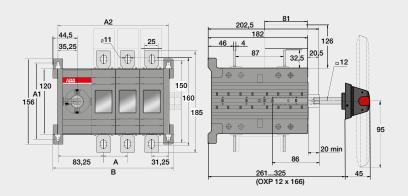


OT315...400E03/04C_P

OT315-400 C

0.0	0.10.10.100_0						
[mm]	E03	E04	E12	E13	E22	E23	E33
А	44	44	44	44	44	44	44
A1	142	142	142	142	142	142	142
A2	202,5	246,5	202,5	246,5	246,5	290,5	334,5
В	221	265	221	265	265	309	353

C000008 / 315-400E02-04_C_ C /ES



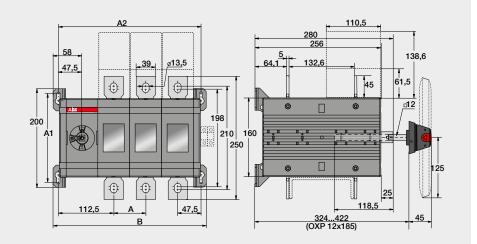
Manual change-over switches Dimensional drawings

OT630...800E03/04C_P

OT630-800_C_

[mm]	E03	E04	E12	E13	E22	E23	E33
Α	65	65	65	65	65	65	65
A1	180	180	180	180	180	180	180
A2	290	355	290	355	355	420	485
В	311	376	311	376	376	441	506

M00088/OT630-800E02-04C_ C /ES

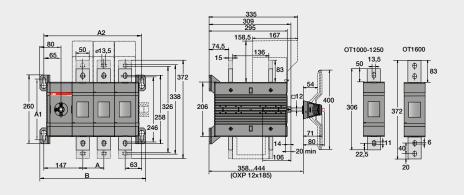


OT1000...1600E03/04CP

OT1000-1600_C_

[mm]	E03	E04	E12	E13	E22
A	80	80	80	80	80
A1	230	230	230	230	230
A2	370	450	370	450	450
В	400	480	400	480	480

M00155/OT1000-1600E_C-1 E /ES

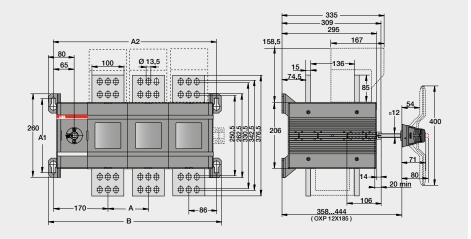


OT2000...2500E03/04CP

OT2000-2500_C

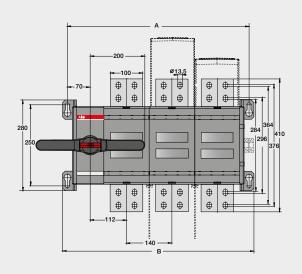
[mm]	E03	E04	E12	E13	E22
A	126	126	126	126	126
A1	230	230	230	230	230
A2	508	634	508	634	634
В	538	664	538	664	664

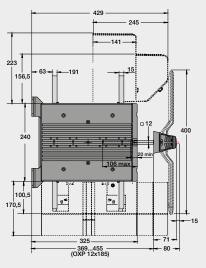
M00179/ OT2000-2500E_C_ D /ES



Manual change-over switches Dimensional drawings

OT3200E02/03/04C_P OT3200_C [mm] E02 E03 E04 560 700 450 590 730 M00435/OT3200E02-04C B

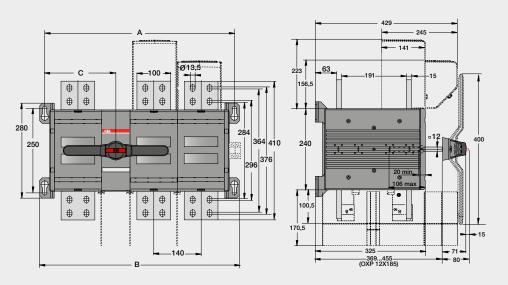




OT3200E12/13/22C_P

OT3200E_C

[mm]	E12	E13	E22
A	560	700	700
В	590	730	730
С	210	210	350



Manual change-over switches Dimensional drawings for UL/CSA -types

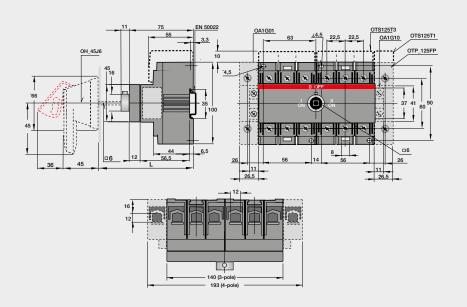
OT30...100_C

Selector handle OH_S2AJE011

Shaft 0XS6X_	Installation depth [mm]		
85	120130		
105	140150		
120	155165		
130	165175		

Pistol handle OH_45J6E311

Shaft OXS6X_	Installation depth [mm]
150	192206
170	212226
265	307321
400	442456

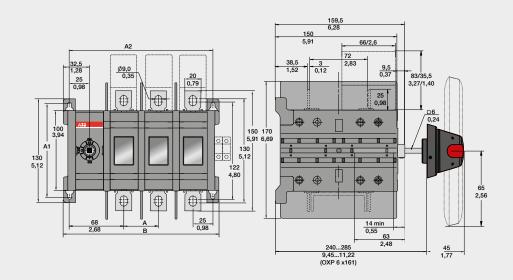


OT200U03/04CP

OT200_C_

[mm/in]	U03	U04
A	43/1,69	43/1,69
A1	116/4,57	116/4,57
A2	179/7,05	222/8,74
В	194/7,64	237/9,33

C000002 / OT200U02 04 C C /ES

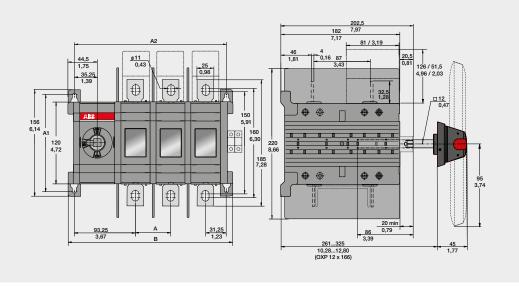


OT400U03/04CP

OT400 C

0.100_0_			
[mm/in]	U03	U04	
A	54/2,13	54/2,13	
A1	142/5,59	142/5,59	
A2	232,5/9,15	286,5/11,28	
В	251/9,88	305/12,01	

C000009 / OT400U02-04_C_ C /ES



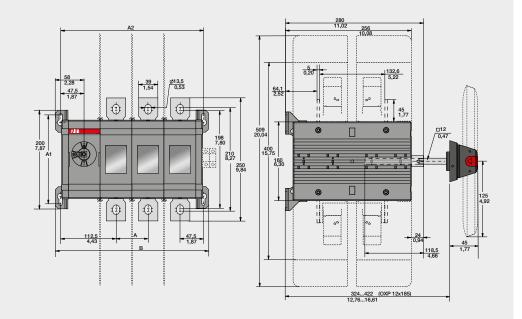
Manual change-over switches Dimensional drawings for UL/CSA -types

OT600U03/04CP

OT600_C_

[mm/in]	U03	U04
A	65/2,56	65/2,56
A1	180/7,09	180/7,09
A2	290/11,42	355/13,98
В	311/12,24	376/14,80

M00087/OT600U02-04C_ C /ES

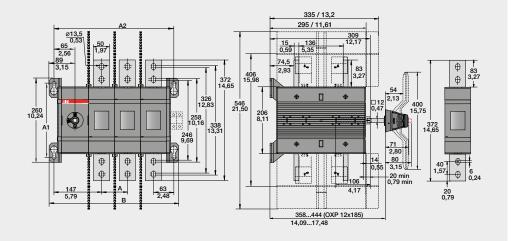


OT800U03/04CP

OT800_C_

[mm/in]	U03	U04
A	80/3,15	80/3,15
A1	230/9,06	230/9,06
A2	370/14,56	450/17,72
В	400/15,75	480/18,90

M00156/OT800-1200U_C-1 C /ES



Optional accessories for manual change-over switches Ordering information for handle knobs



OHRS2_



OHRS3_



OHBS9_



OHRS9_



OHBS11



OHBS12

Handle knobs

No shaft needed, direct mounting on the top of the switch.

Suitable for switches	Colour	Туре	Order number	Units/ type [pcs]	Weight/ unit [kg]
Padlockable in 0-pos	ition		.		
OT1680F_C	Black	OHBS2/1	1SCA109090R1001	1	0.01
OT1680F_C	Black	OHBS2	1SCA109089R1001	10	0.01
OT1680F_C	Red	OHRS2/1	1SCA108599R1001	1	0.01
OT1680F_C	Red	OHRS2	1SCA108598R1001	10	0.01
OT1680F_C	Black	OHBS12/1	1SCA109094R1001	1	0.01
OT1680F_C	Black	OHBS12	1SCA108252R1001	10	0.01
OT1680F_C	Red	OHRS12/1	1SCA109097R1001	1	0.01
OT1680F_C	Red	OHRS12	1SCA108253R1001	10	0.01
OT100125F_C	Black	OHBS11/1	1SCA109093R1001	1	0.02
OT100125F_C	Black	OHBS11	1SCA109092R1001	10	0.02
Non-padlockable			<u>.</u>		•
OT1680F_C	Black	OHBS3/1	1SCA108319R1001	1	0.01
OT1680F_C	Black	OHBS3	1SCA108320R1001	10	0.01
OT1680F_C	Red	OHRS3/1	1SCA108688R1001	1	0.01
OT1680F_C	Red	OHRS3	1SCA108667R1001	10	0.01
0T100125F_C	Black	OHBS9/1	1SCA108689R1001	1	0.01
OT100125F_C	Black	OHBS9	1SCA108665R1001	10	0.01
OT100125F_C	Red	OHRS9/1	1SCA108690R1001	1	0.01
OT100125F_C	Red	OHRS9	1SCA108666R1001	10	0.01

Optional accessories for manual change-over switches Ordering information for external handles



OHBS2_



OHB45J6_



OHB65J6_



OHY125J12_



OHB274J12



OHB200J12P_



OHB65J6E69

Selector handle, indication I-O-II

IP65, Nema type 1, 3R, 12. Padlockable in O -position with maximum three padlocks with bail diameter 5...8 mm (two lower holes) and 5...6.3 mm (the upper hole). Door interlock in I- and II-position and when padlocked in O-position.

Suitable for switches	Colour	Shaft diameter [mm]	Туре	Order number	Delivery batch [pcs]	Weight/ unit [kg]
OT16125F_C	Black	6	OHBS2AJE011	1SCA105220R1001	1	0.07
OT16125F_C	Red-yellow	6	OHYS2AJE011	1SCA105301R1001	1	0.07

Pistol handle, plastic, indication I-O-II

· ·	,					
Suitable		Shaft			Delivery	Weight/
for		diameter			batch	unit
switches	Colour	[mm]	Type	Order number	[pcs]	[kg]

Padlockable in all positions

IP65, Nema type 1, 3R, 12. Door interlock in I- and II-position and when padlocked. Padlocking possibility with three padlocks, bail dia \emptyset 5...10 mm.

	01		,				
	OT16125F_C	Black	6	OHB45J6E311	1SCA022817R2130	1	0.10
	OT16125F_C	Red-yellow	6	OHY45J6E311	1SCA022817R2300	1	0.10
(OT160250_C	Black	6	OHB65J6E311	1SCA022662R4730	1	0.12
(OT315400_C	Black	12	OHB95J12E311	1SCA022779R2140	1	0.12
(OT630800_C	Black	12	OHB125J12E311	1SCA022615R1730	1	0.14
(OT10003200_C	Black	12	OHB200J12PE311	1SCA104685R1001	1	0.40

Padlockable in the O-position

IP65, Nema type 1, 3R, 12. Door interlock in I- and II-position and when padlocked. Padlocking possibility with three padlocks, bail dia \emptyset 5...10 mm.

	. .	. <u>.</u>				
0T16125F_C	Black	6	OHB45J6E011	1SCA022594R7110	1	0.10
OT16125F_C	Red-yellow	6	OHY45J6E011	1SCA022817R2210	1	0.10
0T160250_C	Black	6	OHB65J6E011	1SCA022383R2480	1	0.12
OT160250_C	Red-yellow	6	OHY65J6E011	1SCA022779R1840	1	0.12
OT315400_C	Black	12	OHB95J12E011	1SCA022621R0760	1	0.12
0T315400_C	Red-yellow	12	OHY95J12E011	1SCA022621R0920	1	0.12
OT630800_C	Black	12	OHB125J12E011	1SCA022589R3340	1	0.14
OT630800_C	Red-yellow	12	OHY125J12E011	1SCA022615R1650	1	0.14
OT10003200_C	Black	12	OHB274J12E011	1SCA122306R1001	1	0.54
OT10003200_C	Black	12	OHB200J12PE011	1SCA022873R4230	1	0.40
OT10003200_C	Red-yellow	12	OHY200J12PE011	1SCA104686R1001	1	0.40

Handle not padlockable and no door interlocking

IP65, operating angle 90°.

co, operating angle c						
0T160250_CF	Black	6	OHB65J6E69	1SCA112052R1001	1	0.12
0T315400_CF	Black	12	OHB95J12E69	1SCA112058R1001	1	0.12
0T630800_CF	Black	12	OHB145J12E69	1SCA112066R1001	1	0.14

Optional accessories for manual change-over switches Ordering information for external handles



OHB65J6E65



OHB95J12E65



OTV250ECK



OTV1000ECK



OTV1000ECLK

Pistol handle for closed transition types, plastic, indication I - I+II - II

IP65, operating angle 90°.

Suitable for switches	Colour	Shaft diameter [mm]	Туре	Order number	Delivery batch [pcs]	Weight/ unit [kg]
Handle not padlock	able and no	door interlocki	ng			
OT160250_CL	Black	6	OHB65J6E65	1SCA112050R1001	1	0.12
OT315400_CL	Black	12	OHB95J12E65	1SCA112056R1001	1	0.12
OT630800_CL	Black	12	OHB145J12E65	1SCA112063R1001	1	0.14
OT10002500_CL	Black	12	OHB200J12PE65	1SCA112078R1001	1	0.40

Plastic handle, direct mounting, indication I-O-II

Includes a shaft and a mechanism cover. The type and ordering numbers are for one piece.

Suitable for switches	Colour	Туре	Order number	Delivery batch [pcs]	Weight/ unit [kg]
Padlockable with th	ree padlocks in 0-p	osition.	•		
OT160250_C	Black	OTV250ECK	1SCA022783R0090	1	0.08
OT315400_C	Black	OTV400ECK	1SCA022783R0170	1	0.26
OT630800_C	Black	OTV800ECK	1SCA022797R2470	1	0.30
OT10002500_C	Black	OTV1000ECK	1SCA107481R1001	1	0.75
Includes a shaft (no m	echanism cover)	•			
OTM40125F_C	Black	OHB65D6CM	1SCA022807R9430	1	0.12
Handle not padlocka	ıble, operating angl	e 90°.	•		•
OT160250_CF	Black	OTV250ECFK	1SCA113141R1001	1	0.08
0T315400_CF	Black	OTV400ECFK	1SCA113147R1001	1	0.26
OT630800_CF	Black	OTV800ECFK	1SCA113151R1001	1	0.30

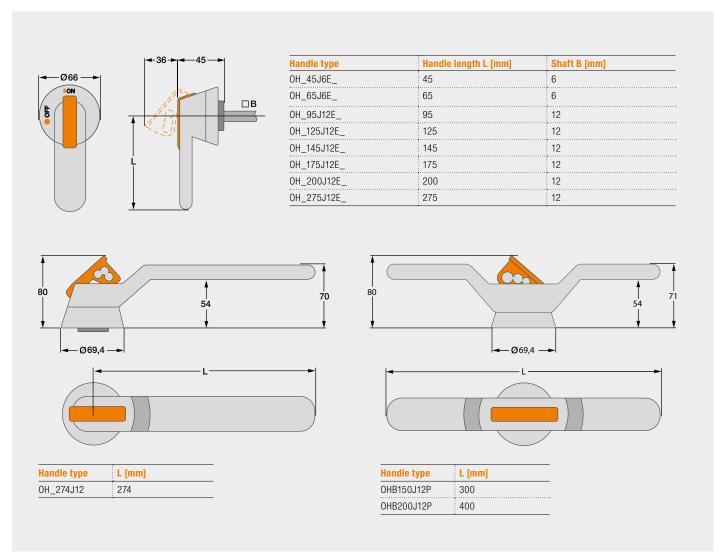
Plastic handle for closed transition types, direct mounting, indication I - I+II - II

Includes a shaft and a mechanism cover. The type and ordering numbers are for one piece.

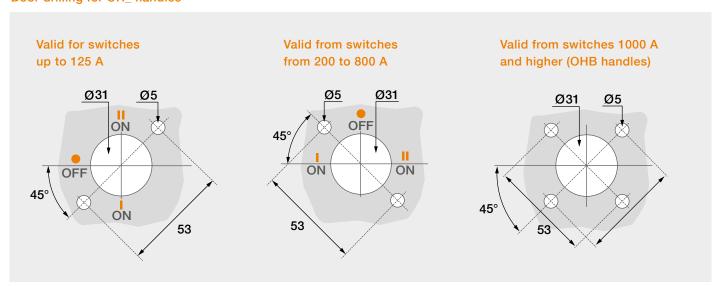
Suitable for switches	Colour	Туре	Order number	Delivery batch [pcs]	Weight/ unit [kg]
Handle not padlocka	ble, operating angl	e 90°.			
OT160250_CL	Black	OTV250ECLK	1SCA113137R1001	1	0.08
0T315400_CL	Black	OTV400ECLK	1SCA113143R1001	1	0.26
OT630800_CL	Black	OTV800ECLK	1SCA113148R1001	1	0.30
OT10002500_CL	Black	OTV1000ECLK	1SCA113152R1001	1	0.75

Optional accessories for manual change-over switches Dimensional drawings for external handles

Plastic handles



Door drilling for OH_ handles



Optional accessories for manual change-over switches Ordering information for extended shafts

Shafts for selector handle handles

185

250

325

395

0XP12X185

0XP12X250

0XP12X325

0XP12X395

0XP12X465



For switches	Length [mm]	Туре	Order number	Delivery batch [pcs]	Weight/unit [kg]
Shaft diameter 6	mm				
OT16125F_C	85	0XS6X85	1SCA101647R1001	10	0.03
	105	0XS6X105	1SCA108043R1001	10	0.03
	120	0XS6X120	1SCA101654R1001	10	0.04
	130	0XS6X130	1SCA101655R1001	10	0.04

For switches	Length [mm]	Type	Order number	Delivery batch [pcs]	Weight/unit [kg]
Shaft diameter 6 n	nm				
OT16125F_C	150	0XP6X150	1SCA022295R5600	10	0.05
	170	0XP6X170	1SCA108224R1001	10	0.05
	265	0XP6X265	1SCA108225R1001	10	0.08
	400	0XP6X400	1SCA108226R1001	10	0.12
Shaft diameter 6 n	nm				
OT160250_C	90	0XP6X90	1SCA022064R1180	10	0.03
	130	0XP6X130	1SCA022057R0570	10	0.04
	161	0XP6X161	1SCA022067R1760	10	0.05
	210	0XP6X210	1SCA022295R6080	10	0.06
	290	0XP6X290	1SCA022042R6370	10	0.08
	360	0XP6X360	1SCA022042R6530	10	0.11
Shaft diameter 6/1	12 mm (6 mm to 12 i	nm conversion sha	aft)	•	
OT160250E	161	0XP6/12x161C	1SCA111724R1001	1	0.05
Shaft diameter 12	mm	•		•	
OT315400_C	107	0XP12X107	1SCA022029R9750	1	0.12
	148	0XP12X148	1SCA022658R5570	1	0.17
	166	0XP12X166	1SCA022325R7100	1	0.20
	185	0XP12X185	1SCA022325R6710	1	0.22
	250	0XP12X250	1SCA022325R6980	1	0.29
	280	0XP12X280	1SCA022137R5140	1	0.33
	325	0XP12X325	1SCA022042R5810	1	0.38
	395	0XP12X395	1SCA022042R5990	1	0.46
	465	0XP12X465	1SCA022042R6020	1	0.54
OT630800_C	148	0XP12X148	1SCA022658R5570	1	0.17
	185	0XP12X185	1SCA022325R6710	1	0.22
	250	0XP12X250	1SCA022325R6980	1	0.29
	325	0XP12X325	1SCA022042R5810	1	0.38
	395	0XP12X395	1SCA022042R5990	1	0.46
	465	0XP12X465	1SCA022042R6020	1	0.54
OT10003200	166	0XP12X166	1SCA022325R7100	1	0.20
		···· · ······			

1SCA022325R6710

1SCA022325R6980

1SCA022042R5810

1SCA022042R5990

1SCA022042R6020

1

0.23

0.29

0.38

0.46

0.54



Optional accessories for manual change-over switches Ordering information for terminal shrouds



OTS_T3



OTS_T1



OTS_L_



OTS_S_

Terminal shrouds, transparent plastic

Snap-on mounting to the switches, IP20. The full shrouding of a 3-pole change-over switch is achieved with four 3-pole shrouds.

Suitable			Delivery	Weight/
for switches	Type	Order number	batch [pcs]	unit [kg]
For three pole switches	; .,,,,,	: 	[pool	. [1-19]
OT1640F_C	OTS40T3	1SCA105317R1001	10	0.01
OT6380F_C	OTS63T3	1SCA022353R6750	10	0.01
OT100125F_C	OTS125T3	1SCA022379R9680	10	0.01
For fourth pole		·	•	•
OTPS40FPN1	OTS40T1	1SCA105314R1001	10	0.01
OTPS40FPN2	0TS40T1	1SCA105314R1001	10	0.01
OTPS80FP	OTS63T1	1SCA022353R6910	10	0.01
OTPS60FP, OTPS125FP	OTS125T1	1SCA022379R9760	10	0.01

Terminal shrouds, grey plastic

Snap-on mounting to the switches, IP 20. A kit includes three or four shrouds which can be used on either side of the switch. Suitable for the upperswitch. Transparent shrouds for OT_160...2500 available on request, please replace the letter "G" with "T".

Suitable for switches	No. of poles	Description	Туре	Order number	Units/ type [pcs]	Weight/ unit [kg]
OT_160250_C	3	Long type	0TS250G1L/3	1SCA022731R8150	3	0.09
OT_160250_C	3	Short type	0TS250G1S/3	1SCA022731R8310	3	0.06
OT_160250_C	4	Long type	0TS250G1L/4	1SCA022731R8230	4	0.12
OT_160250_C	4	Short type	0TS250G1S/4	1SCA022731R8400	4	0.08
OT_315400_C	3	Long type	0TS400G1L/3	1SCA022736R8840	3	0.15
OT_315400_C	3	Short type	0TS400G1S/3	1SCA022736R9060	3	0.09
OT_315400_C	4	Long type	0TS400G1L/4	1SCA022736R9490	4	0.20
OT_315400_C	4	Short type	0TS400G1S/4	1SCA022736R9650	4	0.12
OT_600800_C	3	Long type	0TS800G1L/3	1SCA022776R7890	3	0.32
OT_600800_C	3	Short type	OTS800G1S/3	1SCA022776R8190	3	0.17
OT_600800_C	4	Long type	OTS800G1L/4	1SCA022776R7970	4	0.42
OT_600800_C	4	Short type	0TS800G1S/4	1SCA022776R8270	4	0.26
OT_10001600_C	3	Long type	0TS1600G1L/3	1SCA022871R9510	3	0.64
OT_10001600_C	3	Short type	0TS1600G1S/3	1SCA022871R9600	3	0.37
OT_10001600_C	4	Long type	0TS1600G1L/4	1SCA022871R9780	4	0.85
OT_10001600_C	4	Short type	0TS1600G1S/4	1SCA022871R9860	4	0.49
OT_20002500_C	3	Long type	0TS2500G1L/3	1SCA107261R1001	3	0.77
OT_20002500_C	3	Short type	0TS2500G1S/3	1SCA107260R1001	3	0.47
OT_20002500_C	4	Long type	0TS2500G1L/4	1SCA107262R1001	4	1.00
OT_20002500_C	4	Short type	0TS2500G1S/4	1SCA107271R1001	4	0.61
OT3200_C	3	Long type	0TS4000G1L/3	1SCA129042R1001	3	1.20
OT3200_C	3	Short type	0TS4000G1S/3	1SCA129044R1001	3	1.00
OT3200_C	4	Long type	0TS4000G1L/4	1SCA129043R1001	4	1.40
OT3200_C	4	Short type	0TS4000G1S/4	1SCA129045R1001	4	1.60

Optional accessories for manual change-over switches Ordering information for phase barriers



отв





OZXA38







OZXA33

Phase barriers

The phase barriers designed for ABB Tmax T4-T5 MCCB's can also be used for OT_160...800 change-over switches. 3-pole change-overs need 8 barriers and 4-pole change-overs need 12 barriers for full protection.

Suitable for switches	No. of poles	Height h [mm]	Cutting width W of the phase barrier [mm]	Туре	Order number	Units/ type [pcs]
OT_160250E_C	3	100	55	PB100 low	1SDA054970R1	4
OT_160250E_C	3	200	55	PB200 high	1SDA054972R1	4
OT_160250E_C	4	100	55	PB100 low	1SDA054971R1	6
OT_160250E_C	4	200	55	PB200 high	1SDA054973R1	6
OT_315400E_C	3	100	67	PB100 low	1SDA054970R1	4
OT_315400E_C	3	200	67	PB200 high	1SDA054972R1	4
OT_315400E_C	4	100	67	PB100 low	1SDA054971R1	6
OT_315400E_C	4	200	67	PB200 high	1SDA054973R1	6
OT_600800E_C	3	100	90	PB100 low	1SDA054970R1	4
OT_600800E_C	3	200	90	PB200 high	1SDA054972R1	4
OT_600800E_C	4	100	90	PB100 low	1SDA054971R1	6
OT_600800E_C	4	200	90	PB200 high	1SDA054973R1	6

Parallel connection kits

Finger protected connection bars for parallel connection of the upper or lower terminals. The bars accept additional cables, the maximum size is stated below.

Suitable for switches	Cable cross section [mm²]	Туре	Order number	Units/ type [pcs]	Weight/ unit [kg]
OT1640F3C	6 (fine stranded), 10 (stranded)	OZXA33	1SCA022685R0310	1	0.02
OT1640F4C	6 (fine stranded), 10 (stranded)	OZXA32	1SCA022683R4110	1	0.03
OT6380F3C	25	OZXA38	1SCA022785R2140	1	0.06
OT6380F4C	25	OZXA39	1SCA022790R3820	1	0.09
OT100125F3C	50	OZXA40	1SCA022790R3910	1	0.16
OT100125F4C	50	OZXA41	1SCA022790R4040	1	0.24
OTM40F3C_	2.525/2x2.516	OMZC003	1SCA121324R1001	1	0.5
OTM40F4C_	2.525/2x2.516	OMZC004	1SCA121325R1001	1	0.65
OTM40125F3C_	1070	OMZC03	1SCA117037R1001	1	0.5
OTM40125F4C_	1070	OMZC04	1SCA117038R1001	1	0.65

Optional accessories for manual change-over switches Ordering information for terminal clamps





OZXT2...3



OZXB2L





OZXB9

Terminal clamp sets for Al- and Cu-cables insulated versions

Suitable for switches	Cable cross section [mm²]	Туре	Order number	Units/ type [pcs]	Weight/ unit [kg]
OT63125F_C	1650 Al/2.550 Cu	0ZXT1	1SCA022469R6310	3	0.06
OT100125F_C	16120 Al/Cu	0ZXT2	1SCA022620R7200	3	0.21
OT100125F_C	2x(1650) Al/Cu	OZXT3	1SCA022639R0720	3	0.21
OTM40125F_C	1650 Al/2.550 Cu	0ZXT1	1SCA022469R6310	3	0.06

Terminal clamp sets for Al- and Cu-cables

Suitable for switches	Cable cross section [mm²]	Suitable shroud	Туре	Order number	Units/ type [pcs]	Delivery batch [pcs]	Weight/ unit [kg]
OT100125F_	1070		0ZXL1	1SCA022439R6770	3	1	0.14
OT_160250E_C	1070	0TS250_L	0ZXB1L	1SCA022169R2030	3	1	0.15
OT_160250E_C	1070	0TS250_L	0ZXB1L/1	1SCA022194R0030	1	50	0.05
OT_160250E_C	25120	0ZXB2K	0ZXB2	1SCA022119R7610	3	1	0.34
OT_160250E_C	25120	OZXB2K	0ZXB2/1	1SCA022194R0200	1	50	0.12
OT_160250E_C	25120	OZXB2K	0ZXB2L	1SCA022158R7750	3	1	0.43
OT_160250E_C	25120	0ZXB2K	0ZXB2L/1	1SCA022194R0460	1	50	0.15
OT_160250E_C	95185	0TS250_L	0ZXB8	1SCA022744R1510	3	1	0.50
OT_160250E_C	95185	0TS250_L	0ZXB8/1	1SCA022744R1600	1	20	0.15
OT_160250E_C	95240	0TS250_L	0ZXB9	1SCA022750R3210	3	1	0.50
OT_160250E_C	95240	0TS250_L	0ZXB9/1	1SCA022750R3300	1	20	0.15
OT_315400E_C	25120	OZXB2K	0ZXB2L	1SCA022158R7750	3	1	0.43
OT_315400E_C	25120	0ZXB2K	0ZXB2L/1	1SCA022194R0460	1	50	0.15
OT_315400E_C	70185	0ZXB3K	0ZXB3	1SCA022136R8100	3	1	1.28
OT_315400E_C	70185	0ZXB3K	0ZXB3/1	1SCA022194R0620	1	20	0.43
OT_315400E_C	2x(70185)	0ZXB3K	0ZXB4	1SCA022137R4760	3	1	1.71
OT_315400E_C	2x(70185)	0ZXB3K	0ZXB4/1	1SCA022194R0890	1	20	0.57
OT_315400E_C	120240	0ZXB5K	0ZXB7	1SCA022185R0040	3	1	1.00
OT_315400E_C	120240	OZXB5K	0ZXB7/1	1SCA022194R1430	1	20	0.34
OT_315400E_C	120240	OZXB5K	0ZXB7L	1SCA022185R7130	3	1	1.17
OT_315400E_C	120240	OZXB5K	0ZXB7L/1	1SCA022194R1600	1	20	0.40
OT_315400E_C	95185	0TS400_L	0ZXB8	1SCA022744R1510	3	1	0.50
OT_315400E_C	95185	0TS400_L	0ZXB8/1	1SCA022744R1600	1	20	0.15
OT_315400E_C	95240	0TS400_L	0ZXB9	1SCA022750R3210	3	1	0.50
OT_315400E_C	95240	0TS400_L	0ZXB9/1	1SCA022750R3300	1	20	0.15

Optional accessories for manual change-over switches Ordering information for bridging- and reversing bars



OTZC13...34



OTZC43...44 OTZC53...54



The bridging bars provide a connection link either on the incoming or outcoming side of the switch.

Suitable for switches	No. of poles	Туре	Order number	Units/ type [pcs]	Weight/ unit [kg]
OT_160250_C	3	OTZC13	1SCA022767R6910	3	0.6
OT_160250_C	4	OTZC14	1SCA022767R7040	4	0.8
OT_315400_C	3	OTZC23	1SCA022767R7120	3	0.6
OT_315400_C	4	OTZC24	1SCA022767R7210	4	0.8
OT_600_C800E_C	3	OTZC33	1SCA022785R7020	3	1.0
OT_600_C800E_C	4	OTZC34	1SCA022785R7110	4	1.3
OT_10001250E_C	3	OTZC43	1SCA022868R0710	3	4.2
OT_10001250E_C	4	OTZC44	1SCA022868R0800	4	5.6
OT800U_, OT_1600E_C	3	OTZC53	1SCA022868R0980	3	5.6
OT800U_, OT_1600E_C	4	OTZC54	1SCA022868R1010	4	7.4
OT_20002500E_C	3	OTZC63	1SCA022868R1100	3	10.8
OT_20002500E_C	4	OTZC64	1SCA022868R1360	4	14.5
OT_3200E_C	3	OTZC73	1SCA128843R1001	3	14.1
OT_3200E_C	4	OTZC74	1SCA128844R1001	4	18.7



Reversing bars

A reversing switch can be built by using phase sequence bars in two phases. The kit includes two phase sequence conversion bars. The missing bridging bars must be ordered separately, see above. For example 3-pole switches: one 4-pole standard bridging bar kit is required (one bar for the reversing side, three bars for the other side).

Suitable for switches	Туре	Order number	Units/ type [pcs]	Weight/ unit [kg]
OT_160250_C	OTZR1	1SCA100352R1001	2	0.3
OT_315400_C	OTZR2	1SCA104647R1001	2	0.3
OT_600_C800E_C	OTZR3	1SCA100355R1001	2	0.4

Ordering information for fourth poles



OTPS40F

Fourth poles for OT16...125F

Snap-on mounting to the left or right side of the switches, IP20. Simultaneous operation with power poles. The type and ordering numbers are for one piece.

Suitable for switches	Rated current, up to 415V AC-21A/AC-22A/AC-23A I[A]	Туре	Order number	Delivery batch [pcs]	Weight/ unit [kg]
OT1640F_C	40/40/23	OTPS40FPN11)	1SCA105001R1001	10	0.03
OT1640F_C	40/40/23	OTPS40FPN2 ²⁾	1SCA105000R1001	10	0.03
OT6380F_C	80/80/75	OTPS80FP	1SCA105461R1001	10	0.06
0T100125F C	125/125/90	OTPS125FP	1SCA105099R1001	10	0.14

¹⁾ Installation to the left side

²⁾ Installation to the right side

Optional accessories for manual change-over switches Ordering information and technical data for auxiliary contacts



OA1G01 OA7G10



OA1G10 OA8G01



OA2G11

Auxiliary contact blocks for OT16...125F

Snap-on mounting to the switch, IP 20, max. 2 blocks/ side. I_{th} = 16 A, suitable for cable cross sections max. 2 x 2,5 mm². Simultaneous action with the main contacts.

Suitable for switches	Contact functions	Installation side	Туре	Order number	Delivery batch [pcs]	Weight/ unit [kg]
OT_16125F_C	1NO	Right	0A1G10	1SCA022353R4970	10	0.03
OT_16125F_C	1NC	Right	0A8G01	1SCA022744R2240	10	0.03
OT_16125F_C	1NO	Left	0A7G10	1SCA022673R1140	10	0.03
OT_16125F_C	1NC	Left	0A1G01	1SCA022353R4890	10	0.03
OT63125F3C	1NO+1NC	Either	OA2G11 ¹⁾	1SCA022379R8100	10	0.03

¹⁾ Not mountable on 4-pole change-over switches

Auxiliary contact blocks for OT160... 3200

Mounting on the right side of the switch: Max. 4 auxiliary contact blocks/switch (totally 8 blocks). Types _AU have gold plated contacts for harsh environments and low operating voltages. Simultaneous action with the main contacts, IP20.

Suitable for switches	Contact functions	Installation side	Туре	Order number	Delivery batch [pcs]	Weight/ unit [kg]
OT_1603200_	1NO	Right	OA1G10	1SCA022353R4970	10	0.03
OT_1603200_	1NC	Right	0A3G01	1SCA022456R7410	10	0.03
OT_1603200_	1NO	Right	OA1G10AU	1SCA022436R7910	10	0.03
OT_1603200_	1NC	Right	0A3G01AU	1SCA022819R5260	10	0.03

Auxiliary contacts

Technical data for auxiliary contacts according to IEC 60947-5-1, for OA1G_, OA2G_, OA3G_, OA7G_, OA8G_									
AC15				DC12		DC13			
U _e /[V]	I _e /[A]	U _e /[V]	I _e /[A]	P/[W]	I _e /[A]	P/[W]			
230	6	24	10	240	2	50			
400	4	72	4	290	0.8	60			
415	4	125	2	250	0.55	70			
690	2	250	0.55	140	0.27	70			
	:	440	0.1	44	:	:			

Function tables

Function table of 011603200, 01160800_Y and 01M1602500 auxiliary contacts / Switch I (max. 2+2)								
Handle position	Main contacts	OA1G10 NO	OA3G01 NC					
I	closed	closed	open					
0	open	open	closed					
II	closed	open	closed					

Function table of OT160...3200, OT160...800_Y and OTM160...2500 auxiliary contacts / Switch II (max. 2+2)

Handle position	Main contacts	OA1G10 NO	OA3G01 NC
I	closed	open	closed
0	open	open	closed
II	closed	closed	open



Motorized change-over switches Open transition from 40 to 3200 Amperes

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ABB's motorized change-over switches are suitable for remote operations and ensure a reliable load transfer under any given circumstance.

Motorized change-over switches Uninterrupted power supply with motorized functionality

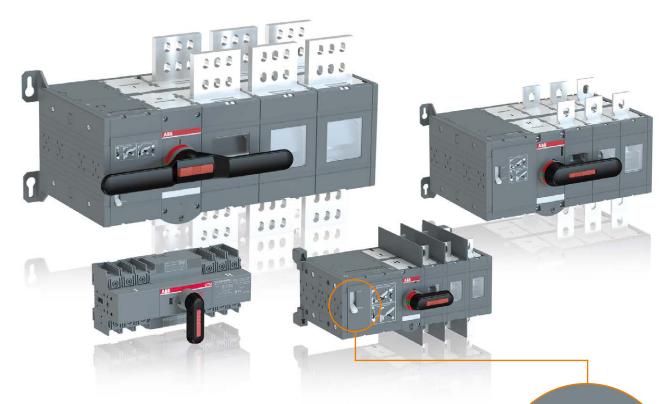


ABB offers a wide variety of open transition motorized change-over switches from 40 to 3200 Amperes in range. All of our visually redesigned motorized change-over switches now come equipped with a new cover with clear operating instructions and enhanced motor operator performance.



High performance level

Ensuring a high performance level for you is of the utmost importance to us. In change-over applications where the loaded switch may need to be operated remotely, adequate durability has been ensured by testing against the IEC 60947-6-1 standard in the specification of endurance requirements.



Reduced installation time

ABB motorized change-over switches are fast and easy to install. The voltage sensing connectors have been designed to save time, as there is no need to drill holes into the busbars (see page 78 for relevant accessories). Also, the control and power cables are screw mounted, providing a safe and secure connection that stays tight even during transportation.



Safe and reliable

Our switches come equipped with a comprehensive range of inbuilt safety features such as mechanical interlock, which ensures the isolation of the two asynchronous power supplies. This eliminates risk of short-circuiting between them. The motorized change-over switches are also equipped with a handle for manual operation in case of emergency.



Space-saving design

ABB provides compact and cost-effective components for any and all installations. On average, our motorized change-over switches are 20% smaller than other similar products on the market.

Motorized change-over switches Open transition from 40 to 2500 Amperes





vitches 16-125 A									
;	_			1	OTM63F_C				
	•	•••••	•	•••••	1		•••••	••••••	•••••
					OTM10	OF_C			
	•••••	••••	•	•••••	1		•••••	•••••	•••••
40	63	80	115	125	40	63	80	115	125
40	63	80	100	125	40	63	80	100	125
40	63	80	80	90	40	63	80	80	90
	OTM40	0TM40F_C 40 63 40 63	OTM40F_C 40 63 80 40 63 80	OTM40F_C 40 63 80 115 40 63 80 100	0TM40F_C 40 63 80 115 125 40 63 80 100 125	0TM40F_C 0TM63 0TM80 0TM10 0TM12 0TM12 40 63 80 115 125 40 40 63 80 100 125 40	OTM40F_C	OTM40F_C OTM63F_C OTM80F_C OTM100F_C OTM125F_C OTM125F_C 40 63 80 115 125 40 63 80 40 63 80 100 125 40 63 80	OTM40F_C OTM63F_C OTM80F_C OTM100F_C OTM125F_C OTM125F_C 40 63 80 115 125 40 63 80 115 40 63 80 100 125 40 63 80 100









Types	OTM16	OTM160E_C			OE_WC		0TM31	15E_C	OTM63	
		OTM200E_C			OTM200E_WC		1 -	00E_C	0TM80	_
		0E_C	······································		50E_WC	•••••		••••••		•
I _{th} /A	160	200	250	160	200	250	315	400	630	800
_e /AC-22A, < 415V	160	200	250	160	200	250	315	400	630	800
_e /AC-23A, < 415V	160	200	250	160	200	250	315	400	630	800
I ₂ /AC-31B, < 415V	160	200	250	160	200	250	315	400	650	720







Motor operation, change-over s	witches 1000-3200 A						
Types	OTM1000E	_C	OTM1600E_C	OTM2000	_		
	OTM1250E	_C		OTM2500E	<u>_</u> C		
				OTM3200			
I _{th} /A	1000	1250	1600	2000	2500	3200	
I _e /AC-22A, < 415V	1000	1250	1600				
I _e /AC-21B, < 415V				2000	2500	3200	
I _e /AC-31B, < 415V	1000	1250	1600			••••••••••••	

Motorized change-over switches Type codes

Type codes

Understanding the type code keys below will help you quickly identify the correct product for your needs. The simple naming system allows you to see the products type, Ampere rating, standard classification and number of poles, all in one glance.

Explanation of the types OTM40...125_C

Option:	OTM125	F	3	С	M	Α	230	V
Position:	1	2	3	4	5	6	7	8
1	Brand and Switch size /	Ampere rating						
2	IEC							
3	Number of the poles							
	3: 3-poles							
-	4: 4-poles							
4	Change over switch: I-0	-II -operation						
5	Remote control							
6	Automatic operation ava	ilable with OMI	O control unit	(controller not i	ncluded in the	e delivery)		
7	Voltage for motor operat	tor						
	230: 110240 V AC/DC							
-	24: 24 V AC/DC							
8	Motor voltage type							
-	V=AC/DC							

Explanation of the types OTM160...2500_C

OTIVI250	⊏	3		IVI	230	
1	2	3	4	5	6	7
Brand and Switch size /	Ampere rating					
IEC						
Number of the poles						
2: 2-poles						
3: 3-poles						
4: 4-poles						
Change-over switch: I-0	-II -operation					
Motorized change-over	switch					
Voltage for motor operat	or					
230: 220240 V AC ¹⁾						
110: 110125 V AC/DC						
48: 48 V AC/DC						
24: 24 V AC/DC						
Motor voltage type						
V: AC/DC						
C: AC						
D: DC						
	Brand and Switch size / IEC Number of the poles 2: 2-poles 3: 3-poles 4: 4-poles Change-over switch: I-O Motorized change-over s Voltage for motor operat 230: 220240 V AC ¹⁾ 110: 110125 V AC/DC 48: 48 V AC/DC 24: 24 V AC/DC Motor voltage type V: AC/DC C: AC	Brand and Switch size / Ampere rating IEC Number of the poles 2: 2-poles 3: 3-poles 4: 4-poles Change-over switch: I-0-II -operation Motorized change-over switch Voltage for motor operator 230: 220240 V AC ¹) 110: 110125 V AC/DC 48: 48 V AC/DC 48: 48 V AC/DC Motor voltage type V: AC/DC C: AC	Brand and Switch size / Ampere rating IEC Number of the poles 2: 2-poles 3: 3-poles 4: 4-poles Change-over switch: I-0-II -operation Motorized change-over switch Voltage for motor operator 230: 220240 V AC ¹) 110: 110125 V AC/DC 48: 48 V AC/DC 24: 24 V AC/DC Motor voltage type V: AC/DC C: AC	Brand and Switch size / Ampere rating IEC Number of the poles 2: 2-poles 3: 3-poles 4: 4-poles Change-over switch: I-0-II -operation Motorized change-over switch Voltage for motor operator 230: 220240 V AC ¹) 110: 110125 V AC/DC 48: 48 V AC/DC 24: 24 V AC/DC Motor voltage type V: AC/DC C: AC	Brand and Switch size / Ampere rating IEC Number of the poles 2: 2-poles 3: 3-poles 4: 4-poles Change-over switch: I-0-II -operation Motorized change-over switch Voltage for motor operator 230: 220240 V AC ¹) 110: 110125 V AC/DC 48: 48 V AC/DC 24: 24 V AC/DC Motor voltage type V: AC/DC C: AC	Brand and Switch size / Ampere rating IEC Number of the poles 2: 2-poles 3: 3-poles 4: 4-poles Change-over switch: I-0-II -operation Motorized change-over switch Voltage for motor operator 230: 220240 V AC ¹⁾ 110: 110125 V AC/DC 48: 48 V AC/DC 24: 24 V AC/DC Motor voltage type V: AC/DC C: AC

^{1) 2-}pole versions, motor voltage Ue 220...240V AC/DC

Motorized change-over switches Technical data for OTM16...125_C

Motorized change-over switches

				Switch size	7	,	,	,
Data according to IEC 60947-3				OTM40_	OTM63_	_08MTO	OTM100_	OTM12
Rated insulation voltage and rated operational voltage AC20/DC20		Pollution degree 3	V	800	800	800	800	800
Dielectric strength		50 Hz 1min.	kV	6	6	6	6	6
Rated impulse withstand voltage			kV	8	8	8	8	8
Rated thermal current and rated	/ ambient 40°C	In open air	Α	40	63	80	115	125
perational current AC20/DC20	/ ambient 40°C	In enclosure	Α	40	63	80	115	125
	/ ambient 60°C	In enclosure	Α	32	50	63	80	100
with minimum conductor cross section		Cu	mm²	10	16	25	35	50
Rated operational current, AC-21A		up to 500 V	Α	40	63	80	100	125
acousticinal current, no 2 m		690 V	A	40	63	80	100	125
Rated operational current, AC-22A		up to 500 V	Α	40	63	80	100	125
lated operational current, AO-22A		690 V	A	40	63	80	100	125
Rated operational current, AC-23A		up to 415 V	A	40	63	80	80	90
nateu operational current, AO-23A		500 V	A	40	60	60	60	70
		÷	÷		÷		÷	
Ostad approximal augment / pales in agging DC 01A		690 V	Α	40	40	40	40	50
ated operational current / poles in series, DC-21A		up to 48 V	A	40/1	63/1	80/1	100/1	125/1
		110 V	A	40/2	63/2	80/2	100/2	125/2
		220 V	A	40/4	63/4	80/4	100/4	100/4
Rated operational current / poles in series, DC-22A		up to 48 V	Α	40/1	63/1	80/1	100/1	125/1
		110 V	Α	40/2	63/2	80/2	100/2	125/2
		220 V	Α	40/4	63/4	80/4	80/4	80/4
Rated operational current / poles in series, DC-23A		up to 48 V	Α	40/1	63/1	80/1	100/1	125/1
		110 V	Α	40/2	63/2	80/2	100/2	125/2
		220 V	Α	40/4	63/4	63/4	63/4	63/4
ated operational power, AC-23A ¹⁾		230 V	kW	7.5	15	22	22	22
he kW-ratings are accurate for 3-phase 1500 R.P.M.		400 V	kW	18.5	30	37	37	45
tandard asychronous motors		415 V	kW	18.5	30	37	37	45
		500 V	kW	22	37	37	37	45
		690 V	kW	37	37	37	37	45
lated breaking capacity in category AC-23		up to 415 V	Α	320	504	640	640	720
g	<u> </u>	500 V	Α	320	480	480	480	560
		690 V	Α	320	320	320	320	400
Rated conditional short-circuit current I, (r.m.s.)	I (r.m.s.) 50 kA, 415 V	î (peak)	kA	16.5	16.5	16.5	16.5	16.5
nd corresponding max. allowed cut-off current î	Max. OFA_ fuse size	gG/aM	A/A	125/125	125/125	125/125	125/125	125/1
peak) value. The cut-off current î, refers to values	I _n (r.m.s.) 18 kA, 690 V		kA	11	11	11	11	111
sted by fuse manufacturers (single phase test	Max. OFA_ fuse size	î¸ (peak) gG		125	125	125	125	125
icc. to IEC60269).			A	10		120		120
	I _p (r.m.s.) 50 kA, 690 V	î (peak)	kA ^ /^	1	10		10	
No. 1 L. 1 C. 20 L. 1	Max. OFA_ fuse size	gG/aM	A/A	63/63	63/63	63/63	63/63	63/63
Rated short-time withstand current	I _{cw} (r.m.s.)	690 V 1s	kA	2.5	2.5	2.5	2.5	2.5
ated short-time making capacity ²⁾	I _{cm} (peak)	690 V	kA	3.6	3.6	3.6	3.6	3.6
ower loss / pole	With rated current		W	1.6	2.8	3.5	4.0	6.3
Mechanical endurance	Number of oper. cycles ³⁾		Cycles	10 000	10 000	10 000	10 000	10 000
Cable size	Cu-wire size suitable for		mm ²	2.5-25/2x2.5-16	10-70	10-70	10-70	10-70
	terminal clamps		AWG	14-4/2x14-6	8-00	8-00	8-00	8-00
erminal tightening torque	Counter torque required		Nm	6	6	6	6	6
perating torque	3-pole switches		Nm	5	5	5	5	5
Veight without accessories	3-pole switch		kg	1.37	1.37	1.37	1.37	1.37
	4-pole switch		kg	1.60	1.60	1.60	1.60	1.60
ata according to IEC 60947-6-1								
Class of equipment				PC	PC	PC	PC	PC
ated short-time withstand current	I _{cw} (r.m.s.)	690 V 0.1s	kA	5	5	5	5	5
conditional short-circuit current	I _{cc} (r.m.s.)	415 V	kA	50	50	50	50	50
corresponding fuse rating	gG/aM fuse	415 V	Α	125	125	125	125	125
Rated operational current, AC-31B	. J	up to 415 V	A	40	63	80	100	125
Rated operational current, AC-32B		up to 415 V	A	40	63	80	100	125
acoa operational outroits, 110 OLD	.	up to 415 V		40	63	80	80	80

These values are given for guidance and may vary according to the motor manufacturer
 Short circuit duration > 50ms, without fuse protection
 Operating cycle: O - I - O - II - O

Motorized change-over switches Technical data for OTM160...800_C

Motorized change-over switches

				Switch si	ze					
Data according to IEC 60947-3				OT_160_	OT_200_	OT_250_	OT_315_	OT_400_	OT_630_	OT_800_
Rated insulation voltage and rated		Pollution	V	1000	1000	1000	1000	1000	1000	1000
operational voltage AC20/DC201)		degree 32)								
Dielectric strength		50 Hz 1min.	kV	10	10	10	10	10	10	10
Rated impulse withstand voltage ³⁾			kV	12	12	12	12	12	12	12
Rated thermal current and rated	/ ambient 40°C	In open air	Α	160	200	250	315	400	630	800
operational current AC20/DC20	/ ambient 40°C	In enclosure	Α	160	200	250	315	400	630	800
.with minimum conductor cross section		Cu	mm²	70	95	120	185	240	2x185	2x240
Rated operational current, AC-21A		up to 500 V	Α	160	200	250	315	400	630	800
		690 V	Α	160	200	250	315	400	630	800
Rated operational current, AC-22A		up to 500 V	Α	160	200	250	315	400	630	800
		690 V	Α	160	200	250	315	400	630	800
Rated operational current, AC-23A		up to 415 V	Α	160	200	250	315	400	630	800
		440 V	Α	160	200	250	315	400	630	800
		500 V	Α	160	200	250	315	400	630	800
		690 V	Α	160	200	250	315	400	630	800
Rated operational current /		≤ 110 V	Α	160/2	200/2	250/2	315/1 ¹⁾	400/11)	630/1	800/1
ooles in series, DC-21A ⁶⁾		220 V	Α	160/2	200/2	250/2	315/21)	400/21)	630/1	800/1
		440 V	Α	160/3	200/3	230/3	315/3	360/3	630/2	720/2
		660 V	Α	160/4	200/4	200/4	315/4	315/4	630/41)	630/41)
Rated operational power, AC-23A ²⁾		230 V	kW	45	60	75	100	132	200	250
The kW-ratings are accurate for		400 V	kW	90	110	140	160	220	355	450
3-phase 1500 R.P.M. standard		415 V	kW	90	110	145	180	230	355	450
sychronous motors		500 V	kW	110	132	170	220	280	400	560
		690 V	kW	160	200	250	315	400	630	800
Rated breaking capacity		up to 415 V	A	1 280	1 600	2 000	2 520	3 200	5 040	6 400
n category AC-23		500 V	Α	1 280	1 600	2 000	2 520	3 200	5 040	6 400
3 ,		690 V	A	1 280	1 600	2 000	2 520	3 200	5 040	6 400
Rated conditional short-circuit	I _. (r.m.s.) 80 kA, 415 V	î (peak)	kA	40.5	40.5	40.5	59	59	83.5	83.5
current I _a (r.m.s.) and cut-off	Max. OFA fuse size	gG/aM	A/A	355/315	355/315	355/315	500/500	500/500	800/1 000	800/1 00
current î (peak) value. The cut-off	I _n (r.m.s.) 100 kA, 500 V	î, (peak)	kA	40.5	40.5	40.5	61.5	61.5	90	90
current î refers to values listed by	Max. OFA_ fuse size	gG/aM	A	315/315	315/315	315/315	500/450	500/450	800/800	800/800
use manufacturers (single phase	;	;	;	40.5	40.5	40.5	59	59	83.5	83.5
est acc. to IEC60269).	I _p (r.m.s.) 80 kA, 690 V Max. OFA_ fuse size	î _c (peak) gG/aM	kΑ	355/315	355/315	355/315	500/500	500/500	800/1 000	800/1 00
Patad about time withstand averant	· } ······		A	+	· 	. 4	÷	;		
Rated short-time withstand current	I _{cw} (r.m.s.)	690 V 0.15s 690 V 0.25s	÷	15 15	15 15	15 15	31 24	31 24	38 36	38 36
		÷	÷	1	8	8	15	15	20	20
Dated short time making conscitus	1 (2004)4)	690 V 1s	kA	8		30	 	4		
Rated short-time making capacity ³⁾	I _{cm} (peak) ⁴⁾	690 V	kA	30	30		65	65	80	80 40
Power loss / pole	With rated current		W	2.4	4	6.5	6.5	10	25	.
Mechanical endurance	Number of oper. cycles ⁵⁾		Cycles	8 000	8 000	8 000	8 000	8 000	5 000	5 000
Ferminal bolt size	Metric thread diameter x length		mm	M8x25	M8x25	M8x25	M10x30	M10x30	M12x40	M12x40
erminal tightening torque	Counter torque required		Nm	15-22	15-22 7	15-22 7	30-44	30-44	50-75	50-75
Operating torque	3-pole change-over switches		Nm	7			16	16	27	27
Veight without accessories	3-pole switch		kg	5.7	5.7	5.7	10.2	10.2	17.5	17.5
	4-pole switch		kg	6.4	6.4	6.4	11.4	11.4	20.4	20.4
Data according to IEC 60947-6-1	:		:		. po	i no	: po	. po	. 00	. DO
Class of equipment		0001:5:		PC	PC	PC	PC	PC	PC	PC
Rated short-time withstand current	I _{cw} (r.m.s.)	690 V 0.1s		15	15	15	25	25	38	38
Rated operational current, AC-31B		up to 415 V		160	200	250	315	400	650	720
Rated operational current, AC-33B		up to 415 V	A	160	200	250	315	400	650	650

¹⁾ Utilization category B

²⁾ These values are given for guidance and may vary acc. to the motor manufacturer

³⁾ Short circuit duration > 50ms, without fuse protection

⁴⁾ Max. distance from switch frame to nearest busbar / cable support 150 mm

⁵⁾ Operating cycle: O - I - O - II - O

⁶⁾ Further ratings on request

Motorized change-over switches Technical data for OTM1000...3200_C

Motorized change-over switches

				Switch size					
Data according to IEC 60947-3				OT_1000_	OT_1250_	OT_1600_	OT_2000_	OT_2500_	OT_3200
Rated insulation voltage and rated		Pollution degree 3	3 ²⁾ V	1 000	1 000	1 000	1 000	1 000	1 000
operational voltage AC20/DC201)									
Dielectric strength		50 Hz 1min.	kV	10	10	10	10	10	10
Rated impulse withstand voltage ³⁾			kV	12	12	12	12	12	12
Rated thermal current and rated	/ ambient 40°C	In open air	Α	1 000	1 250	1 600	2 000	2 500	3 200
operational current AC20/DC20	/ ambient 40°C	In enclosure	Α						
with minimum conductor		Cu	mm ²	2x300	2x400	2x500	3x500	4x500	4x1 000
cross section						ļ			
Rated operational current, AC-21A		up to 500 V	A	1 000	1 250	1 600	2 0005)	2 5005)	3 2005)
		690 V	Α	1 000	1 250	1 600			
Rated operational current, AC-22A		up to 500 V	Α	1 000	1 250	1 600			
		690 V	A	1 000	1 250	1 600			
Rated operational current, AC-23A		up to 415 V	A	1 000	1 250	1 250	į	<u>.</u>	
		440 V	A	1 000	1 250	1 250		ļ	
		500 V	Α	1 000	1 250	1 250	į	: :	
		690 V	A	1 000	1 250	1 250	<u>.</u>	: -	
Rated operational power, AC-23A1)		230 V	kW	315	400	400			
The kW-ratings are accurate for		400 V	kW	560	710	710	į	<u>:</u>	į
3-phase 1500 R.P.M. standard asychronous motors		415 V	kW	560	710	710		ļ	
asychionous motors		500 V	kW	710	900	900	į	<u>.</u>	
		690 V	kW	1 000	1 200	1 200	<u>.</u>	: -	
Rated breaking capacity		up to 415 V	A	10 000	10 000	10 000		ļ	
in category AC-23		500 V	A	10 000	10 000	10 000	į	:	į
		690 V	A	10 000	10 000	10 000			
Rated conditional short-circuit	I _p (r.m.s.) 80 kA, 415 V	î _c (peak)	kA	100	100	100			
current I _p (r.m.s.) and cut-off current î _e (peak) value. The cut-off	Max. OFA_ fuse size	gG/aM	A/A	+	1 250/1 250	1 250/1 250		<u>.</u>	
current i refers to values listed by	I _p (r.m.s.) 100 kA, 500 V	î _c (peak)	kA	106	106	106			
fuse manufacturers (single phase	Max. OFA_ fuse size	gG/aM	A	1 250/1 250	1 250/1 250	1 250/1 250	<u>.</u>		<u>.</u>
test acc. to IEC60269).	I _p (r.m.s.) 80 kA, 690 V	î _c (peak)	kA		,	ļ	į		
	Max. OFA_ fuse size	gG/aM	Α						
Rated short-time withstand current	I _{cw} (r.m.s.)	690 V 0.15s	kA	50	50	50	50	50	
		690 V 0.25s	kA	50	50	50	50	50	
		690 V 1s	kA	50	50	50	55	55	65
Rated short-time making capacity ²⁾	I _{cm} (peak) ³⁾	690 V	kA	92	92	92	110	110	143
Power loss / pole	With rated current		W	19	29	48	55	85	95
Mechanical endurance	Number of oper. cycles ⁴⁾		Cycles	3 000	3 000	3 000	2 000	2 000	2 000
Terminal bolt size	Metric thread diameter x length		mm	M12x60	M12x60	M12x60	M12x60	M12x60	M12x100
Terminal tightening torque	Counter torque required		Nm	50-75	50-75	50-75	50-75	50-75	50-75
Operating torque	3-pole change-over switches		Nm	78	78	78	78	78	80
Weight without accessories	3-pole switch		kg	42	42	44	56	56	83
	4-pole switch		kg	50	50	52	70	70	101
Data according to IEC 60947-6-1	+	,		1	,				
Class of equipment		: :	į	PC	PC	PC	<u>;</u>	:	;
Rated short-time withstand current	I _{cw} (r.m.s.)	690 V 0.1s	kA	50	50	50		•	<u> </u>
Rated operational current, AC-31B		up to 415 V	A	1 000	1 250	1 600		<u>.</u>	
Rated operational current, AC-33B		up to 415 V	Α	1 000	1 000	1 000			

¹⁾ These values are given for guidance and may vary acc. to the motor manufacturer

²⁾ Short circuit duration > 50ms, without fuse protection

Max. distance from switch frame to nearest busbar / cable support 150 mm
 Operating cycle: O - I - O - II - O
 Category AC-21B, up to 415V

Motorized change-over switches Motor operator performance data for OTM40...125_C

Motor operator

				Switch size
Data according to IEC 60947				40125
Rated operational voltage U _e	Pollution degree 3		V AC/DC	110 - 240
	50/60 Hz		V DC	24
Operating voltage range				0.85 - 1.1 x U _e
Operating time ¹⁾	90° I-0, 0-I, 0-II, II-0	110240 V AC/DC	S	0.5-1.0
		24 V DC	S	0.6-1.3
Operating transfer time ¹⁾	180° I-II, II-I	110240 V AC/DC	S	1.2-1.5
		24 V DC	S	1.4-2.1
OFF -time when operating I-II or II-I ¹⁾	180° I-II, II-I	110240 V AC/DC	S	0.4-0.8
		24 V DC	S	0.6-1.0
Nominal current In ¹⁾		110240 V AC/DC	Α	0.2-0.5
		24 V DC	Α	0.6
Current inrush ¹⁾		110240 V AC/DC	Α	1.5-3.0
		24 V DC	A	3.6
Operating rate	Cycle 0-I-0-II-0	Max. continuous	cycles/min	1
		Max. short-time ≤ 10 cycles	cycles/min	10
Overvoltage category				lli
Rated impulse withstand voltage U _{imp}			kV	4
Dielectric strength		50 Hz 1 min.	kV	1.5
mpulse command		Min. impulse duration	ms	100
Terminals	······		;	
/oltage supply wiring for U _e				PE - N - L
Cross section		Solid/stranded	mm²	1.5 - 2.5
Short-circuit protection device		Max. MCB	Α	C16
Control terminal				C - II - I - O
Cross section	.	Solid/stranded	mm²	1.5 - 2.5
Maximum cable length			m	100
Terminal for state information	· · · · · · · · · · · · · · · · · · ·	10.000		
Terminal for state information	1234	Solid/stranded	mm²	1.5
Also used with the OMD automatic control unit		Rating	Α	3
	<u>@</u> / - −			AC-1/250V
Common, voltage supply	1			
Position of switch I	2			
Position of switch II	3			
Handle attached or motor operator locked	4			
Short-circuit protection device		Max. MCB	A	C2
Control terminal for OMD automatic control unit	,			
Control terminal for OMD automatic control unit	ي ي	Solid/stranded	mm²	1.5 - 2.5
	1 2 3			
Common, voltage supply from motor operator	1		V DC	24
Close switch I or open switch II	2		V DC	24
			mW	500
Close switch II or open switch I	3		V DC	24
			mW	500
Operating temperature			°C	-25+55
ransportation and storage temperature			°C	-40+70
Nax. altitude			m	2 000
Protection degree (front panel)				IP20

¹⁾ Under nominal conditions

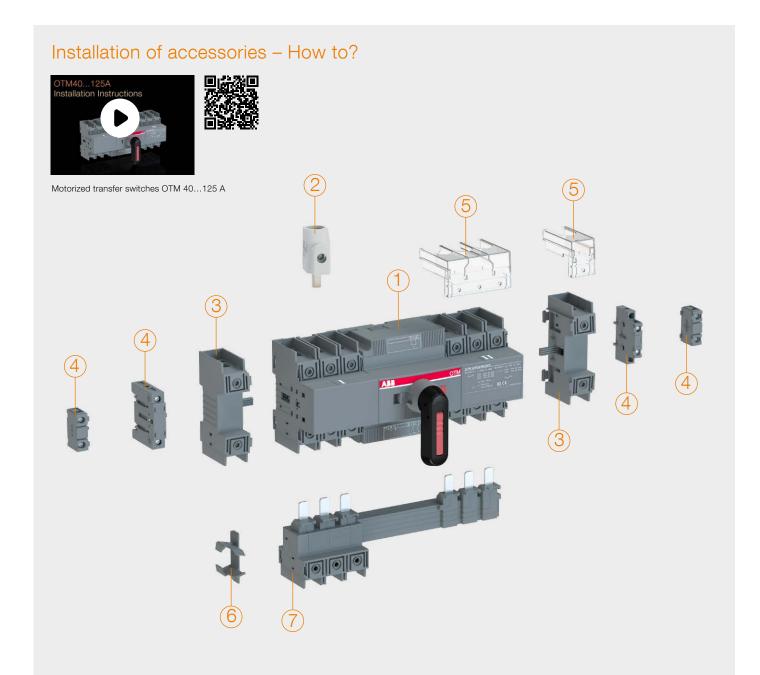
Motorized change-over switches Motor operator performance data for OTM160...3200_C

Motor operator

				Switch size	,			
Data according to IEC 60947				160250	315400	630800	10001600	2000320
Rated operational voltage U _e	Pollution degree 3	50/60 Hz	V AC V AC/DC V DC V DC			220 - 240 110 - 125 48 24		
Operating voltage range					***************************************	0,85 - 1,1 x l	J _e	•••••
Operating time ¹⁾	90° I-0, 0-I, 0-II, II-0	220-240VAC	S	0.4-1.0	0.4-1.0	0.4-1.0	0.5-1.5	0.5-1.5
		110-125VAC/DC 48VDC 24VDC	S S	0.5-1.5 0.5-1.5 0.4-1.0	0.5-1.5 0.4-1.0 0.4-1.0	0.6-1.2 0.6-1.6 0.5-1.5	0.5-1.5 0.5-1.5 1.0-2.0	0.5-1.5 0.5-1.5 1.0-2.0
Operating transfer time!	180° I-0-II, II-0-I	220-240VAC	S	1.0-2.0	0.4-1.0	0.9-2.0	1.5-3.0	1.5-3.0
Operating transfer time ¹⁾	100 1-0-11, 11-0-1	110-125VAC/DC	S S	1.1-2.5	1.2-2.6	1.2-3.0	1.5-3.0	1.5-3.0
		48VDC 24VDC	S S	1.4-2.5 1.0-2.0	1.0-2.0 1.0-2.0	1.3-3.0 1.1-2.5	1.5-3.0 2.0-3.5	1.5-3.0 2.0-3.5
OFF -time when operating I-II or II-I1)	180° I-II, II-I	220-240VAC	S	0.4-1.0	0.4-1.0	0.4-1.0	0.5-1.5	0.5-1.5
		110-125VAC/DC	s	0.4-1.1	0.5-1.5	0.6-1.5	0.5-1.5	0.5-1.5
		48VDC	S	0.5-1.1	0.4-1.0	0.7-1.6	0.5-1.5	0.5-1.5
		24VDC	s	0.4-1.0	0.4-1.0	0.5-1.5	0.8-1.7	0.8-1.7
Nominal current I 1)		220-240VAC	Α	0.2	0.5	0.7	1.8	1.8
n		110-125VAC/DC	Α	0.5	0.6	0.8	3.0	3.0
		48VDC	Α	1.1	2.1	2.6	5.3	5.3
		24VDC	Α	3.3	4.2	4	8.0	8.0
Current inrush ¹⁾		220-240VAC	A	1.3	2.1	2.8	7.7	7.7
surrone initiatin		110-125VAC/DC	Α	2.1	2.5	4.6	13.3	13.3
		48VDC	A	4.4	8.3	8.4	22.4	22.4
	1	24VDC	A	16.8	17.5	22.4	26.6	26.6
Overload fuse	Type / I / Capacity	220-240VAC	mA	T/315/H	T/500/H	T/1 000/H	T/2 000/H	T/2 000/H
overioau iuse	Type / In / Gapacity	110-125VAC/DC	mA	T/500/H	T/630/H	T/1 000/H	T/4 000/H	T/4 000/H
		:	÷		÷	÷	÷	:
		48VDC	A	T/1,25/H	T/2,5/H	T/2,5/H	T/5/H	T/5/H
	a.	24VDC	Α	T/4,0/H	T/5,0/H	T/5,0/H	T/10/H	T/10/H
	Size		mm	5x20	5x20	5x20	5x20	5x20
Operating rate	Cycle 0-I-0-II-0,	220-240VAC	cycles/min	1	1	1	0.5	0.5
	max. continuous	110-125VAC/DC 48VDC	cycles/min cycles/min	1	1	1	0.5 0.5	0.5 0.5
		24VDC	cycles/min	1	1	1	0.5	0.5
	Max. short-time,	220-240VAC	cycles/min	10	10	10	5	5
	≤ 10 cycles	110-125VAC/DC	cycles/min	10	10	10	5	5
	3 10 0yoloo	48VDC	cycles/min	10	10	10	5	5
		24VDC	cycles/min	10	10	10	5	5
Overvoltage category		24100	Cycles/IIIII		10	4	J	J
Rated impulse withstand voltage U _{imp}			kV		····•	 	···•	•
		50 Hz 1 min.	kV			1.5		
Dielectric strength		·	KV			1.5	··•·······	
Impulse command		Min. impulse duration	ms			100		
Terminals								
Voltage supply wiring for U _e						PE - N - L		
Cross section		solid/stranded	mm²		***************************************	1.5 - 2.5		•
Short-circuit protection device		max. MCB	А		•••••	C16	•••••	•
Control terminal (no SELV)					•••••	C - II - I - O	•••••	•
Cross section		solid/stranded	mm²			1.5 - 2.5		• • • • • • • • • • • • • • • • • • • •
Maximum cable length			m			100		
State information of locking (no SELV)	-	:		I				
Handle attached or motor operator locked		11-12-14 (C/O)				5A/250V/cosq	n=1	
_ocking motor operator		23-24 (NO)	•			5A/250V/cosq		
Short-circuit protection device		Max. MCB	Α	+		C2		•••••
•		IVIAA. IVIOD	^			IP20		
Protection degree			00		····•	· · · · • · · · · · · · · · · · · · · ·		
Operating temperature			°C			-25+55		
Transportation and storage temperature			°C		<u>.</u>	-40+70		•••••
Max. altitude	<u> </u>	:	m			2 000		

¹⁾ Under nominal conditions

Motorized change-over switches Ordering information for OTM40...OTM125_CMA



Motorized change-over switch accessory guide

- Terminal clamp including voltage sensing connector
- Fourth pole

- 4. Auxiliary contact (Different types for left and right side)
- 5. Terminal shroud
- 7. Parallel connection kit

See next page for recommendations.

Motorized change-over switches Ordering information for OTM40...OTM125_CMA



OTM40...125F3C_



OTM40...125F4C_

Motorized change-over switches, open transition, OTM40...OTM125_CMA

Delivered with a handle for manual operation, a storage clip for the handle and male connectors for control circuit.

No. of poles	Rated current AC-21A, AC-22A ≤ 415V, I[A]	Rated power 400V S[kVA]	Rated current AC-31B/ AC-33B 415V, I[A]	Туре	Order number	Weight/ unit [kg]
Motor v	oltage U _e 110	240 V AC/DC				
3	40	27	40/40	OTM40F3CMA230V	1SCA120096R1001	1.64
4	40	27	40/40	OTM40F4CMA230V	1SCA120102R1001	1.86
3	63	43	63/63	OTM63F3CMA230V	1SCA120095R1001	1.64
4	63	43	63/63	OTM63F4CMA230V	1SCA120101R1001	1.86
3	80	55	80/80	OTM80F3CMA230V	1SCA120093R1001	1.64
4	80	55	80/80	OTM80F4CMA230V	1SCA120100R1001	1.86
3	100	70	100/80	OTM100F3CMA230V	1SCA120071R1001	1.64
4	100	70	100/80	OTM100F4CMA230V	1SCA120098R1001	1.86
3	125	86	125/80	OTM125F3CMA230V	1SCA120070R1001	1.64
4	125	86	125/80	OTM125F4CMA230V	1SCA120097R1001	1.86
Motor v	oltage U _e 24 V C	C	•			•
3	40	27	40/40	OTM40F3CMA24D	1SCA124061R1001	1.64
4	40	27	40/40	OTM40F4CMA24D	1SCA124063R1001	1.86
3	63	43	63/63	OTM63F3CMA24D	1SCA124060R1001	1.64
4	63	43	63/63	OTM63F4CMA24D	1SCA124064R1001	1.86
3	80	55	80/80	OTM80F3CMA24D	1SCA124059R1001	1.64
4	80	55	80/80	OTM80F4CMA24D	1SCA124062R1001	1.86
3	100	70	100/80	OTM100F3CMA24D	1SCA124058R1001	1.64
4	100	70	100/80	OTM100F4CMA24D	1SCA124066R1001	1.86
3	125	86	125/80	OTM125F3CMA24D	1SCA124057R1001	1.64
4	125	86	125/80	OTM125F4CMA24D	1SCA124065R1001	1.86

Handles included as standard, cable cross section

Suitable for switches	Cable cross section [mm²]	Handle
OTM40F_CM	2.525 or 2 x 2.516	OHB65D6CM
OTM63125F_CM	10 70	OHB65D6CM

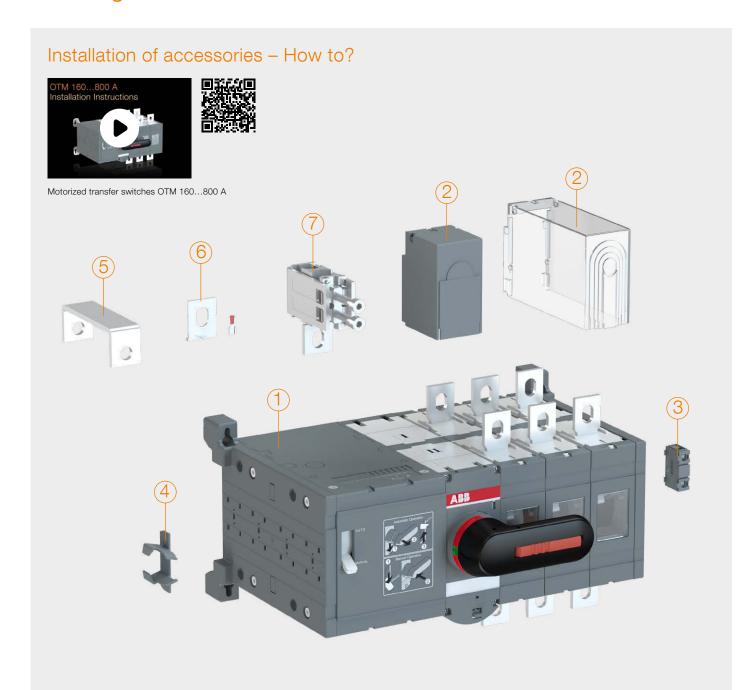




Recommended accessories: Parallel connection kits and terminal clamp

Suitable for switches	Cable cross section [mm²]	Туре	Order number	Units/ type [pcs]	Weight/ unit [kg]
OTM40F3C_	2.525/2x2.516	OMZC003	1SCA121324R1001	1	0.5
OTM40F4C_	2.525/2x2.516	OMZC004	1SCA121325R1001	1	0.65
OTM40125F3C_	1070	OMZC03	1SCA117037R1001	1	0.5
OTM40125F4C_	1070	OMZC04	1SCA117038R1001	1	0.65
OTM40125F_	1650 Al/2.550 Cu	OZXT6	1SCA122537R1001	3	0.06

Motorized change-over switches Ordering information for OTM160...OTM3200_CM



Motorized change-over switch accessory guide

- Terminal shroud
- Storage for handle and fuses
- Bridging bar
- Voltage sensing connectors

Please note that not all listed accessories are automatically included in your order. See next page for recommendations.

Motorized change-over switches Ordering information for OTM160...OTM400_CM



OTM160...250E2CM230V



OTM160...250E2WCM230V



OTM160...250E3CM230C



OTM160...250E4WCM230C



OTM315...400E3CM230V



OTM315...400E4CM230C

Motorized change-over switches, open transition, OTM160...OTM400_CM

Delivered with a handle for manual operation, bolt kit with nut and washers for all terminals and male connectors for control circuits. Types OTM160...400E include a storage clip for the handle and spare fuses. Types OTM160...250E_W are equipped with extended phase distance.



No. of poles	Rated current AC-21A, AC-22A ≤ 415V, I[A]	Rated power 400V S[kVA]	Rated current AC-31B/ AC-33B 415V, I[A]	Туре	Order number	Weight/ unit [kg]
Motor v	oltage U _e 220	240 V AC1)	•		•	•
2	160	110	160/160	OTM160E2CM230V	1SCA121216R1001	5.7
2	160	110	160/160	OTM160E2WCM230V	1SCA121218R1001	5.9
3	160	110	160/160	OTM160E3CM230C	1SCA022845R8610	6.6
3	160	110	160/160	OTM160E3WCM230C	1SCA022846R4000	6.9
4	160	110	160/160	OTM160E4CM230C	1SCA022848R1510	7.5
4	160	110	160/160	OTM160E4WCM230C	1SCA022846R7440	7.9
2	200	135	200/200	OTM200E2CM230V	1SCA121209R1001	5.7
2	200	135	200/200	OTM200E2WCM230V	1SCA121294R1001	5.9
3	200	135	200/200	OTM200E3CM230C	1SCA022845R8960	6.6
3	200	135	200/200	OTM200E3WCM230C	1SCA022846R3960	6.9
4	200	135	200/200	OTM200E4CM230C	1SCA022846R1590	7.5
4	200	135	200/200	OTM200E4WCM230C	1SCA022846R7870	7.9
2	250	170	250/250	OTM250E2CM230V	1SCA121211R1001	5.7
2	250	170	250/250	OTM250E2WCM230V	1SCA121220R1001	5.9
3	250	170	250/250	OTM250E3CM230C	1SCA022845R9260	6.6
3	250	170	250/250	OTM250E3WCM230C	1SCA022846R4770	6.9
4	250	170	250/250	OTM250E4CM230C	1SCA022846R1910	7.5
4	250	170	250/250	OTM250E4WCM230C	1SCA022846R8250	7.9
2	315	215	315/315	OTM315E2CM230V	1SCA121221R1001	9.7
3	315	215	315/315	OTM315E3CM230C	1SCA022847R1210	11.1
4	315	215	315/315	OTM315E4CM230C	1SCA022847R2870	12.5
2	400	275	400/400	OTM400E2CM230V	1SCA121226R1001	9.7
3	400	275	400/400	OTM400E3CM230C	1SCA022847R1630	11.1
4	400	275	400/400	OTM400E4CM230C	1SCA022847R3250	12.5

 $^{^{\}mbox{\tiny 1)}}$ 2-pole versions, motor voltage $\mbox{\rm U}_{\mbox{\tiny e}}$ 220...240V AC/DC

Handles and bolt kits included as standard

Suitable for switches	Handle	Bolt kit
OTM160250	OTV250ECMK	M8x25
OTM315400	OTV400ECMK	M10x30

Recommended accessories: Bridging bars and voltage sensing connectors

Motorized change-over switches Ordering information for OTM630...OTM3200_CM



OTM630...800E2CM230V



OTM630...800E3CM230C



OTM1000...1250E3CM230C



OTM1000...1250E4CM230C



OTM1600E2CM230V



OTM1600E4CM230C



OTM2000...2500E3CM230C



OTM2000...2500E4CM230C

Motorized change-over switches, open transition, OTM630...OTM3200_CM

Delivered with a handle for manual operation, bolt kit with nut and washers for all terminals and male connectors for control circuits. Types OTM630...3200E_ include a storage clip for the handle and spare fuses.



No. of poles	Rated current¹¹ AC-21A, AC-22A ≤ 415V, I[A]	Rated power 400V S[kVA]	Rated current AC-31B/ AC-33B 415V, I[A]	Туре	Order number	Weight/ unit [kg]
Motor	voltage U _e 220	.240 V AC ²⁾	•			
2	630	435	650/650	OTM630E2CM230V	1SCA121268R1001	19
3	630	435	650/650	OTM630E3CM230C	1SCA103567R1001	22
4	630	435	650/650	OTM630E4CM230C	1SCA022873R1990	25
2	800	550	720/650	OTM800E2CM230V	1SCA121270R1001	19
3	800	550	720/650	OTM800E3CM230C	1SCA103570R1001	22
4	800	550	720/650	OTM800E4CM230C	1SCA022872R8340	25
2	1000	680	1000/1000	OTM1000E2CM230V	1SCA121279R1001	45
3	1000	680	1000/1000	OTM1000E3CM230C	1SCA112677R1001	55
4	1000	680	1000/1000	OTM1000E4CM230C	1SCA112703R1001	65
2	1250	850	1250/1000	OTM1250E2CM230V	1SCA121293R1001	45
3	1250	850	1250/1000	OTM1250E3CM230C	1SCA112676R1001	55
4	1250	850	1250/1000	OTM1250E4CM230C	1SCA112702R1001	65
2	1600	1000	1600/1000	OTM1600E2CM230V	1SCA121280R1001	49
3	1600	1000	1600/1000	OTM1600E3CM230C	1SCA112678R1001	59
4	1600	1000	1600/1000	OTM1600E4CM230C	1SCA112704R1001	69
2	2000	1350		OTM2000E2CM230V	1SCA121289R1001	61
3	2000	1350		OTM2000E3CM230C	1SCA112709R1001	78
4	2000	1350		OTM2000E4CM230C	1SCA112712R1001	95
2	2500	1700		OTM2500E2CM230V	1SCA121291R1001	61
3	2500	1700		OTM2500E3CM230C	1SCA112710R1001	78
4	2500	1700		OTM2500E4CM230C	1SCA112713R1001	95
3	3200			OTM3200E3CM230C	1SCA129240R1001	83
4	3200			OTM3200E4CM230C	1SCA129242R1001	101

¹⁾ OTM2000...3200: Category AC-21B

Handles and bolt kits included as standard

Suitable for switches	Handle	Bolt kit
OTM630800	OTV800ECMK	M12x40
OTM10002500	OTV1000ECMK	M12x60

Recommended accessories: Bridging bars and voltage sensing connectors

 $^{^{\}rm 2)}$ 2-pole versions, motor voltage U $_{\rm e}$ 220...240V AC/DC

Motorized change-over switches Ordering information for OTM160...OTM2500_CM



OTM160...250E3CM110V



OTM160...250E4WCM110V



OTM315...400E3CM110V



OTM630...800E4CM110V



OTM1000...1250E4CM110V



OTM1600E3CM230C



OTM2000...2500E4CM110V

Motorized change-over switches, open transition, OTM160...OTM2500_CM

Delivered with a handle for manual operation, bolt kit with nut and washers for all terminals and male connectors for control circuits. Types OTM160...2500E_ include a storage clip for the handle and spare fuses. Types OTM160...250E_W are equipped with extended phase distance.



No. of poles	Rated current ¹⁾ AC-21A, AC-22A	Rated power 400V	Rated current AC-31B/ AC-33B	Tuno	Order number	Weight/ unit
•	≤ 415V, I[A] voltage U _e 110		415V, I[A]	Туре	Order Halliber	[kg]
3	160	110	160/160	OTM160E3CM110V	1SCA022845R8530	6.6
3	160	110	160/160	OTM160E3WCM110V	1SCA022846R3450	6.9
1	160	110	160/160	OTM160E4CM110V	1SCA022846R1080	7.5
ļ	160	110	160/160	OTM160E4WCM110V	1SCA022846R7360	7.9
}	200	135	200/200	OTM200E3CM110V	1SCA022845R8880	6.6
 }	200	135	200/200	OTM200E3WCM110V	1SCA022846R3880	6.9
	200	135	200/200	OTM200E4CM110V	1SCA022846R1410	7.5
	200	135	200/200	OTM200E4WCM110V	1SCA022846R7790	7.9
}	250	170	250/250	OTM250E3CM110V	1SCA022845R9180	6.6
}	250	170	250/250	OTM250E3WCM110V	1SCA022846R4690	6.9
ļ	250	170	250/250	OTM250E4CM110V	1SCA022846R1830	7.5
 }	250	170	250/250	OTM250E4WCM110V	1SCA022846R8170	7.9
}	315	215	315/315	OTM315E3CM110V	1SCA022847R1120	11.1
1	315	215	315/315	OTM315E4CM110V	1SCA022847R2790	12.5
3	400	275	400/400	OTM400E3CM110V	1SCA022847R1550	11.1
1	400	275	400/400	OTM400E4CM110V	1SCA022847R3170	12.5
3	630	435	650/650	OTM630E3CM110V	1SCA022873R1050	22
	630	435	650/650	OTM630E4CM110V	1SCA022873R1810	25
3	800	550	720/650	OTM800E3CM110V	1SCA022872R5750	22
	800	550	720/650	OTM800E4CM110V	1SCA022872R8260	25
3	1000	680	1000/1000	OTM1000E3CM110V	1SCA113653R1001	55
1	1000	680	1000/1000	OTM1000E4CM110V	1SCA113656R1001	65
}	1250	850	1250/1000	OTM1250E3CM110V	1SCA113652R1001	55
ļ	1250	850	1250/1000	OTM1250E4CM110V	1SCA113655R1001	65
3	1600	1000	1600/1000	OTM1600E3CM110V	1SCA113654R1001	59
ļ	1600	1000	1600/1000	OTM1600E4CM110V	1SCA113657R1001	69
}	2000	1350		OTM2000E3CM110V	1SCA113683R1001	78
1	2000	1350		OTM2000E4CM110V	1SCA113685R1001	95
3	2500	1700		OTM2500E3CM110V	1SCA113684R1001	78
4	2500	1700		OTM2500E4CM110V	1SCA113686R1001	95

¹⁾ OTM2000...2500: Category AC-21B

Handles and bolt kits included as standard

Suitable for switches	Handle	Bolt kit
OTM160250	OTV250ECMK	M8x25
OTM315400	OTV400ECMK	M10x30
OTM630800	OTV800ECMK	M12x40
OTM10002500	OTV1000FCMK	M12x60

Recommended accessories: Bridging bars and voltage sensing connectors

Motorized change-over switches Ordering information for OTM160...OTM2500_CM



OTM160...250E3CM48D



OTM160...250E4WCM48D



OTM315...400E4CM48D



OTM630...800E3CM48D



OTM1000...1250E4CM48D



OTM1600E3CM48D



OTM2000...2500E4CM48D

Motorized change-over switches, open transition, OTM160...OTM2500_C

Delivered with a handle for manual operation, bolt kit with nut and washers for all terminals and male connectors for control circuits. Types OTM160...2500E_ include a storage clip for the handle and spare fuses. Types OTM160...250E_W are equipped with extended phase distance.



No. of poles	Rated current¹¹ AC-21A, AC-22A ≤ 415V, I[A]	Rated power 400V SIKVA1	Rated current AC-31B/ AC-33B 415V, I[A]	Туре	Order number	Weight/ unit [kg]
	oltage U _e 48 V		1101,1[1]	.,,,,	Order Hamber	T.91
3	160	110	160/160	OTM160E3CM48D	1SCA022845R8450	6.6
3	160	110	160/160	OTM160E3WCM48D	1SCA022846R3370	6.9
4	160	110	160/160	OTM160E4CM48D	1SCA022846R0940	7.5
4	160	110	160/160	OTM160E4WCM48D	1SCA022846R7280	7.9
3	200	135	200/200	OTM200E3CM48D	1SCA022845R8700	6.6
3	200	135	200/200	OTM200E3WCM48D	1SCA022846R3700	6.9
4	200	135	200/200	OTM200E4CM48D	1SCA022846R1320	7.5
4	200	135	200/200	OTM200E4WCM48D	1SCA022846R7610	7.9
3	250	170	250/250	OTM250E3CM48D	1SCA022845R9000	6.6
3	250	170	250/250	OTM250E3WCM48D	1SCA022846R4510	6.9
4	250	170	250/250	OTM250E4CM48D	1SCA022846R1750	7.5
4	250	170	250/250	OTM250E4WCM48D	1SCA022846R8090	7.9
4	315	215	315/315	OTM315E4CM48D	1SCA022847R2610	11.1
3	400	275	400/400	OTM400E3CM48D	1SCA022847R1470	12.5
4	400	275	400/400	OTM400E4CM48D	1SCA022847R3090	11.1
3	315	215	315/315	OTM315E3CM48D	1SCA022847R1040	12.5
3	630	435	650/650	OTM630E3CM48D	1SCA022873R1300	22
4	630	435	650/650	OTM630E4CM48D	1SCA022873R2110	25
3	800	550	720/650	OTM800E3CM48D	1SCA022872R6050	22
4	800	550	720/650	OTM800E4CM48D	1SCA022872R8510	25
3	1000	680	1000/1000	OTM1000E3CM48D	1SCA113663R1001	55
4	1000	680	1000/1000	OTM1000E4CM48D	1SCA113666R1001	65
3	1250	850	1250/1000	OTM1250E3CM48D	1SCA113662R1001	55
4	1250	850	1250/1000	OTM1250E4CM48D	1SCA113665R1001	65
3	1600	1000	1600/1000	OTM1600E3CM48D	1SCA113664R1001	59
4	1600	1000	1600/1000	OTM1600E4CM48D	1SCA113667R1001	69
3	2000	1350		OTM2000E3CM48D	1SCA113689R1001	78
4	2000	1350		OTM2000E4CM48D	1SCA113691R1001	95
3	2500	1700		OTM2500E3CM48D	1SCA113690R1001	78
4	2500	1700		OTM2500E4CM48D	1SCA113692R1001	95

¹⁾ OTM2000...2500: Category AC-21B

Handles and bolt kits included as standard

Suitable for switches	Handle	Bolt kit		
OTM160250	OTV250ECMK	M8x25		
OTM315400	OTV400ECMK	M10x30		
OTM630800	OTV800ECMK	M12x40		
OTM10002500	OTV1000ECMK	M12x60		

Recommended accessories: Bridging bars and voltage sensing connectors

Motorized change-over switches Ordering information for OTM160...OTM2500_CM



OTM160...250E3CM24D



OTM160...250E4WCM24D



OTM315...400E4CM24D



OTM630...800E3CM24D



OTM1000...1250E4CM24D



OTM1600E3CM24D



OTM2000...2500E4CM48D

Motorized change-over switches, open transition, OTM160...OTM2500_C

Delivered with a handle for manual operation, bolt kit with nut and washers for all terminals and male connectors for control circuits. Types OTM160...2500E_ include a storage clip for the handle and spare fuses. Types OTM160...250E_W are equipped with extended phase distance.



No. of poles	Rated current¹¹ AC-21A, AC-22A ≤ 415V, I[A]	Rated power 400V SIKVA1	Rated current AC-31B/ AC-33B 415V, I[A]	Туре	Order number	Weight/ unit [kq]
	oltage U _a 24 V I		1101,151	1,700	Oraci nambor	: [1,9]
3	160	110	160/160	OTM160E3CM24D	1SCA022845R8110	6.6
3	160	110	160/160	OTM160E3WCM24D	1SCA022846R3290	6.9
4	160	110	160/160	OTM160E4CM24D	1SCA022846R0860	7.5
4	160	110	160/160	OTM160E4WCM24D	1SCA022846R7100	7.9
3	200	135	200/200	OTM200E3CM24D	1SCA022845R8290	6.6
3	200	135	200/200	OTM200E3WCM24D	1SCA022846R3610	6.9
4	200	135	200/200	OTM200E4CM24D	1SCA022846R1240	7.5
4	200	135	200/200	OTM200E4WCM24D	1SCA022846R7520	7.9
3	250	170	250/250	OTM250E3CM24D	1SCA022845R8370	6.6
3	250	170	250/250	OTM250E3WCM24D	1SCA022846R4420	6.9
4	250	170	250/250	OTM250E4CM24D	1SCA022846R1670	7.5
4	250	170	250/250	OTM250E4WCM24D	1SCA022846R7950	7.9
3	315	215	315/315	OTM315E3CM24D	1SCA022847R0910	11.1
4	315	215	315/315	OTM315E4CM24D	1SCA022847R2520	12.5
3	400	275	400/400	OTM400E3CM24D	1SCA022847R1390	11.1
4	400	275	400/400	OTM400E4CM24D	1SCA022847R2950	12.5
3	630	435	650/650	OTM630E3CM24D	1SCA022873R1210	22
4	630	435	650/650	OTM630E4CM24D	1SCA022873R2020	25
3	800	550	720/650	OTM800E3CM24D	1SCA022872R5910	22
4	800	550	720/650	OTM800E4CM24D	1SCA022872R8420	25
3	1000	680	1000/1000	OTM1000E3CM24D	1SCA113672R1001	55
4	1000	680	1000/1000	OTM1000E4CM24D	1SCA113675R1001	65
3	1250	850	1250/1000	OTM1250E3CM24D	1SCA113671R1001	55
4	1250	850	1250/1000	OTM1250E4CM24D	1SCA113674R1001	65
3	1600	1000	1600/1000	OTM1600E3CM24D	1SCA113673R1001	59
4	1600	1000	1600/1000	OTM1600E4CM24D	1SCA113676R1001	69
3	2000	1350		OTM2000E3CM24D	1SCA113695R1001	78
4	2000	1350		OTM2000E4CM24D	1SCA113697R1001	95
3	2500	1700		OTM2500E3CM24D	1SCA113696R1001	78
4	2500	1700		OTM2500E4CM24D	1SCA113698R1001	95

¹⁾ OTM2000...2500: Category AC-21B

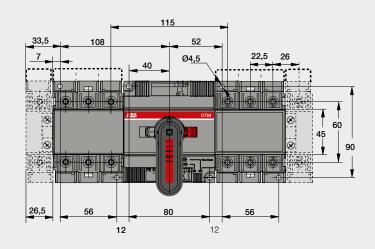
Handles and bolt kits included as standard

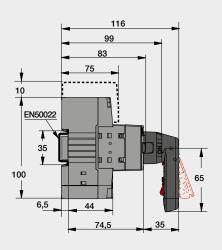
Suitable for switches	Handle	Bolt kit
OTM160250	OTV250ECMK	M8x25
OTM315400	OTV400ECMK	M10x30
OTM630800	OTV800ECMK	M12x40
OTM10002500	OTV1000ECMK	M12x60

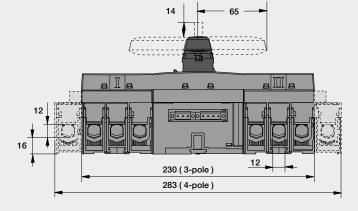
Recommended accessories: Bridging bars and voltage sensing connectors

OTM40...125F3/4_CM

M00352/OTM30-125F_C_M A





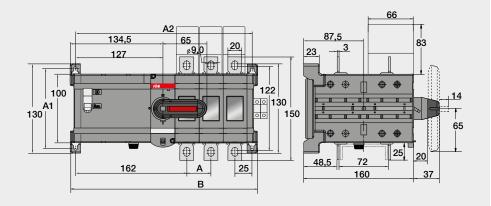


OTM160...250E2/3/4CM

OTM160-250 C M

0 1 m 1 0 0 2 0 0 _ 0 _ m						
[mm]	E2	E3	E4			
A	35	35	35			
A1	116	116	116			
A2	223	258	293			
В	238	273	308			

M00111 / OTM160-250E_C_M E

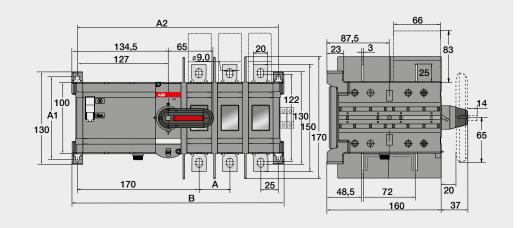


OTM160...250E2/3/4WCM

OTM160-250_WCM

[mm]	E2	E3	E4
A	43	43	43
A1	116	116	116
A2	239	282	325
В	254	297	340

M00115 / OTM160-250E_WC_M E

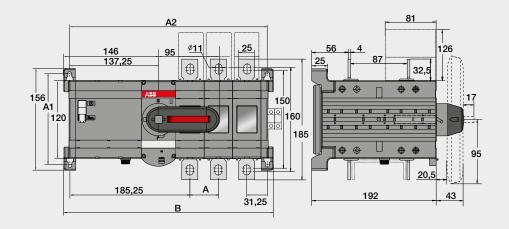


OTM315...400E2/3/4CM

OTM315-400_C_M

[mm]	E2	E3	E4
A	44	44	44
A1	142	142	142
A2	261	305	349
В	280	323	367

M00113 / OTM315-400E_C_M F

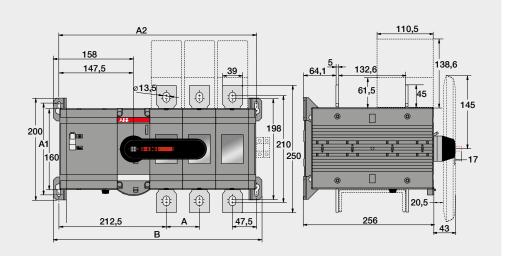


OTM630...800E2/3/4CM

OTM630-800E C M

	- · · · · · · · · · · · · · · · · · · ·						
[mm]	E2	E3	E4				
A	65	65	65				
A1	180	180	180				
A2	325	390	455				
В	346	411	476				

M00140 / OTM630-800E02-04C M C

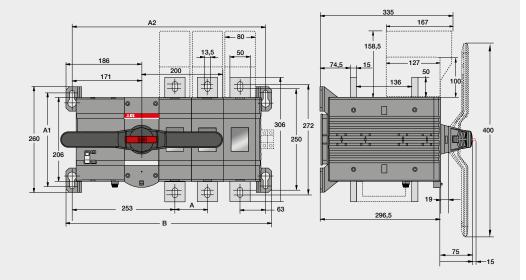


OTM1000...1250E2/3/4CM

OTM1000-1250_C_M

[mm]	E2	E3	E4
A	80	80	80
A1	230	230	230
A2	296,5	476,5	556,5
В	426,5	506,5	586,5

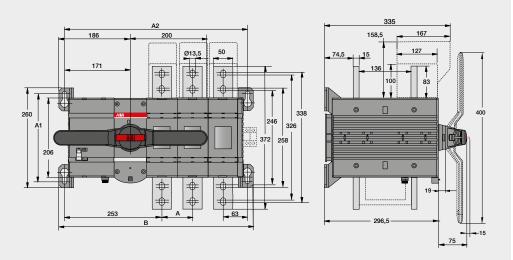
M00256 / OTM1000-1250E_C_M C



OTM1600E2/3/4CM

OTM1600_C_M

[mm]	E2	E3	E4
A	80	80	80
A1	230	230	230
A2	396,6	476,5	556,5
В	426,5	506,5	586,5

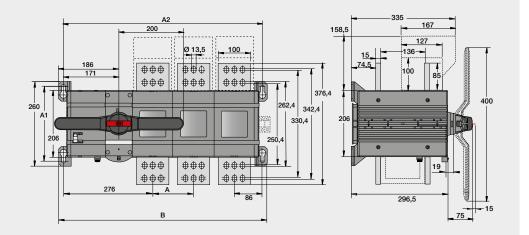


OTM2000...2500E3/4CM

OTM2000-2500_C_M

[mm]	E2	E3	E4
A	126	126	126
A1	230	230	230
A2	488,5	614,5	740,5
В	518,5	644,5	770,5

M00259 / OTM2000-2500E_C_M C

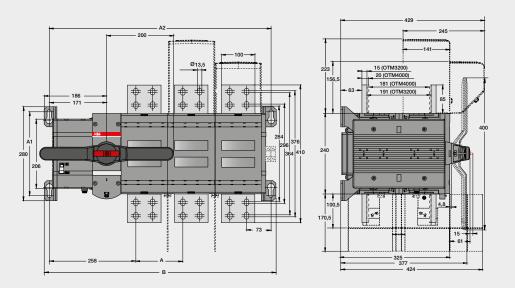


OT3200E2/3/4CM A

OTM3200_C_M

[mm]	E2	E3	E4
A	140	140	140
A1	250	250	250
A2	521,5	661,5	801,5
В	551,5	691,5	831,5

M00432/OTM3200-4000 C M A



Optional accessories for motorized change-over switches Ordering information for handles and storage clips



OTV400ECMK

Plastic handle, direct mounting, indication I-O-II

Includes a shaft and a mechanism cover. The type and ordering numbers are for one piece.

Suitable for switches	Colour	Туре		Delivery batch [pcs]	Weight/ unit [kg]
Padlockable with thre	e padlocks in 0-position.	Types -ECMK include also r	nicroswitches.		
OTM160250_C	Black	OTV250ECMK	1SCA022804R0570	1	0.10
OTM315400_C	Black	OTV400ECMK	1SCA022843R2900	1	0.28
OTM630800_C	Black	OTV800ECMK	1SCA022804R3410	1	0.32
OTM10002500_C	Black	OTV1000ECMK	1SCA111301R1001	1	0.77

Handle and spare fuse storage clip for motorized change-over switches

OTM40...125F_, the handle can be stored in the handle storage clip OTVS0. The clip can be fixed to a panel frame using the included adhesive tape. OTM160...3200E_, the handle and two spare fuses can be stored in the OTVS1 and OTVS2. OTVS1 and OTVS2 can be installed onto the left side of the switch. Snap-on mounting, no tools required. On OTM160...3200E_, the size of the handle prevents the installation onto the switch frame. However, the handle clip can be installed separately onto the panel frame and the fuse holder clip onto the switch frame.







OTVS1

Optional accessories for motorized change-over switches Ordering information for terminal shrouds



OTS_T3



OTS_T1



OTS_L_



OTS_S_

Terminal shrouds, grey plastic

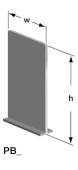
Snap-on mounting to the switches, IP 20. A kit includes three or four shrouds which can be used on either side of the switch. Suitable for the upperswitch. Transparent shrouds for OTM160...3200 available on request, please replace the letter "G" with "T".

Suitable for switches	No. of poles	Description	Туре	Order number	Units/ type [pcs]	Weight/ unit [kg]
OTM40125F_			OTS125T3	1SCA022379R9680	10	0.01
OT_160250_C	3	Long type	0TS250G1L/3	1SCA022731R8150	3	0.09
OT_160250_C	3	Short type	0TS250G1S/3	1SCA022731R8310	3	0.06
OT_160250_C	4	Long type	0TS250G1L/4	1SCA022731R8230	4	0.12
OT_160250_C	4	Short type	0TS250G1S/4	1SCA022731R8400	4	0.08
OT_315400_C	3	Long type	0TS400G1L/3	1SCA022736R8840	3	0.15
OT_315400_C	3	Short type	0TS400G1S/3	1SCA022736R9060	3	0.09
OT_315400_C	4	Long type	0TS400G1L/4	1SCA022736R9490	4	0.20
OT_315400_C	4	Short type	0TS400G1S/4	1SCA022736R9650	4	0.12
OT_600800_C	3	Long type	0TS800G1L/3	1SCA022776R7890	3	0.32
OT_600800_C	3	Short type	0TS800G1S/3	1SCA022776R8190	3	0.17
OT_600800_C	4	Long type	0TS800G1L/4	1SCA022776R7970	4	0.42
OT_600800_C	4	Short type	0TS800G1S/4	1SCA022776R8270	4	0.26
OT_10001600_C	3	Long type	0TS1600G1L/3	1SCA022871R9510	3	0.64
OT_10001600_C	3	Short type	0TS1600G1S/3	1SCA022871R9600	3	0.37
OT_10001600_C	4	Long type	0TS1600G1L/4	1SCA022871R9780	4	0.85
OT_10001600_C	4	Short type	0TS1600G1S/4	1SCA022871R9860	4	0.49
OT_20002500_C	3	Long type	0TS2500G1L/3	1SCA107261R1001	3	0.77
OT_20002500_C	3	Short type	0TS2500G1S/3	1SCA107260R1001	3	0.47
OT_20002500_C	4	Long type	0TS2500G1L/4	1SCA107262R1001	4	1.00
OT_20002500_C	4	Short type	0TS2500G1S/4	1SCA107271R1001	4	0.61
OT3200_C	3	Long type	0TS4000G1L/3	1SCA129042R1001	3	1.20
OT3200_C	3	Short type	0TS4000G1S/3	1SCA129044R1001	3	1.00
OT3200_C	4	Long type	0TS4000G1L/4	1SCA129043R1001	4	1.40
OT3200_C	4	Short type	OTS4000G1S/4	1SCA129045R1001	4	1.60

Optional accessories for motorized change-over switches Ordering information for phase barriers



OTB_



Phase barriers

The phase barriers designed for ABB Tmax T4-T5 MCCB's can also be used for OT_160...800 change-over switches. 3-pole change-overs need 8 barriers and 4-pole change-overs need 12 barriers for full protection.

Suitable for switches	No. of poles	Height h [mm]	Cutting width W of the phase barrier [mm]	Туре	Order number	Units/ type [pcs]
OT_160250E_C	3	100	55	PB100 low	1SDA054970R1	4
OT_160250E_C	3	200	55	PB200 high	1SDA054972R1	4
OT_160250E_C	4	100	55	PB100 low	1SDA054971R1	6
OT_160250E_C	4	200	55	PB200 high	1SDA054973R1	6
OT_315400E_C	3	100	67	PB100 low	1SDA054970R1	4
OT_315400E_C	3	200	67	PB200 high	1SDA054972R1	4
OT_315400E_C	4	100	67	PB100 low	1SDA054971R1	6
OT_315400E_C	4	200	67	PB200 high	1SDA054973R1	6
OT_600800E_C	3	100	90	PB100 low	1SDA054970R1	4
OT_600800E_C	3	200	90	PB200 high	1SDA054972R1	4
OT_600800E_C	4	100	90	PB100 low	1SDA054971R1	6
OT_600800E_C	4	200	90	PB200 high	1SDA054973R1	6

Ordering information for terminal clamps





OZXT2...3



OZXT6

Terminal clamp sets for Al- and Cu-cables insulated versions

Suitable for switches	Cable cross section [mm²]	Туре	Order number	type	Weight/ unit [kg]			
OTM40125F_	1650 Al/2.550 Cu	0ZXT1	1SCA022469R6310	3	0.06			
OTM63125F_	16120 AI/Cu	0ZXT2	1SCA022620R7200	3	0.21			
OTM63125F_	2x(1650) Al/Cu	OZXT3	1SCA022639R0720	3	0.21			
Including 0.752.5 mm² voltage sensing connection. Voltage sensing wires are not included								
OTM40125F_	1650 AI/2.550 Cu	0ZXT6	1SCA122537R1001	3	0.06			

Optional accessories for motorized change-over switches Ordering information for bridging- and reversing bars



OTZC13...34



OTZC43...44 OTZC53...54

Bridging bars

The bridging bars provide a connection link either on the incoming or outcoming side of the switch.

Suitable for switches	No. of poles	Туре	Order number	Units/ type [pcs]	Weight/ unit [kg]
OT_160250_C	3	OTZC13	1SCA022767R6910	3	0.6
OT_160250_C	4	OTZC14	1SCA022767R7040	4	0.8
OT_315400_C	3	OTZC23	1SCA022767R7120	3	0.6
OT_315400_C	4	OTZC24	1SCA022767R7210	4	0.8
OT_600_C800E_C	3	OTZC33	1SCA022785R7020	3	1.0
OT_600_C800E_C	4	OTZC34	1SCA022785R7110	4	1.3
OT_10001250E_C	3	OTZC43	1SCA022868R0710	3	4.2
OT_10001250E_C	4	OTZC44	1SCA022868R0800	4	5.6
OT800U_, OT_1600E_C	3	OTZC53	1SCA022868R0980	3	5.6
OT800U_, OT_1600E_C	4	OTZC54	1SCA022868R1010	4	7.4
OT_20002500E_C	3	OTZC63	1SCA022868R1100	3	10.8
OT_20002500E_C	4	OTZC64	1SCA022868R1360	4	14.5
OT_3200E_C	3	OTZC73	1SCA128843R1001	3	14.1
OT_3200E_C	4	OTZC74	1SCA128844R1001	4	18.7

Correct mounting of bridging bars onto the switch shown here.





Reversing bars

A reversing switch can be built by using phase sequence bars in two phases. The kit includes two phase sequence conversion bars. The missing bridging bars must be ordered separately, see above. For example 3-pole switches: one 4-pole standard bridging bar kit is required (one bar for the reversing side, three bars for the other side).

Suitable for switches	Туре	Order number	Units/ type [pcs]	Weight/ unit [kg]
OT_160250_C	OTZR1	1SCA100352R1001	2	0.3
OT_315400_C		1SCA104647R1001	2	0.3
OT_600_C800E_C		1SCA100355R1001	2	0.4

Optional accessories for motorized change-over switches Ordering information for voltage sensing connector



OMZB18...28





OMZB18...28



OMZB48

Voltage sensing connectors*

For 0.5...1.5mm² voltage sensing connection of the top or bottom power poles. The connector package includes also the faston terminals (see the picture). One package includes 8 connectors and 8 faston terminals. Wires are not included.

Suitable for switches	Faston terminal cable cross section [mm²]	Туре	Order number	Units/ type [pcs]	Weight/ unit [kg]
OT_160250_C	0.51.5	OMZB18	1SCA120153R1001	8	0.2
OT_315400_C	0.51.5	OMZB28	1SCA120154R1001	8	0.2
OT_630800E_C	0.51.5	OMZB38	1SCA120155R1001	8	0.2
OT_10003200_C	0.51.5	OMZB48	1SCA120156R1001	8	0.2

Terminal clamp OZXT6 is recommended to use with OTM40...125_C for voltage sensing connection. Terminal clamp OZXT6 includes 0.75...2.5 mm² voltage sensing connection. See ordering information on page 55.

Correct mounting of voltage sensing connectors onto the switch shown here.



Ordering information for parallel connection kits



Parallel connection kits

Finger protected connection bars for parallel connection of the upper or lower terminals. The bars accept additional cables, the maximum size is stated below.

Suitable for switches	Cable cross section [mm²]	Туре	Order number	Units/ type [pcs]	Weight/ unit [kg]
OTM40F3C_	2.525/2x2.516	OMZC003	1SCA121324R1001	1	0.5
OTM40F4C_	2.525/2x2.516	OMZC004	1SCA121325R1001	1	0.65
OTM40125F3C_	1070	OMZC03	1SCA117037R1001	1	0.5
OTM40125F4C_	1070	OMZC04	1SCA117038R1001	1	0.65

Optional accessories for motorized change-over switches Ordering information and technical data for auxiliary contacts



OA1G01 OA7G10



OA1G10 OA8G01



OA2G11

Auxiliary contact blocks for OTM40...125F

Snap-on mounting to the switch, IP 20, max. 2 blocks/ side. $I_{th} = 16$ A, suitable for cable cross sections max. $2 \times 2,5 \text{ mm}^2$. Simultaneous action with the main contacts.

Suitable for switches	Contact functions	Installation side	Туре	Order number	Delivery batch [pcs]	Weight/ unit [kg]
OT_16125F_C	1NO	Right	OA1G10	1SCA022353R4970	10	0.03
OT_16125F_C	1NC	Right	0A8G01	1SCA022744R2240	10	0.03
OT_16125F_C	1NO	Left	0A7G10	1SCA022673R1140	10	0.03
OT_16125F_C	1NC	Left	OA1G01	1SCA022353R4890	10	0.03
0T63125F3C	1NO+1NC	Either	OA2G11 ¹⁾	1SCA022379R8100	10	0.03

¹⁾ Not mountable on 4-pole change-over switches

Auxiliary contact blocks for OTM160...3200

Mounting on the right side of the switch: Max. 4 auxiliary contact blocks/switch (totally 8 blocks). Types _AU have gold plated contacts for harsh environments and low operating voltages. Simultaneous action with the main contacts, IP20.

Suitable for switches	Contact functions	Installation side	Туре	Order number	:	Weight/ unit [kg]
OT_1603200_	1NO	Right	OA1G10	1SCA022353R4970	10	0.03
OT_1603200_	1NC	Right	0A3G01	1SCA022456R7410	10	0.03
OT_1603200_	1NO	Right	OA1G10AU	1SCA022436R7910	10	0.03
OT_1603200_	1NC	Right	OA3G01AU	1SCA022819R5260	10	0.03

Auxiliary contacts

Technical da	ata for auxiliary co	ntacts according to	IEC 60947-5-1,	for OA1G_, OA2G_,	OA3G_, OA7G_, C	DA8G_	
AC15				DC12		DC13	
U _e /[V]	I _e /[A]	U _e /[V]	I _e /[A]	P/[W]	I _e /[A]	P/[W]	
230	6	24	10	240	2	50	
400	4	72	4	290	0.8	60	
415	4	125	2	250	0.55	70	
690	2	250	0.55	140	0.27	70	
	:	440	0.1	44	:		

Function tables

Function table of 011603200, 01160800_Y and 01M1602500 auxiliary contacts / Switch I (max. 2+2)			
Handle position	Main contacts	OA1G10 NO	OA3G01 NC
I	closed	closed	open
0	open	open	closed
<u>II</u>	closed	open	closed

Function table of OT160...3200, OT160...800_Y and OTM160...2500 auxiliary contacts / Switch II (max. 2+2)

Handle position	Main contacts	OA1G10 NO	OA3G01 NC
I	closed	open	closed
0	open	open	closed
II	closed	closed	open

Optional accessories for motorized change-over switches Ordering information for automatic control units and related accessories



OMD200



OMD300



OMD800



OMZD1



OMZC2

Automatic control units

OMD automatic control units can be used with OTM40...3200 motorized change-over switches in order to assemble an automatic transfer switch. The type and ordering codes include the OMD control unit, PCB connectors and 2 OMZD1 fasteners for door mounting.

If used with OTM40...125 CMA:

1 x OTM40...125_CMA_ motorized change-over switch and 2 or 3 x OZXT6 terminal clamp sets (including voltage sensing connection) must be ordered separately to be able to assemble an automatic transfer switch.

If used with OTM160...3200 CM:

1 x OTM160...3200_CM_ motorized change-over switch, 1 x OMZB_ voltage sensing connectors and 2 x OA1G10 auxiliary contacts must be ordered separately to be able to assemble an automatic transfer switch. The control unit can be mounted on a door or on DIN rail.

Suitable for	_		type	Weight/ unit
switches	Type	Order number	[pcs]	[Kg]
OTM403200_CM_	OMD200E480C-A1	1SCA123789R1001	1	0.8
OTM403200_CM_	OMD300E480C-A1	1SCA123790R1001	1	1.0
OTM403200_CM_	OMD800E480C-A1	1SCA123791R1001	1	1.3

Panel fasteners

For mounting the OMD automatic control unit on the door. The type and ordering code is for 1 piece, so 2 units must be ordered for mounting the control on the door.

Suitable for OMD control unit	Туре	Order number	Units/type [pcs]
OMD200_, OMD300_, OMD800_	OMZD1	1SCA022787R5190	1

Cover plate

Providing protection against accidental contact. Padlockable transparent cover. The type and ordering codes are for 1 piece.

Suitable			Units/type
for OMD control unit	Туре	Order number	[pcs]
OMD200_, OMD300_, OMD800_	OMZC2	1SCA101001R1001	1

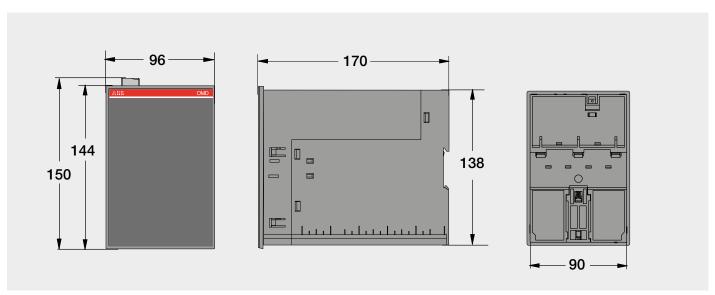
Optional accessories for motorized change-over switches Technical data and dimensional drawings for automatic control units

Technical data for automatic control units OMD200/300/800

OMD200 and OMD300			
Rated operational voltage U _e		208 V AC - 480 V AC +/- 20% + N	
	Phase - Neutral	120 V AC - 277 V AC +/- 20%	
Rated frequency		50 / 60 Hz +/- 10%	
Voltage sensing precision		5%	
Frequency sensing precision		. 1%	
Relay ratings:	X21, X22	12 A, AC1, 250 V / 12 A, DC1, 24 V	
	X23, X24	8 A, AC1, 250 V / 8 A, DC1, 24 V	
	X26, X27, X28	10 A, AC1, 250 V / 5 A, DC1, 24 V	
Rated impulse withstand voltage, U _{imp}		6 kV	
Overvoltage category		. III	
Pollution degree		2	
OMD800			
Rated operational voltage U _p on 3 phase system		100 V AC - 480 V AC +/- 20%	
	Phase - Neutral	57,7 V AC - 277 V AC +/- 20%	
Rated operational voltage U _e on 1 phase system ¹⁾		57,7 V AC - 277 V AC +/- 20%	
Rated frequency		50 / 60 Hz +/- 10%	
Voltage sensing precision		. 1%	
Frequency sensing precision		. 1%	
Relay ratings:	X21, X22, X24	12 A, AC1, 250 V / 12 A, DC1, 24 V	
	X23	8 A, AC1, 250 V / 8 A, DC1, 24 V	
	X29	5 A, AC1, 250 V / 6 A, DC1, 24 V	
Rated impulse withstand voltage, U _{imp}		6 kV	
Overvoltage category		. III	
Pollution degree		2	
AUX voltage ¹⁾		24 V DC - 110 V DC (-10% to +15%)	
Protection rating for the front panel		IP40	
Operating temperature		−20+ 60 °C	
Transportation and storage temperature		−25+ 80 °C	
Altitude		Max. 2000m	
Humidity			
With condensation		5 %98 %	
Without condensation		5 %90 %	

 $^{^{1)}}$ If on 1 phase system the voltage level is between 57,7 – 109 V AC, AUX voltage supply must be used

OMD200/300/800



Optional accessories for motorized change-over switches Ordering information for dual power sources

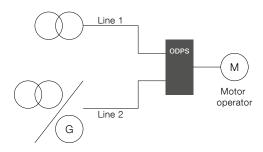


ODPSE230C

Dual power source

Provides power supply to the motor operator by using two lines. The device has two inputs, from line I (LN I) and line II (LN II), and one output for the motor operator. The motor operator is automatically energized whenever power is available in one of the lines. Can be used with 230VAC motor operators. Snap-on mounted PCB connectors are included in the delivery. The device can be DIN-rail or screw mounted.

Suitable			Units/	Weight/
for switches	Туре	Order number	type [pcs]	unit [kg]
OTM403200_	ODPSE230C	1SCA116892R1001	1	0.3



Connection diagram, ODPSE230C

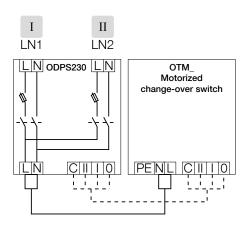


ODPS230

Dual power source including ATS functionality

Similar to previous dual power source but also including ATS (Automatic Transfer Switch) functionality and in-built short-circuit protection. Provides power supply to the motor operator by using two 220...240 V AC lines. Motor operator is automatically energized whenever power is available in one of the lines. The device has a three position (AUTO-MAN-O) DIP switch to choose the correct operating mode. The AUTO position enables and the MAN position disables the ATS functionality when used with OTM motorized change-over switch. The O position is used for safety reasons: it operates the OTM to position 0 to isolate the load from the feeding sources. The device can be DIN-rail or screw mounted.

Suitable for			Units/ type	Weight/ unit
switches	Туре	Order number	[pcs]	[kg]
OTM403200_	0DPS230	1SCA122946R1001	1	0.3



Connection diagram, ODPS230

Optional accessories for motorized change-over switches Technical data and dimensional drawings for dual power sources

Technical data for dual power source ODPSE230C

Dual power source ODPSE230C	
Rated operational voltage U [V]	220240 V AC +/- 20%
Rated frequency	50 / 60 Hz +/- 10%
Short-circuit protection device	Max. MCB 4 A
Nominal output current I _n [A]	4 A
Startup time	Max. 1.0 s (with 230 V AC)
Operating transfer time LN1 - LN2 or LN2 - LN1	Max. 0.5 s (with 230 V AC)
Cable size	0,22,5 mm ²
Rated impulse withstand voltage, U _{imp}	4 kV
Overvoltage category	
Pollution degree	3
Protection rating for the front panel	IP20
	−25+ 60 °C
Transportation and storage temperature	- 40+ 70 °C
Altitude	Max. 2 000m

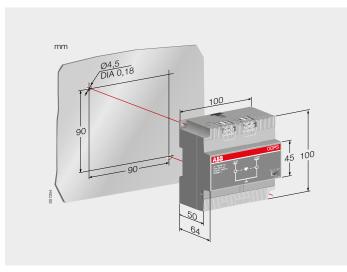
Technical data for new dual power source ODPS230 with ATS functionality

Dual power source ODPS230	
Rated operational voltage U [V]	220240 V AC, 50 / 60 Hz
Maximum voltage	288 V AC
Pick-up voltage	≥198 V AC
Drop-out voltage	≤154 V AC
Operating time	1 s ± 0.5 s
Nominal output current I, [A]	3,15 A
Rated conditional short-circuit current, I _D (r.m.s.)	50 kA
Internal fuse	T/3,15A/H*
Fuse size	6,3 x 32 mm
Rated impulse withstand voltage, U _{imp.}	4 kV
Overvoltage category	
Pollution degree	3
Cable size	Max. 6 mm²
Protection rating for the front panel	IP20
Operating temperature	− 25+ 60 °C
Transportation and storage temperature	− 40+ 70 °C
Altitude	Max. 2 000m

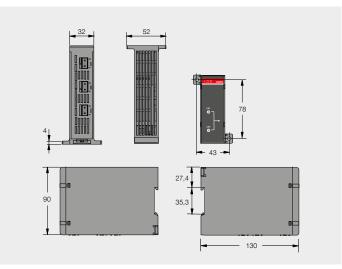
^{*)} The breaking capacity must be 50 kA to achieve 50 kA lp (r.m.s.) rating

Dimensional drawings for dual power sources

ODPS230



ODPSE230C





Automatic transfer switches Open transition from 160 to 1600 Amperes

Introduction to automatic transfer switches General information 78 Product range 79 Type codes 80 Switching sequence and operating times 81 List of product functionalities 82 **Technical data** OTM160...400_C_D 84 OTM630...1600_C_D 85 Technical data for power and control circuits 86 **Ordering information** OTM160...OTM1600_C_D 87 **Dimension drawings** Automatic transfer switches 90 Ordering information for optional accessories Terminal shrouds 94 Phase barriers 95 Terminal clamps 96 Bridging- and reversing bars 97 Auxiliary contacts 98 Automatic control units and related accessories 99 Dual power sources 98

ABB's automatic transfer switches provide virtually instantaneous automatic switching between power sources.

Automatic transfer switches Instantaneous automatic switching between power sources



ABB offers a wide selection of automatic transfer switches (ATS), from 160 to 1600 Amperes in range. They have the features and functionality that makes them suitable for diverse applications: industrial plants, docks, airports and data centers.



Quick and easy solution

All ATS products by ABB are delivered as a ready-to-use solution in which the OMD unit is pre-mounted at the factory prior to delivery. It is also possible to purchase the control units and motorized change-over switches as separate components, allowing you to build the automatic transfer switch yourself.



Reliable functionality

You can rest assured that your automatic transfer switch solution works as expected without the need to carry out any testing. The entire solution has been tested by ABB and is guaranteed to fulfill all the requirements according to the IEC60947-6-1 standard.



Safe operations

With automatic transfer switches by ABB safe ON LOAD operations with a handle is always easy and readily available. Our switches also come equipped with numerous other safety features such as the possibility to prevent unwanted operations by padlocking the handle into O position.



Improved user experience

Ensuring a high performance level and an easy and efficient user experience for you is of the utmost importance to us. Usage has been made simpler than ever before with an LCD display with menus available in eight languages.

Automatic transfer switches Open transition from 160 to 1600 Amperes







Automatic transfer switches, 10	60-400 A								
Types	OTM160				OTM160E_WC_D			OTM315E_C_D	
	OTM200				OTM200E_WC_D		0TM40	OTM400E_C_D	
	0TM250	OTM250E_C_D		OTM250	OTM250E_WC_D				
I _{th} /A	160	200	250	160	200	250	315	400	
I _e /AC-22A, < 415V	160	200	250	160	200	250	315	400	
I _e /AC-23A, < 415V	160	200	250	160	200	250	315	400	
I _e /AC-31B, < 415V	160	200	250	160	200	250	315	400	







Automatic transfer switches 63	0-1600 A						
Types	OTM630E_	_C_D	OTM1000E	_C_D	OTM1600E_C_D	OTM1600E_C_D	
	-			_C_D			
I _{th} /A	630	800	1000	1250	1600		
I _e /AC-22A, < 415V	630	800	1000	1250	1600		
I _e /AC-23A, < 415V	630	800	1000	1250	1250		
I _e /AC-31B, < 415V	650	720	1000	1250	1600		

Automatic transfer switches Type codes

Type codes

Understanding the type code keys below will help you quickly identify the correct product for your needs. The simple naming system allows you to see the products type, Ampere rating, standard classification and number of poles, all in one glance.

Explanation of the types OTM160...1600_C_D

Option:	OTM800	Е	4	С	3	D	230	С
Position:	1	2	3	4	5	6	7	8
1	Brand and Switch size / A	mpere rating						
2	IEC							
3	Number of the poles							
4	Change over switch: I-0-II	-operation						
	3: 3-poles							
	4: 4-poles							
5	Place of sensing kit							
	_(blank): Voltage sensing I	kit on the top)					
	B: Voltage sensign kit on t	he bottom						
6	Automatic controlle unit							
	2D: OMD200							
	3D: OMD300							
	8D: OMD800							
7	Voltage for motor operato	ſ						
	230: 220240 V AC							
8	Motor voltage type							
	V=AC/DC							

Automatic transfer switches Switching sequence and operating times

Example of switching sequence for automatic transfer switches

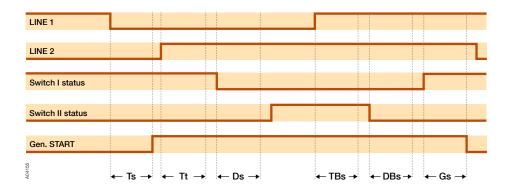
An example of the switching sequence can be summarized in following steps:

- An anomaly occurs on the Line 1
- Switching delay
- Generator start
- Delay on transfer
- Change-over switch (Switch I) to the position O
- Dead band I to II delay
- Change-over switch (Switch II) to the position II

The back switching sequence can be summarized in the following steps:

- The Line 1 will start the normal functioning
- Back switching delay
- Change-over switch (Switch II) to the position O
- Dead band II to I delay
- Change-over switch (Switch I) to the position I
- Generator stop delay
- Generator stop

The diagram is with OTM_C8D and Line 1 priority operating mode



Ts: Switching delay, Tt: Delay on transfer, Ds: Dead band I to II, TBs: Back switching delay, DBs: Dead band II to I, Gs: Generator stop delay

Automatic transfer switches operating times for OTM160...1600_ **Operating times**

	Operating transfer time ^{a)}	OFF-time when operating ^{a)}
Туре	I - II, II - I [s]	I - II, II - I [s]
OTM160250_C2D_	2.0 - 4.0	0.4 - 1.0
OTM160250_C3D_	2.0 - 4.0	0.4 - 1.0
OTM160250_C8D_	1.5 - 3.0	0.4 - 1.0
OTM315400_C2D_	2.0 - 5.0	0.4 - 1.0
OTM315400_C3D_	2.0 - 5.0	0.4 - 1.0
OTM315400_C8D_	1.5 - 3.0	0.4 - 1.0
OTM630800_C2D_	2.0 - 5.0	0.4 - 1.0
OTM630800_C3D_	2.0 - 5.0	0.4 - 1.0
OTM630800_C8D_	1.5 - 3.0	0.4 - 1.0
OTM10001600_C2D_	3.0 - 6.0	0.6 - 1.5
OTM10001600_C3D_	3.0 - 6.0	0.6 - 1.5
OTM10001600_C8D_	2.5 - 4.0	0.6 - 1.5

a) Under nominal conditions

Automatic transfer switches List of product functionalities



Automatic transfer switches functionality

	OTM_C2D_	OTM_C3D_	OTM_C8D_
OTM_C_D products overview		•	<u>.</u>
Includes automatic control unit	OMD200_	OMD300_	OMD800_
Manual operation with handle	Χ	Х	Х
Local operation with front panel keypad	Х	Х	Х
Automatic transfer switching equipment (ATSE)	Χ	Х	Х
Dual power source for the motor operator ¹⁾	0	Х	0
Measurements	•	•	•
Three phase voltage measurement on LINE 1	Х	Х	х
Single phase voltage measurement on LINE 1	Χ	Х	Х
Three phase voltage measurement on LINE 2	Χ	Х	Х
Single phase voltage measurement on LINE 2	Χ	Х	Х
Frequency on LINE 1	Χ	Х	Х
Frequency on LINE 2	Х	Х	Х
Possibility to check the measurements via LCD			Х
Source failure detections			
No voltage	Х	Х	Х
Undervoltage	Χ	Х	Х
Overvoltage	Х	Х	Х
Phase missing	X	Х	Х
Voltage unbalance	Χ	Х	Х
Invalid frequency	Χ	Х	Х
Incorrect phase sequence			Х
Configuration			
By DIP switches	Χ	Х	
By rotary switches	Χ	Х	
By keypad and LCD			Х
Voltage threshold setting	Χ	Х	Х
Voltage hysteresis setting			X
Frequency threshold setting			Х
Frequency hysteresis setting			Х
Time delays			
Switching delay	X ²⁾	X ²⁾	060 s
Delay on transfer³)			0600 s
Dead band time I-II (stop switching to position 0)			060 s
Back-switching delay	X ⁴⁾	X ⁴⁾	05 400 s
Dead band time II-I (stop switching to position 0)			060 s
Generator stop delay	X ⁵⁾	X ⁵⁾	01 800 s
Status of time delays on the LCD			Х

¹⁾ Dual power source allows the motor operator to be supplied by two separate voltage supplies. This way the motor operator is always energized from the available line.

 $^{^{\}scriptscriptstyle 2)}$ Four options: 0, 5, 10 or 30 seconds

³⁾ Delaying the switching sequence before transferring to generator, guaranteeing that in cold locations the generator is properly warmed up

guaranteeing that in cold locations the generator is properly warned up

4) Two options: the duration of back-switching delay is the same as switching delay,
i.e. the time delay is same for I - II and II - I, or the back-switching delay is fixed 300 seconds

5) Two options: the duration of generator stop delay is the same as Switching delay or fixed 5 min

x = included as standard

o = as an accessory

Automatic transfer switches List of product functionalities



Automatic transfer switches functionality

	OTM_C2D_	OTM_C3D_	OTM_C8D_
Features Page 19 Page	•	•	
Generator start and stop	Х	Х	Х
Off-load test sequence	χ	Х	Х
On-load test sequence	Χ	Х	Х
Source status via front panel	Х	Х	Х
Source status via digital outputs			Х
Switch position via front panel	Х	Х	Х
LCD ⁶⁾			Х
Fieldbus interface ⁷⁾			Х
Event/alarm log			Х
Counter for number of operations			Х
Auxiliary voltage supply ⁸⁾			Х
Programmable digital inputs (eight) and digital outputs (six)			Х
Secondary load control (load shedding)			Х
Digital input - Allow transfer to secondary ⁹⁾			Х
Digital input - Generator alarm ¹⁰⁾			Х
Digital input - Remote control to positions I, O and II			Х
Operating mode			
Line priority	X ¹¹⁾	X ¹¹⁾	X ¹²⁾
Manual back-switching ¹³⁾	Χ	Х	Х
Automatic operation to position O, in case of source failure ¹⁴⁾			Х
Applications	•	•	·
Transfer between two transformers	Х	Х	Х
Transfer between a transformer and a generator	Х	Х	X

- ⁶⁾ Menus available in eight languages; English, French, German, Italian, Spanish, Russian, Chinese and Finnish
- 7) Two-way communication, bus communication protocol is Modbus
- $^{8}\,$ In case of source failure, the control unit can be supplied with an external auxiliary supply with 24...110 V DC
- 9 Control unit requires an external signal before allowing the transfer to secondary
- 10 Two options for the operating mode after receiving the alarm: control unit either works normally, or initiates generator stop with operation to position O
- Two options: No line priority, or Source 1 is the priority source
 Three options: No line priority, Source 1 or Source 2 is the priority source
- ¹³⁾ Automatic back-switching to primary source is prevented
- ¹⁴⁾ Control unit and motor operator must be energized
- x = included as standard
- o = as an accessory

Automatic transfer switches Technical data for OTM160...400_C

Automatic transfer switches

				Switch size	, OTM_			
Data according to IEC 60947-3				OTM_160_	OTM_200_	OTM_250_	OTM_315_	OTM_400
Rated insulation voltage and rated operational voltage AC20/DC20 ¹⁾		Pollution degree 3 ²⁾	V	1 000	1 000	1 000	1 000	1 000
Dielectric strength		50 Hz 1min.	kV	10	10	10	10	10
Rated impulse withstand voltage ³⁾			kV	12	12	12	12	12
Rated thermal current and rated	/ ambient 40°C	In open air	Α	160	200	250	315	400
operational current AC20/DC20	/ ambient 40°C	In enclosure	Α	160	200	250	315	400
.with minimum conductor cross section		Cu	mm²	70	95	120	185	240
Rated operational current, AC-21A		up to 500 V	Α	160	200	250	315	400
		690 V	Α	160	200	250	315	400
Rated operational current, AC-22A		up to 500 V	Α	160	200	250	315	400
		690 V	Α	160	200	250	315	400
Rated operational current, AC-23A		up to 415 V	A	160	200	250	315	400
		440 V	Α	160	200	250	315	400
		500 V	A	160	200	250	315	400
		690 V	Α	160	200	250	315	400
Rated operational current /		≤ 110 V	A	160/2	200/2	250/2	315/14)	400/14)
ooles in series, DC-21A ¹⁰⁾		220 V	Α	160/2	200/2	250/2	315/24)	400/24)
		440 V	Α	160/3	200/3	230/3	315/3	360/3
		660 V	A	160/4	200/4	200/4	315/4	315/4
Rated operational power, AC-23A ⁵⁾ The kW-ratings are accurate for		230 V	kW	45	60	75	100	132
B-phase 1500 R.P.M. standard		400 V	kW	90	110	140	160	220
sychronous motors		415 V	kW	90	110	145	180	230
		500 V	kW	110	132	170	220	280
National descriptions and the second		690 V	kW	160	200	250	315	400
Rated breaking capacity n category AC-23		up to 415 V	A	1 280	1 600	2 000	2 520	3 200
Tealegory Ac-25		500 V 690 V	A	1 280 1 280	1 600	2 000	2 520	3 200 3 200
Potod conditional abort circuit current	1 (rm a) 90 kA 41E V		A	40.5	1 600 40.5	2 000 40.5	2 520 59	59
Rated conditional short-circuit current (r.m.s.) and cut-off current (reak) value.	I _p (r.m.s.) 80 kA, 415 V Max. OFA_ fuse size	î¸ (peak) gG/aM	kA A/A	355/315	355/315	355/315	500/500	500/500
he cut-off current î, refers to values	I_ (r.m.s.) 100 kA, 500 V	î (peak)	kA	40.5	40.5	40.5	61.5	61.5
isted by fuse manufacturers	Max. OFA_ fuse size	gG/aM	A	315/315	315/315	315/315	500/450	500/450
single phase test acc. to IEC60269).	I _a (r.m.s.) 80 kA, 690 V	î (peak)	kA	40.5	40.5	40.5	59	59
	Max. OFA_ fuse size	gG/aM	A	355/315	355/315	355/315	500/500	500/500
Rated short-time withstand current	I _{c.} (r.m.s.)	690 V 0.15s	kA	15	15	15	31	31
lated short time withstand current	1 _{CW} (1.111.5.)	690 V 0.25s	kA	15	15	15	24	24
		690 V 1s	kA	8	8	8	15	15
Rated short-time making capacity ⁶⁾	I _{cm} (peak) ⁷⁾	690 V	kA	30	30	30	65	65
Power loss / pole	With rated current		W	2.4	4	6.5	6.5	10
Mechanical endurance	Number of oper. cycles ⁸⁾		Cycles	8 000	8 000	8 000	8 000	8 000
Ferminal bolt size	Metric thread diameter x length		mm	M8x25	M8x25	M8x25	M10x30	M10x30
erminal tightening torque	Counter torque required		Nm	15-22	15-22	15-22	30-44	30-44
Operating torque	Typical for 3-pole change-over switches		Nm	7	7	7	16	16
Veight without accessories	Automatic transfer switches	3-pole switch 4-pole switch	kg kg	5.7 6.4	5.7 6.4	5.7 6.4	10.2 11.4	10.2 11.4
Data according to IEC 60947-6-1	<u> </u>	i boio amitori	: 19	0.7		0.7	į 116 7	: 11.7
Class of equipment	:	:	-	PC	PC	PC	PC	PC
Rated short-time withstand current	I _{cw} (r.m.s.)	690 V 0.1s	kA	15	15	15	25	25
Rated operational current, AC-31B	'cw (1.111.0.)	up to 415 V	A	160	200	250	315	400
Rated operational current, AC-33B		up to 415 V	A	160	200	250	315	400
iaiou oporalional current, AO-000	<u>:</u>	: up 10 410 V	: ^	100	: 200	: 200	: 010	: 400

Automatic transfer switches: operational voltage = max. 415 V AC for OTM_C2D_, OTM_C3D_ and OTM_C8D_

²⁾ Automatic transfer switches: pollution degree 2 for OTM_C2D_, OTM_C3D_ and OTM_C8D_

³⁾ Automatic transfer switches: U_{imp} = 6 kV for OTM_C2D_, OTM_C3D_ and OTM_C8D_

⁴⁾ Utilization category B

⁵⁾ These values are given for guidance and may vary acc. to the motor manufacturer

⁶⁾ Short circuit duration > 50ms, without fuse protection

 $^{^{7)}\,}$ Max. distance from switch frame to nearest busbar / cable support 150 mm

⁸⁾ Operating cycle: O - I - O - II - O

⁹ Category AC-21B, up to 415V

Automatic transfer switches Technical data for OTM630...1600_C

Automatic transfer switches

				Switch size	<u>, OTM_</u>	_		
Data according to IEC 60947-3				OTM_630_	_008_MTO	OTM_1000_	OTM_1250_	OTM_1600_
Rated insulation voltage and rated operational voltage AC20/DC20 ¹⁾		Pollution degree 3 ²⁾	V	1 000	1 000	1 000	1 000	1 000
Dielectric strength		50 Hz 1min.	kV	10	10	10	10	10
Rated impulse withstand voltage ³⁾		•	kV	12	12	12	12	12
Rated thermal current and rated	/ ambient 40°C	In open air	Α	630	800	1 000	1 250	1 600
operational current AC20/DC20	/ ambient 40°C	In enclosure	Α	630	800	•		•
with minimum conductor cross section		Cu	mm ²	2x185	2x240	2x300	2x400	2x500
Rated operational current, AC-21A		up to 500 V	Α	630	800	1 000	1 250	1 600
nated operational our only no 2 m		690 V	Α	630	800	1 000	1 250	1 600
Rated operational current, AC-22A		up to 500 V	Α	630	800	1 000	1 250	1 600
nation operational outrons, no 227		690 V	Α	630	800	1 000	1 250	1 600
Rated operational current, AC-23A		up to 415 V	Α	630	800	1 000	1 250	1 250
nation operational outront, No 257		440 V	Α	630	800	1 000	1 250	1 250
		500 V	A	630	800	1 000	1 250	1 250
		690 V	Α	630	800	1 000	1 250	1 250
Pated aparational current /			;	+		1 000	1 200	1 200
Rated operational current / poles in series, DC-21A ¹⁰⁾		≤ 110 V 220 V	A	630/1 630/1	800/1 800/1	ŀ		
polos III sorios, Do ZIA		÷	Α		}	į		<u>:</u>
		440 V	Α	630/2	720/2	-		
		660 V	Α	630/44)	630/44)			
Rated operational power, AC-23A ⁵⁾ The kW-ratings are accurate for		230 V	kW	200	250	315	400	400
The kw-ratings are accurate for 3-phase 1500 R.P.M. standard		400 V	kW	355	450	560	710	710
asychronous motors		415 V	kW	355	450	560	710	710
asychionous motors		500 V	kW	400	560	710	900	900
		690 V	kW	630	800	1 000	1 200	1 200
Rated breaking capacity		up to 415 V	Α	5 040	6 400	10 000	10 000	10 000
in category AC-23		500 V	Α	5 040	6 400	10 000	10 000	10 000
		690 V	Α	5 040	6 400	10 000	10 000	10 000
Rated conditional short-circuit current	I, (r.m.s.) 80 kA, 415 V	î, (peak)	kA	83.5	83.5	100	100	100
(r.m.s.) and cut-off current î _c (peak) value.	Max. OFA_ fuse size	gG/aM	A/A	800/1 000	800/1 000	1 250/1 250	1 250/1 250	1 250/1 250
The cut-off current î refers to values	I _n (r.m.s.) 100 kA, 500 V	î (peak)	kA	90	90	106	106	106
listed by fuse manufacturers (single phase test acc. to IEC60269).	Max. OFA_ fuse size	gG/aM	Α	800/800	800/800	1 250/1 250	1 250/1 250	1 250/1 250
(Siligle pliase test acc. to iEC60269).	I _s (r.m.s.) 80 kA, 690 V	î (peak)	kA	83.5	83.5			
	Max. OFA_ fuse size	gG/aM	Α	800/1 000	800/1 000	•		•
Rated short-time withstand current	I _{cw} (r.m.s.)	690 V 0.15s	kA	38	38	50	50	50
nation of the ministration	cw (************************************	690 V 0.25s	kA	36	36	50	50	50
		690 V 1s	kA	20	20	50	50	50
Rated short-time making capacity ⁶⁾	I _{cm} (peak) ⁷⁾	690 V	kA	80	80	92	92	92
Power loss / pole	With rated current	030 V	W	25	40	19	29	48
Mechanical endurance	Number of oper. cycles ⁸⁾			5 000	5 000	3 000	3 000	3 000
Terminal bolt size	*	<u>i</u>	· · · * · · · · · · · · · · · · · · · ·	M12x40		M12x60	M12x60	M12x60
Terminal bolt size	Metric thread diameter x length		mm	WHZX40	M12x40	WIIZXOU	MIZXOU	IVIIZXOU
Terminal tightening torque	Counter torque required		Nm	50-75	50-75	50-75	50-75	50-75
Operating torque	Typical for 3-pole		Nm	27	27	78	78	78
operating torque	change-over switches		INIII	- '	<i>L</i> 1	70	, ,	70
Weight without accessories	Automatic	3-pole switch	kg	17.5	17.5	42	42	44
Troight Without accounting	transfer switches	4-pole switch	kg	20.4	20.4	50	50	52
Data according to IEC 60947-6-1	:	. polo oviitoli	: ''9		. 20.1	, 50		
Class of equipment	<u> </u>		:	PC	PC	PC	PC	PC
Rated short-time withstand current	l (rme)	690 V 0.1s	kA	38	38	50	50	50
***************************************	I _{cw} (r.m.s.)	.	.	. 🛊				. •
Rated operational current, AC-31B		up to 415 V	A	650	720	1 000	1 250	1 600
Rated operational current, AC-33B		up to 415 V	Α	650	650	1 000	1 000	1 000

¹⁾ Automatic transfer switches: operational voltage

⁼ max. 415 V AC for OTM_C2D_, OTM_C3D_ and OTM_C8D_

²⁾ Automatic transfer switches: pollution degree 2 for OTM_C2D_, OTM_C3D_ and OTM_C8D_

 $^{^{\}mbox{\tiny 3}}$ Automatic transfer switches: $\mbox{U}_{\mbox{\tiny imp}} = 6$ kV for OTM_C2D_, OTM_C3D_ and OTM_C8D_

⁴⁾ Utilization category B

⁵⁾ These values are given for guidance and may vary acc. to the motor manufacturer

⁶⁾ Short circuit duration > 50ms, without fuse protection

 $^{^{7)}\,}$ Max. distance from switch frame to nearest busbar / cable support 150 mm

⁸⁾ Operating cycle: O - I - O - II - O

⁹⁾ Category AC-21B, up to 415V

¹³⁾ Further ratings on request

Automatic transfer switches Technical data for power and control circuits

Technical data for automatic transfer switches, power circuit

OTM_C2D_ (OMD200)		
Rated operational voltage U _e		208 - 415 V AC +/- 20 % + N
	Phase - Neutral	120 - 240 V AC +/- 20 %
Rated frequency		50 / 60 Hz +/- 10 %
Rated impulse withstand voltage U _{imp}		6 kV
OTM_C3D_ (OMD300)		
Rated operational voltage U _e		208 - 415 V AC +/- 20 % + N
	Phase - Neutral	120 - 240 V AC +/- 20 %
Rated frequency		50 / 60 Hz +/- 10 %
Rated impulse withstand voltage U _{imp}		6 kV
OTM_C8D_ (OMD800)		
Rated operational voltage U _p on 3 phase system		100 - 415 V AC +/- 20 %
· ·	Phase - Neutral	57,7 - 240 V AC +/- 20 %
Rated operational voltage U _e on 1 phase system ¹⁾		57,7 - 240 V AC +/- 20 %
Rated frequency		50 / 60 Hz +/- 10 %
Rated impulse withstand voltage U _{imp}		6 kV
AUX voltage ¹⁾		24 V DC - 110 V DC (-10 to 15 %)
Operating temperature		-5+40°C
Transportation and storage temperature		-25+70°C
Altitude		Max.2 000m

¹⁾ If on 1 phase system the voltage level is between 57,7 – 109 V AC, AUX voltage supply must be used

Technical data for motor operator, control circuit

Motor operator, control circuit				OTM160250	OTM315400	OTM630800	OTM10001600		
Rated operational voltage U [V]	Pollution degree 3	50/60 Hz		220 - 240 V AC					
Operating voltage range				0,81,2 x U _e					
Operating times					See the	e table below			
Nominal current I _n ^{a)}			Α	0.2	0.5	0.7	1.8		
Current Inrush ^{a)}			Α	1.3	2.1	2.8	7.7		
Overload fuse	Type / In / Capacity		mA	T/315/H	T/500/H	T/1 000/H	T/2 000/H		
	Size		mm	5x20	5x20	5x20	5x20		
Operating rate	Cycle 0 - I - 0 - II - 0								
	Max. continuous		cycles / min	1	1	1	0.5		
Max. short-time ≤ 10 cycles			cycles / min	10	10	10	5		
Overvoltage category					-	III			
Rated impulse withstand voltage U _{imp}			kV			4			
Dielectric strength		50 Hz 1 min.	kV			1.5			
Terminals									
Voltage supply wiring for U					Pl	E - N - L			
Cross section		solid/stranded	mm²		1	.5 - 2.5			
Short-circuit protection device		max. MCB	Α			C16			
State information of locking (no SEL	.V)								
Cross section		solid/stranded	mm²		1	.5 - 2.5			
Locking motor operator		23-24 (NO)			5A/25	50V/cosφ=1			
Short-circuit protection device		Max. MCB	Α	C2					
Protection degree						IP20			
Operating temperature			°C	-25+55					
Transportation and storage temperature			°C		-4	0+70			
Max. altitude			m			2 000			

Automatic transfer switches Ordering information for OTM160...OTM1600_C



Automatic transfer switch accessory guide

- Bridging bar
- Terminal shroud

Please note that not all listed accessories are automatically included in your order.

Voltage sensing connection is part of standard delivery and factory fitted.

Automatic transfer switches Ordering information for OTM160...OTM1600_C



OTM160...250E4C_D230C



OTM160...250E4WC_D230C



OTM315...400E4C_D230C



OTM630...800E4C_D230C



OTM1000...1250E4C_D230C



OTM1600E4C D230C

Automatic transfer switches, open transition, OTM160...OTM1600_C

Delivered with a handle for manual operation, PCB connectors, bolt kit with nuts and washers for all terminals. Voltage sensing connections are part of standard delivery and factory fitted. Types OTM160...1600_C_D_ include a voltage sensing kit on the top of the switch. Please note that OTM_C2D types are equipped with OMD200 control units, while OTM_C3D types are equipped with OMD300 control units.

To ensure suitability and easy installation, these products are also available with the voltage sensing kit installed onto the bottom of the switch. Simply add the letter "B" to the typecode when ordering. For example, OTM160E4C2D230C ▶ OTM160E4CB2D230C. Types OTM160...1600E_ include a storage clip for the handle and spare fuses. Types OTM160...250_WC_D_ are equipped with extended phase distance.

No. of poles	Rated current AC-21A, AC-22A ≤ 415V, I[A]	Rated power 400V S[kVA]	Rated current AC-31B/ AC-33B 415V, I[A]	Туре	Order number	Weight/ unit [kg]
Automa	itic operation, O	TM_C2D_ type	s, voltage sensing	on the top. Voltage sensing	connection included as s	tandard.
Motor of	oerator voltage U _e	= 220240 V A	AC1)			
4	160	110	160/160	OTM160E4C2D230C	1SCA106230R1001	11
4	160	110	160/160	OTM160E4WC2D230C	1SCA101033R1001	11
4	200	135	200/200	OTM200E4C2D230C	1SCA106671R1001	11
4	200	135	200/200	OTM200E4WC2D230C	1SCA101034R1001	11
4	250	170	250/250	OTM250E4C2D230C	1SCA101016R1001	11
4	250	170	250/250	OTM250E4WC2D230C	1SCA101035R1001	11
4	315	215	315/315	OTM315E4C2D230C	1SCA101059R1001	15
4	400	275	400/400	OTM400E4C2D230C	1SCA101060R1001	15
4	630	435	650/650	OTM630E4C2D230C	1SCA108434R1001	37
4	800	550	720/650	OTM800E4C2D230C	1SCA108439R1001	37
4	1000	680	1000/1000	OTM1000E4C2D230C	1SCA112858R1001	66
4	1250	850	1250/1000	OTM1250E4C2D230C	1SCA112857R1001	66
4	1600	1000	1600/1000	OTM1600E4C2D230C	1SCA112854R1001	70

Automatic operation, OTM_C3D_ types, voltage sensing on the top. Voltage sensing connection included as standard.

	160	110	160/160	OTM160F4C3D230C	1SCA106305R1001	11
+				·····		11
1	160	110	160/160	OTM160E4WC3D230C	1SCA106306R1001	11
1	200	135	200/200	OTM200E4C3D230C	1SCA106309R1001	11
1	200	135	200/200	OTM200E4WC3D230C	1SCA106310R1001	11
1	250	170	250/250	OTM250E4C3D230C	1SCA106313R1001	11
1	250	170	250/250	OTM250E4WC3D230C	1SCA106314R1001	11
1	315	215	315/315	OTM315E4C3D230C	1SCA106317R1001	15
1	400	275	400/400	OTM400E4C3D230C	1SCA106318R1001	15
1	630	435	650/650	OTM630E4C3D230C	1SCA108726R1001	37
1	800	550	720/650	OTM800E4C3D230C	1SCA108728R1001	37
1	1000	680	1000/1000	OTM1000E4C3D230C	1SCA112852R1001	66
1	1250	850	1250/1000	OTM1250E4C3D230C	1SCA112851R1001	66
ļ	1600	1000	1600/1000	OTM1600E4C3D230C	1SCA112848R1001	70

¹⁾ Under nominal conditions

See next page for handles and bolt kits >

Automatic transfer switches Ordering information for OTM160...1600_C

Rated

Rated



OTM160E3C8D230C



OTM160...250E3WC8D230C



OTM315...400E4C8D230C



OTM630...800E4C8D230C



OTM1000...1250E4C8D230C



OTM1600F3C8D230C

Automatic transfer switches, open transition, OTM160...OTM1600_C

current

Delivered with a handle for manual operation, PCB connectors, bolt kit with nuts and washers for all terminals. Types OTM160...1600_C_D_ include a voltage sensing kit on the top of the switch. Please note that OTM_C2D types are equipped with OMD200 control units, while OTM_C3D types are equipped with OMD300 control units.

To ensure suitability and easy installation, these products are also available with the voltage sensing kit installed onto the bottom of the switch. Simply add the letter "B" to the typecode when ordering. For example,OTM160E4C2D230C ▶ OTM160E4CB2D230C. Types OTM160...1600E_ include a storage clip for the handle and spare fuses. Types OTM160...250_WC_D_ are equipped with extended phase distance.

No. of poles	AC-21A, AC-22A ≤ 415V, I[A]	power 400V S[kVA]	AC-31B/ AC-33B 415V, I[A]	Туре	Order number	Weight/ unit [kg]
Automa		TM_C8D_ ty	pes, voltage sensi	ng on the top	•	
Motor op	perator voltage U _e	= 220240	V AC ¹⁾			
3	160	110	160/160	OTM160E3C8D230C	1SCA101017R1001	10
3	160	110	160/160	OTM160E3WC8D230C	1SCA101036R1001	10
4	160	110	160/160	OTM160E4C8D230C	1SCA101020R1001	11
4	160	110	160/160	OTM160E4WC8D230C	1SCA101039R1001	11
3	200	135	200/200	OTM200E3C8D230C	1SCA101018R1001	10
3	200	135	200/200	OTM200E3WC8D230C	1SCA101037R1001	10
4	200	135	200/200	OTM200E4C8D230C	1SCA101021R1001	11
4	200	135	200/200	OTM200E4WC8D230C	1SCA101040R1001	11
3	250	170	250/250	OTM250E3C8D230C	1SCA101019R1001	10
3	250	170	250/250	OTM250E3WC8D230C	1SCA101038R1001	10
4	250	170	250/250	OTM250E4C8D230C	1SCA101022R1001	11
4	250	170	250/250	OTM250E4WC8D230C	1SCA101041R1001	11
3	315	215	315/315	OTM315E3C8D230C	1SCA101062R1001	14
4	315	215	315/315	OTM315E4C8D230C	1SCA101063R1001	15
3	400	275	400/400	OTM400E3C8D230C	1SCA101061R1001	14
4	400	275	400/400	OTM400E4C8D230C	1SCA101064R1001	15
3	630	435	650/650	OTM630E3C8D230C	1SCA108452R1001	34
4	630	435	650/650	OTM630E4C8D230C	1SCA108453R1001	37
3	800	550	720/650	OTM800E3C8D230C	1SCA108454R1001	34
4	800	550	720/650	OTM800E4C8D230C	1SCA108455R1001	37
3	1000	680	1000/1000	OTM1000E3C8D230C	1SCA112868R1001	57
4	1000	680	1000/1000	OTM1000E4C8D230C	1SCA112861R1001	66
3	1250	850	1250/1000	OTM1250E3C8D230C	1SCA112862R1001	57
4	1250	850	1250/1000	OTM1250E4C8D230C	1SCA112864R1001	66
3	1600	1000	1600/1000	OTM1600E3C8D230C	1SCA112866R1001	60
4	1600	1000	1600/1000	OTM1600E4C8D230C	1SCA112867R1001	70

Handles and bolt kits included as standard

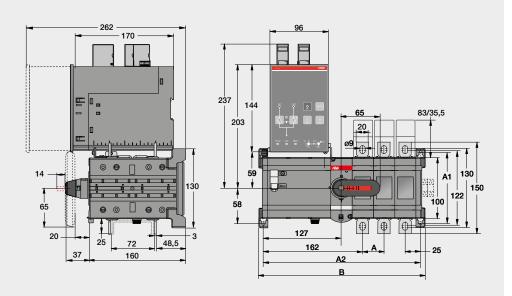
Suitable for switches	Handle	Bolt kit
OTM160250	OTV250ECMK	M8x25
OTM315400	OTV400ECMK	M10x30
OTM630800	OTV800ECMK	M12x40
OTM10001600	OTV1000ECMK	M12x60

OTM160...250E_C_2D_ OTM160...250E_C_3D_

OT160-250_C_D_

[mm]	E3	E4
A	35	35
A1	116	116
A2	257	292
В	272	307

13 / OTM160-250E_C_2D_ C

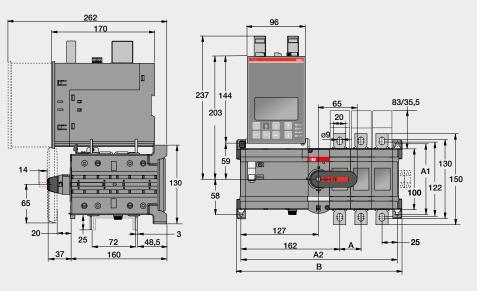


OTM160...250E C 8D

OT160-250_C_D

· · · · · · · · · · · · · · · · · · ·				
[mm]	E03	E04		
A	35	35		
A1	116	116		
A2	257	292		
В	272	307		

M00184 / OTM160-250E_C_8D_ C

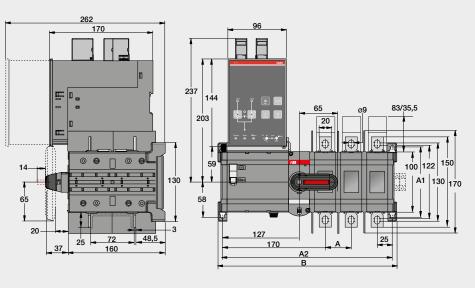


OTM160...250E_WC_2D_ OTM160...250E_WC_3D_

OT160-250 WC D

[mm]	E3	E4		
A	43	43		
A1	116	116		
A2	281	324		
В	296	339		

M00186 / OTM160-250E_WC_2D_ C

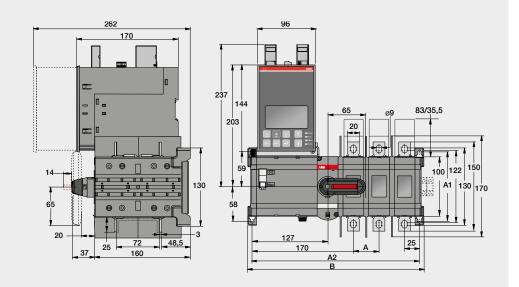


OTM160...250E_WC_8D_

OT160-250_WC_D_

[mm]	E3	E4
A	43	43
A1	116	116
A2	281	324
В	296	339

M00187 / OTM160-250E_WC_8D_ C

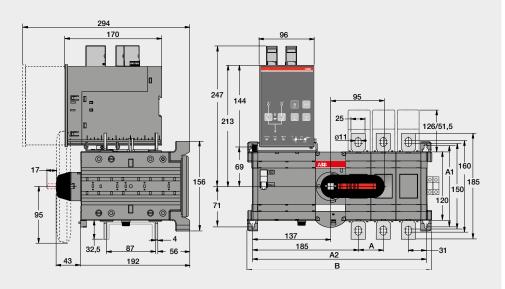


OTM315...400E_C_2D_ OTM315...400E_C_3D

OTM315-400_C_D_

[mm]	E3	E4
A	44	44
A1	142	142
A2	304,5	348,5
В	323	367

M00192 / OTM315-400E_C_2D_ C

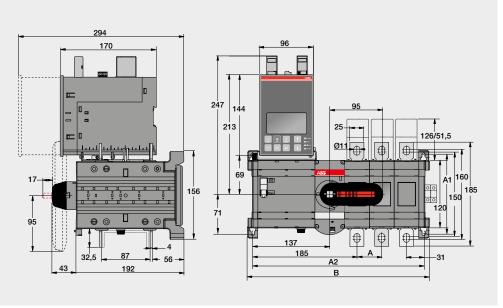


OTM315...400E_C_8D_

OTM315-400 C D

OTMOTO 400_O_D_				
[mm]	E3	E4		
A	44	44		
A1	142	142		
A2	304,5	348,5		
В	323	367		

M00193 / OTM315-400E_C_8D_ C

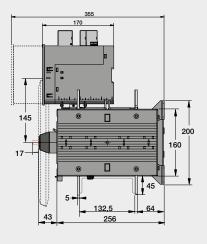


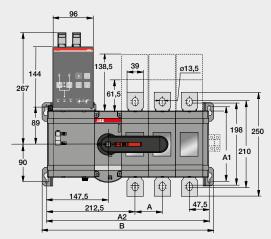
OTM630...800E_C_2D_ OTM630...800E_C_3D_

OTM630-800_C_D_

[mm]	E2	E3	E4
A	65	65	65
A1	180	180	180
A2	325	390	455
В	346	411	476

M00204 / OTM630-800E_C_2D_ C



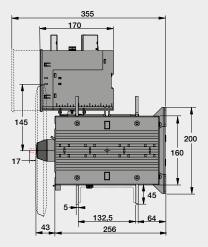


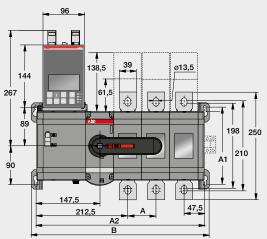
OTM630...800E C 8D

OTM630-800 C D

	-		
[mm]	E2	E3	E4
A	65	65	65
A1	180	180	180
A2	325	390	455
В	346	411	476

M00205 / OTM630-800E_C_8D_ C



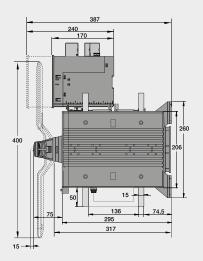


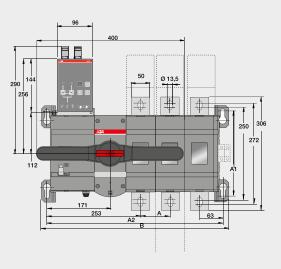
OTM1000...1250E_C2D_ OTM1000...1250E_C3D_

OTM1000-1250E C D

[mm]	E2	E3	E4	
A	80	80	80	
A1	230	230	230	
A2	396	476	556	
В	426	506	586	

M00262 / OTM1000_1250E2_4C2 B



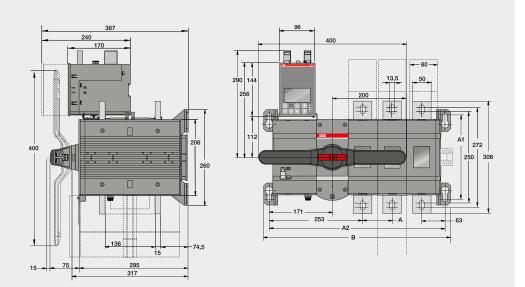


OTM1000...1250E_C_8D

OTM1000-1250E_C_D

[mm]	E2	E3	E4
A	80	80	80
A1	230	230	230
A2	396	476	556
В	426	506	586

M00264 / OTM1000_1250E2_4C8 B

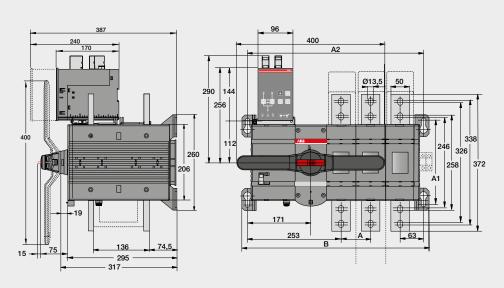


OTM1600E_C2D_ OTM1600E_C3D_

OTM1600_C_D

[mm]	E2	E3	E4
A	80	80	80
A1	230	230	230
A2	396	476	556
В	426	506	586

M00268 / OTM1600E2-4C2D_ C

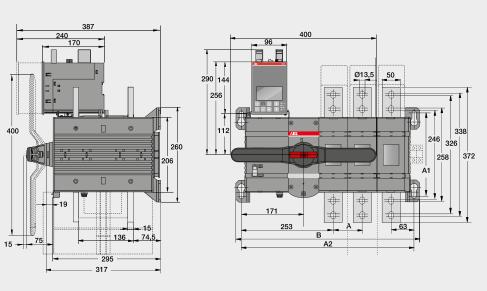


OTM1600E_C8D_

OTM1600E_C_D

[mm]	E2	E3	E4
A	80	80	80
A1	230	230	230
A2	396	476	556
В	426	506	586

M00269 / OTM1600E2_4C8 B



Optional accessories for automatic transfer switches Ordering information for terminal shrouds



OTS_L_



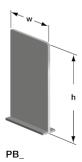
OTS_S_

Terminal shrouds, grey plastic

Snap-on mounting to the switches, IP 20. A kit includes three or four shrouds which can be used on either side of the switch. Suitable for the upperswitch. Transparent shrouds for OT_160...1600 available on request, please replace the letter "G" with "T".

Suitable No. for of switches poles		Description	Туре	Order number	Units/ type [pcs]	Weight/ unit [kg]
OT_160250_C	3	Long type	OTS250G1L/3	1SCA022731R8150	3	0.09
OT_160250_C	3	Short type	OTS250G1S/3	1SCA022731R8310	3	0.06
OT_160250_C	4	Long type	0TS250G1L/4	1SCA022731R8230	4	0.12
OT_160250_C	4	Short type	OTS250G1S/4	1SCA022731R8400	4	0.08
OT_315400_C	3	Long type	OTS400G1L/3	1SCA022736R8840	3	0.15
OT_315400_C	3	Short type	OTS400G1S/3	1SCA022736R9060	3	0.09
OT_315400_C	4	Long type	OTS400G1L/4	1SCA022736R9490	4	0.20
OT_315400_C	4	Short type	OTS400G1S/4	1SCA022736R9650	4	0.12
OT_600800_C	3	Long type	OTS800G1L/3	1SCA022776R7890	3	0.32
OT_600800_C	3	Short type	OTS800G1S/3	1SCA022776R8190	3	0.17
OT_600800_C	4	Long type	OTS800G1L/4	1SCA022776R7970	4	0.42
OT_600800_C	4	Short type	OTS800G1S/4	1SCA022776R8270	4	0.26
OT_10001600_C	3	Long type	OTS1600G1L/3	1SCA022871R9510	3	0.64
OT_10001600_C	3	Short type	OTS1600G1S/3	1SCA022871R9600	3	0.37
OT_10001600_C	4	Long type	OTS1600G1L/4	1SCA022871R9780	4	0.85
OT_10001600_C	4	Short type	OTS1600G1S/4	1SCA022871R9860	4	0.49

Optional accessories for automatic transfer switches Ordering information for phase barriers



Phase barriers

The phase barriers designed for ABB Tmax T4-T5 MCCB's can also be used for OT_160...800 change-over switches. 3-pole change-overs need 8 barriers and 4-pole change-overs need 12 barriers for full protection.

Suitable for switches	No. of poles	Height h [mm]	Cutting width W of the phase barrier [mm]	Туре	Order number	Units/ type [pcs]
OT_160250E_C	3	100	55	PB100 low	1SDA054970R1	4
OT_160250E_C	3	200	55	PB200 high	1SDA054972R1	4
OT_160250E_C	4	100	55	PB100 low	1SDA054971R1	6
OT_160250E_C	4	200	55	PB200 high	1SDA054973R1	6
OT_315400E_C	3	100	67	PB100 low	1SDA054970R1	4
OT_315400E_C	3	200	67	PB200 high	1SDA054972R1	4
OT_315400E_C	4	100	67	PB100 low	1SDA054971R1	6
OT_315400E_C	4	200	67	PB200 high	1SDA054973R1	6
OT_600800E_C	3	100	90	PB100 low	1SDA054970R1	4
OT_600800E_C	3	200	90	PB200 high	1SDA054972R1	4
OT_600800E_C	4	100	90	PB100 low	1SDA054971R1	6
OT_600800E_C	4	200	90	PB200 high	1SDA054973R1	6

Optional accessories for automatic transfer switches Ordering information for terminal clamps



OZXB2L





Terminal o	clamp sets	for Al- and	Cu-cables
------------	------------	-------------	-----------

Suitable for switches	Cable cross section [mm²]	Suitable shroud	Туре	Order number	Units/ type [pcs]	Delivery batch [pcs]	Weight/ unit [kg]
OT_160250E_C	1070	0TS250_L	0ZXB1L	1SCA022169R2030	3	1	0.15
OT_160250E_C	1070	0TS250_L	OZXB1L/1	1SCA022194R0030	1	50	0.05
OT_160250E_C	25120	0ZXB2K	OZXB2	1SCA022119R7610	3	1	0.34
OT_160250E_C	25120	OZXB2K	0ZXB2/1	1SCA022194R0200	1	50	0.12
OT_160250E_C	25120	0ZXB2K	0ZXB2L	1SCA022158R7750	3	1	0.43
OT_160250E_C	25120	0ZXB2K	0ZXB2L/1	1SCA022194R0460	1	50	0.15
OT_160250E_C	95185	0TS250_L	OZXB8	1SCA022744R1510	3	1	0.50
OT_160250E_C	95185	0TS250_L	OZXB8/1	1SCA022744R1600	1	20	0.15
OT_160250E_C	95240	0TS250_L	OZXB9	1SCA022750R3210	3	1	0.50
OT_160250E_C	95240	0TS250_L	OZXB9/1	1SCA022750R3300	1	20	0.15
OT_315400E_C	25120	OZXB2K	0ZXB2L	1SCA022158R7750	3	1	0.43
OT_315400E_C	25120	0ZXB2K	0ZXB2L/1	1SCA022194R0460	1	50	0.15
OT_315400E_C	70185	0ZXB3K	OZXB3	1SCA022136R8100	3	1	1.28
OT_315400E_C	70185	0ZXB3K	OZXB3/1	1SCA022194R0620	1	20	0.43
OT_315400E_C	2x(70185)	0ZXB3K	OZXB4	1SCA022137R4760	3	1	1.71
OT_315400E_C	2x(70185)	0ZXB3K	OZXB4/1	1SCA022194R0890	1	20	0.57
OT_315400E_C	120240	OZXB5K	OZXB7	1SCA022185R0040	3	1	1.00
OT_315400E_C	120240	OZXB5K	OZXB7/1	1SCA022194R1430	1	20	0.34
OT_315400E_C	120240	OZXB5K	OZXB7L	1SCA022185R7130	3	1	1.17
OT_315400E_C	120240	OZXB5K	OZXB7L/1	1SCA022194R1600	1	20	0.40
OT_315400E_C	95185	0TS400_L	OZXB8	1SCA022744R1510	3	1	0.50
OT_315400E_C	95185	0TS400_L	OZXB8/1	1SCA022744R1600	1	20	0.15
OT_315400E_C	95240	0TS400_L	OZXB9	1SCA022750R3210	3	1	0.50
OT_315400E_C	95240	0TS400_L	0ZXB9/1	1SCA022750R3300	1	20	0.15

Optional accessories for automatic transfer switches Ordering information for bridging- and reversing bars



OTZC13...34



OTZC43...44 OTZC53...54



Bridging bars

The bridging bars provide a connection link either on the incoming or outcoming side of the switch.

Suitable for switches	No. of poles	Туре	Order number	Units/ type [pcs]	Weight/ unit [kg]	
OT_160250_C	3	OTZC13	1SCA022767R6910	3	0.6	
OT_160250_C	4	OTZC14	1SCA022767R7040	4	0.8	
OT_315400_C	3	OTZC23	1SCA022767R7120	3	0.6	
OT_315400_C	4	OTZC24	1SCA022767R7210	4	0.8	
OT_600_C800E_C	3	OTZC33	1SCA022785R7020	3	1.0	
OT_600_C800E_C	4	OTZC34	1SCA022785R7110	4	1.3	
OT_10001250E_C	3	OTZC43	1SCA022868R0710	3	4.2	
OT_10001250E_C	4	OTZC44	1SCA022868R0800	4	5.6	
OT800U_, OT_1600E_C	3	OTZC53	1SCA022868R0980	3	5.6	
OT800U_, OT_1600E_C	4	OTZC54	1SCA022868R1010	4	7.4	
OT_20002500E_C	3	OTZC63	1SCA022868R1100	3	10.8	
OT_20002500E_C	4	OTZC64	1SCA022868R1360	4	14.5	
OT_3200E_C	3	OTZC73	1SCA128843R1001	3	14.1	
OT_3200E_C	4	OTZC74	1SCA128844R1001	4	18.7	

Reversing bars

A reversing switch can be built by using phase sequence bars in two phases. The kit includes two phase sequence conversion bars. The missing bridging bars must be ordered separately, see above. For example 3-pole switches: one 4-pole standard bridging bar kit is required (one bar for the reversing side, three bars for the other side).

Suitable for switches	Туре	Order number	Units/ type [pcs]	Weight/ unit [kg]
OT_160250_C	OTZR1	1SCA100352R1001	2	0.3
OT_315400_C	OTZR2	1SCA104647R1001	2	0.3
OT 600 C800E C	OTZR3	1SCA100355R1001	2	0.4

Optional accessories for automatic transfer switches Ordering information and technical data for auxiliary contacts



OA1G01 OA7G10



OA1G10 OA8G01



OA2G11

Auxiliary contact blocks for OTM40...125F

Snap-on mounting to the switch, IP 20, max. 2 blocks/ side. $I_{\rm th}$ = 16 A, suitable for cable cross sections max. $2 \times 2,5 \text{ mm}^2$. Simultaneous action with the main contacts.

Suitable for switches	Contact functions	Installation side	Туре	Order number	Delivery batch [pcs]	Weight/ unit [kg]
OT_16125F_C	1NO	Right	OA1G10	1SCA022353R4970	10	0.03
OT_16125F_C	1NC	Right	0A8G01	1SCA022744R2240	10	0.03
OT_16125F_C	1NO	Left	0A7G10	1SCA022673R1140	10	0.03
OT_16125F_C	1NC	Left	OA1G01	1SCA022353R4890	10	0.03
0T63125F3C	1NO+1NC	Either	0A2G11 ¹⁾	1SCA022379R8100	10	0.03

¹⁾ Not mountable on 4-pole change-over switches

Auxiliary contact blocks for OTM160...3200

Mounting on the right side of the switch: Max. 4 auxiliary contact blocks/switch (totally 8 blocks). Types _AU have gold plated contacts for harsh environments and low operating voltages. Simultaneous action with the main contacts, IP20.

Suitable for switches	Contact functions	Installation side	Туре	Order number	Delivery batch [pcs]	Weight/ unit [kg]
OT_1603200_	1NO	Right	OA1G10	1SCA022353R4970	10	0.03
OT_1603200_	1NC	Right	0A3G01	1SCA022456R7410	10	0.03
OT_1603200_	1NO	Right	OA1G10AU	1SCA022436R7910	10	0.03
OT_1603200_	1NC	Right	OA3G01AU	1SCA022819R5260	10	0.03

Auxiliary contacts

Technical data for auxiliary contacts according to IEC 60947-5-1, for OA1G_, OA2G_, OA3G_, OA7G_, OA8G_									
AC15			DC12						
U _e /[V]	I _e /[A]	U _e /[V]	I _e /[A]	P/[W]	I _e /[A]	P/[W]			
230	6	24	10	240	2	50			
400	4	72	4	290	0.8	60			
415	4	125	2	250	0.55	70			
690	2	250	0.55	140	0.27	70			
***************************************	:	440	0.1	44	:	:			

Function tables

Function table of OT1603200, OT160800_Y and OTM1602500 auxiliary contacts / Switch I (max. 2+2)							
Handle position Main contacts OA1G10 NO OA3G01 NC							
I	closed	closed	open				
0	open	open	closed				
II	closed	open	closed				

Function table of OT160...3200, OT160...800_Y and OTM160...2500 auxiliary contacts / Switch II (max. 2+2)

Handle position	Main contacts	OA1G10 NO	OA3G01 NC
	closed	open	closed
0	open	open	closed
I	closed	closed	open

Optional accessories for automatic transfer switches Ordering information for automatic control units and related accessories



OMD200



OMD300



OMD800



OMZD1



OMZC2

Automatic control units

OMD automatic control units can be used with OTM40...3200 motorized change-over switches in order to assemble an automatic transfer switch. The type and ordering codes include the OMD control unit, PCB connectors and 2 OMZD1 fasteners for door mounting.

If used with OTM40...125_CMA_:

1 x OTM40...125_CMA_ motorized change-over switch and 2 or 3 x OZXT6 terminal clamp sets (including voltage sensing connection) must be ordered separately to be able to assemble an automatic transfer switch.

If used with OTM160...3200 CM:

1 x OTM160...3200_CM_ motorized change-over switch, 1 x OMZB_ voltage sensing connectors and 2 x OA1G10 auxiliary contacts must be ordered separately to be able to assemble an automatic transfer switch. The control unit can be mounted on a door or on DIN rail.

Suitable for switches	Туре	Order number		Weight/ unit [kg]
OTM403200_CM_	OMD200E480C-A1	1SCA123789R1001	1	0.8
OTM403200_CM_	OMD300E480C-A1	1SCA123790R1001	1	1.0
OTM403200_CM_	OMD800E480C-A1	1SCA123791R1001	1	1.3

Panel fasteners

For mounting the OMD automatic control unit on the door. The type and ordering code is for 1 piece, so 2 units must be ordered for mounting the control on the door.

Suitable for OMD control unit	Туре	Order number	Units/type [pcs]
OMD200_, OMD300_, OMD800_	OMZD1	1SCA022787R5190	1

Cover plate

Providing protection against accidental contact. Padlockable transparent cover. The type and ordering codes are for 1 piece.

Suitable for OMD control unit	Туре	Order number	Units/type [pcs]
OMD200_, OMD300_, OMD800_	OMZC2	1SCA101001R1001	1

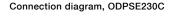
Optional accessories for automatic transfer switches Ordering information for dual power sources

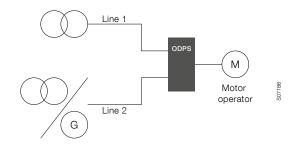


Dual power source

Provides power supply to the motor operator by using two lines. The device has two inputs, from line I (LN I) and line II (LN II), and one output for the motor operator. The motor operator is automatically energized whenever power is available in one of the lines. Can be used with 230VAC motor operators. Snap-on mounted PCB connectors are included in the delivery. The device can be DIN-rail or screw mounted.

Suitable for			Units/ type	Weight/ unit
switches	Туре	Order number	[pcs]	[kg]
OTM403200_	ODPSE230C	1SCA116892R1001	1	0.3







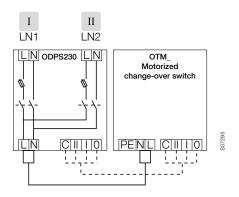
ODPS230

Dual power source including ATS functionality

Similar to previous dual power source but also including ATS (Automatic Transfer Switch) functionality and in-built short-circuit protection. Provides power supply to the motor operator by using two 220...240 V AC lines. Motor operator is automatically energized whenever power is available in one of the lines. The device has a three position (AUTO-MAN-O) DIP switch to choose the correct operating mode. The AUTO position enables and the MAN position disables the ATS functionality when used with OTM motorized change-over switch. The O position is used for safety reasons: it operates the OTM to position 0 to isolate the load from the feeding sources. The device can be DIN-rail or screw mounted.

Suitable for			type	Weight/ unit
switches	Туре	Order number	[pcs]	[kg]
OTM403200	ODPS230	1SCA122946R1001	1	0.3

Connection diagram, ODPS230



Technical data and dimensional drawings to be found on the following pages.

Optional accessories for automatic transfer switches Technical data and dimensional drawings for dual power sources

Technical data for dual power source ODPSE230C

Dual power source ODPSE230C	
Rated operational voltage U [V]	220240 V AC +/- 20%
Rated frequency	50 / 60 Hz +/- 10%
Short-circuit protection device	Max. MCB 4 A
Nominal output current I _n [A]	4 A
Startup time	Max. 1.0 s (with 230 V AC)
Operating transfer time LN1 - LN2 or LN2 - LN1	Max. 0.5 s (with 230 V AC)
Cable size	0,22,5 mm²
Rated impulse withstand voltage, U _{imp}	4 kV
Overvoltage category	
Pollution degree	3
Protection rating for the front panel	IP20
Operating temperature	− 25+ 60 °C
Transportation and storage temperature	− 40+ 70 °C
Altitude	Max. 2 000m

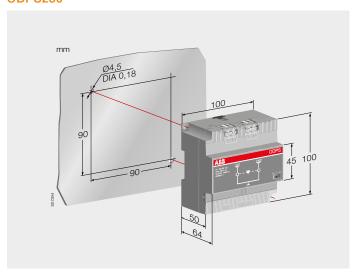
Technical data for new dual power source ODPS230 with ATS functionality

· · · · · · · · · · · · · · · · · · ·	·
Dual power source ODPS230	
Rated operational voltage U [V]	220240 V AC, 50 / 60 Hz
Maximum voltage	288 V AC
Pick-up voltage	≥198 V AC
Drop-out voltage	≤154 V AC
Operating time	1 s ± 0.5 s
Nominal output current I _{n.} [A]	3,15 A
Rated conditional short-circuit current, I _o (r.m.s.)	50 kA
Internal fuse	T/3,15A/H*
Fuse size	6,3 x 32 mm
Rated impulse withstand voltage, U _{imp.}	4 kV
Overvoltage category	
Pollution degree	3
Cable size	Max. 6 mm ²
Protection rating for the front panel	IP20
Operating temperature	− 25+ 60 °C
Transportation and storage temperature	– 40+ 70 °C
Altitude	Max. 2 000m

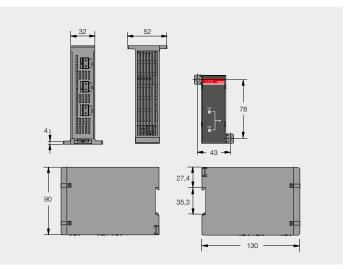
^{*)} The breaking capacity must be 50 kA to achieve 50 kA lp (r.m.s.) rating

Dimensional drawings for dual power sources

ODPS230



ODPSE230C





Manual and motorized bypass switches Open transition from 160 to 800 Amperes

Introduction to manual and motorized bypass switches General information 104 Product range 105 Type codes and functionality in brief 107 **Technical data** OTM160...800_Y_ 108 Motor operators 109 **Ordering information** Manual OT160...800E_YP 110 Motorized OTM160...800E_YM_C 112 **Dimension drawings** Manual bypass switches 114 Motorized bypass switches 115 Ordering information for optional accessories External handles and terminal shrouds 116 Phase barriers 117 Terminal clamps 118 Bridging- and reversing bars 119 Auxiliary contacts 120

ABB's manual and motorized bypass switches are the best solution for optimized and efficient panel design.

Manual and motorized bypass switches Optimized performance in a compact device



Our comprehensive range of bypass switches from 160 to 800 Amperes is the best solution for an optimized and efficient panel design, for safe maintenance of critical components. Traditionally, bypass switches were built using individual switch-disconnectors connected with conversion kits. ABB offers a modern solution: one single device, consisting of three switches and no conversion kits. This does not only have a high performance, but optimizes space.



Innovative space saving design

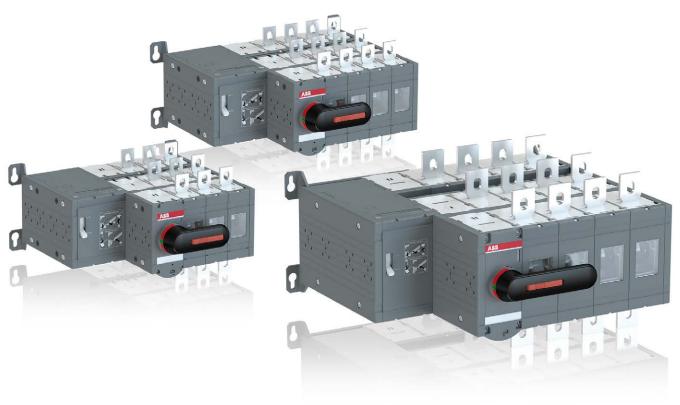
Three switches are stacked on top of each other; so the total footprint is equivalent to only one switch. ABB's bypass switches can be fitted into a smaller cabinet, compared to bypass switches built using conversion kits. This enables the customer to create more compact panels with an optimized design.



Safe operation and maintenance

ABB's bypass switches fulfill isolating requirements according to standard IEC 60947-3, so there is no need for additional isolating devices. The equipment can be safely maintained while the load is being supplied directly from the source.

Manual and motorized bypass switches Open transition from 160 to 800 Amperes



Motorized bypass switches shown above.

	d							
Manual operation, bypass swi	itches, 160-800 A			The second second		. 01		
Types	OT160_'	Υ		OT315_\	Y	OT630_'	/	
	0T200_			OT400_'		OT800_'		
	0T250_		***************************************		•••••••••••••••••••••••••••••••••••••••		•••••••••••••••••••••••••••••••••••••••	
I _{th} /A	160	200	250	315	400	630	800	
I _e /AC-22A, < 415V	160	200	250	315	400	630	800	
I _a /AC-23A, < 415V	160	200	250	315	400	630	800	
0								







	1 100		1	A H B			
ritches, 160-800 A							
OTM200	OTM200_Y		OTM400	OTM400_Y		OTM800_Y	
i		•		•		•	
160	200	250	315	400	630	800	
160	200	250	315	400	630	800	
160	200	250	315	400	630	800	
	0TM160 0TM200 0TM250 160	OTM160_Y OTM200_Y OTM250_Y 160 200 160 200	OTM160_Y OTM200_Y OTM250_Y 160 200 250 160 200 250	0TM160_Y 0TM315 0TM200_Y 0TM400 0TM250_Y 0TM400 160 200 250 315 160 200 250 315	OTM160_Y OTM315_Y OTM200_Y OTM400_Y OTM250_Y 160 200 250 315 400 160 200 250 315 400	0TM160_Y 0TM315_Y 0TM630 0TM200_Y 0TM400_Y 0TM800 0TM250_Y 315 400 630 160 200 250 315 400 630 160 200 250 315 400 630	OTM160_Y OTM315_Y OTM630_Y OTM200_Y OTM400_Y OTM800_Y OTM250_Y 0100 0100 160 200 250 315 400 630 800 160 200 250 315 400 630 800

Manual and motorized bypass switches Type codes and functionality in brief

Type codes

Understanding the type code keys below will help you quickly identify the correct product for your needs. The simple naming system allows you to see the products type, Ampere rating, standard classification and number of poles, all in one glance.

Explanation of the manual bypass switces types OT160...3200_C

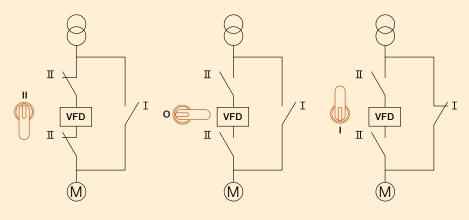
		• •	•	•	-
Option:	OT250	Е	03	С	Р
Position:	1	2	3	4	5
1	Brand and Swite	ch size / Ampere	rating		
2	Standard				
	E: IEC				
3	Number of the p				
	03: 12				
•	04: 13				
	22: 33				
4	Bypass switch				
5	Included handle				
	P: Pistol handle				

Explanation of the motorized bypass switces types OTM160...2500_C

Option:	OTM250	Е	3	Υ		M	230C
Position:	1	2	3	4		5	5
1	Brand and Switch size / Ampere rating						
2	IEC						
	E: IEC						
3	Number of the po						
	3: 3-poles						
	4: 4-poles						
4	Bypass switch						
5	Motorized bypass	switch					
6	Voltage for motor						_
	230C: 220240 \						

Functionality in brief

This simplified diagram illustrates the basic functionality and application of these switch products.





Manual and motorized bypass switches Technical data for OT and OTM160...800_Y_

Manual and motorized bypass switches

				Switch size , OTM_						
Data according to IEC 60947-3				OTM160_	OTM200_	OTM250_	OTM315_	OTM400_	OTM630_	OTM800_
Rated insulation voltage and rated operational voltage AC20/DC20		Pollution degree 3	V	1000	1000	1000	1000	1000	1000	1000
Dielectric strength		50 Hz 1min.	kV	10	10	10	10	10	10	10
Rated impulse withstand voltage			kV	12	12	12	12	12	12	12
Rated thermal current and rated	/ ambient 40°C	In open air	Α	160	200	250	315	400	630	800
perational current AC20/DC20	/ ambient 40°C	In enclosure	Α	160	200	250	315	400	630	800
with minimum conductor cross section		Cu	mm ²	70	95	120	185	240	2x185	2x240
Rated operational current, AC-21A		up to 500 V	Α	160	200	250	315	400	630	800
		690 V	Α	160	200	250	315	400	630	800
Rated operational current, AC-22A		up to 500 V	Α	160	200	250	315	400	630	800
		690 V	Α	160	200	250	315	400	630	800
Rated operational current, AC-23A		up to 415 V	Α	160	200	250	315	400	630	800
		440 V	Α	160	200	250	315	400	630	800
		500 V	Α	160	200	250	315	400	630	800
		690 V	Α	160	200	250	315	400	630	800
Rated operational current /		≤ 110 V	Α	160/2	200/2	250/2	315/14)	400/14)	630/1	800/1
oles in series, DC-21A1)		220 V	Α	160/2	200/2	250/2	315/24)	400/24)	630/1	800/1
		440 V	Α	160/3	200/3	230/3	315/3	360/3	630/2	720/2
		660 V	Α	160/4	200/4	200/4	315/4	315/4	630/44)	630/44)
ated operational power, AC-23A ²⁾		230 V	kW	45	60	75	100	132	200	250
he kW-ratings are accurate		400 V	kW	90	110	140	160	220	355	450
or 3-phase 1500 R.P.M. standard		415 V	kW	90	110	145	180	230	355	450
sychronous motors		500 V	kW	110	132	170	220	280	400	560
		690 V	kW	160	200	250	315	400	630	800
Rated breaking capacity		up to 415 V	Α	1 280	1 600	2 000	2 520	3 200	5 040	6 400
n category AC-23		500 V	Α	1 280	1 600	2 000	2 520	3 200	5 040	6 400
		690 V	Α	1 280	1 600	2 000	2 520	3 200	5 040	6 400
Rated conditional short-circuit current	lp (r.m.s.) 80 kA, 415 V	îc (peak)	kA	40.5	40.5	40.5	59	59	83.5	83.5
p (r.m.s.) and cut-off current îc	Max. OFA fuse size	gG/aM	A/A	355/315	355/315	355/315	500/500	500/500	800/1 000	800/1 000
peak) value. The cut-off current îc	lp (r.m.s.) 100 kA, 500 V	îc (peak)	kA	40.5	40.5	40.5	61.5	61.5	90	90
efers to values listed by fuse	Max. OFA fuse size	gG/aM	Α	315/315	315/315	315/315	500/450	500/450	800/800	800/800
nanufacturers (single phase test acc. to EC60269).	Ip (r.m.s.) 80 kA, 690 V	îc (peak)	kA	40.5	40.5	40.5	59	59	83.5	83.5
LG00209J.	Max. OFA_ fuse size	gG/aM	Α	355/315	355/315	355/315	500/500	500/500	:	800/1 000
Rated short-time withstand current	Icw (r.m.s.)	690 V 0.15s	kA	15	15	15	31	31	38	38
iateu siioi t-tiirie witiistaliu current	16W (1.111.3.)	690 V 0.13s	kA	15	15	15	24	24	36	36
		690 V 0.238	kA kA	8	8	8	15	15	20	20
)-1d -bd tiit-0)	1 (I) ()		.							
Rated short-time making capacity3)	Icm (peak)4)	690 V	kA W	30 2.4	30 4	30 6.5	65	65	80 25	80 40
ower loss / pole	With rated current	<u>.</u>	·				6.5		<mark></mark>	
Mechanical endurance erminal bolt size	Number of oper. cycles ⁵⁾ Metric thread		Cycles	8 000 M8x25	8 000	8 000	8 000 M10x30	8 000 M10x30	5 000 M12x40	5 000 M12x40
erminai boit size	diameter x length		mm	IVIOXZO	M8x25	M8x25	WHUX3U	WHUX3U	IVI I ZX4U	WHZX4U
Ferminal tightening torque	Counter torque required	-	Nm	15-22	15-22	15-22	30-44	30-44	50-75	50-75
Operating torque	Typical for 3-pole bypass switches		Nm	14	14	14	32	32	54	54
Weight without accessories	Manual bypass switches	3-pole switch	kg	4.3	4.3	4.3	8.2	8.2	19.9	19.9
		4-pole switch	•	5.8	5.8	5.8	11.0	11.0	26.6	26.6

¹⁾ Further ratings on request

²⁾ These values are given for guidance and may vary acc. to the motor manufacturer

³⁾ Short circuit duration > 50ms, without fuse protection

 $^{^{\}mbox{\tiny 4)}}$ Max. distance from switch frame to nearest busbar / cable support 150 mm

 $^{^{\}rm 5)}$ Operating cycle: O - I - O - II - O

Manual and motorized bypass switches Technical data for motor operators

Motorized bypass switches, Motor operator

				Switch size		
Data according to IEC 60947				160250	315400	630800
Rated operational voltage Ue	Pollution degree 3	50/60 Hz	V AC	220 - 240	•	•
Operating voltage range				0,85 - 1,1 x Ue	•	
Operating time1)	90° I-0, 0-I, 0-II, II-0	220-240VAC	S	0.4-1.0	0.4-1.0	0.4-1.0
Operating transfer time1)	180° I-0-II, II-0-I	220-240VAC	S	1.0-2.0	0.9-2.0	0.9-2.0
OFF -time when operating I-II or II-I1)	180° I-II, II-I	220-240VAC	S	0.4-1.0	0.4-1.0	0.4-1.0
Nominal current In1)		220-240VAC	Α	0.2	0.5	0.7
Current inrush1)		220-240VAC	Α	1.3	2.1	2.8
Overload fuse	Type / In / Capacity	220-240VAC	mA	T/315/H	T/500/H	T/1 000/H
Operating rate	Cycle 0-I-0-II-0,	220-240VAC	cycles/min	1	1	1
Overvoltage category				III		
Rated impulse withstand voltage Uimp			kV	4	•	
Dielectric strength		50 Hz 1 min.	kV	1.5		
Impulse command		Min. impulse				
		duration	ms	100		
Terminals						
Voltage supply wiring for Ue				PE - N - L		
Cross section		solid/stranded	mm2	1.5 - 2.5		
Short-circuit protection device		max. MCB	Α	C16		
Control terminal (no SELV)				C - II - I - O		
Cross section		solid/stranded	mm2	1.5 - 2.5	••••••	
Maximum cable length			m	100		
State information of locking (no SELV)	·	·	•	<u>'</u>		
Handle attached or motor operator locked		11-12-14 (C/O)		5A/250V/cosφ=1		
Locking motor operator		23-24 (NO)		5A/250V/cosφ=1		
Short-circuit protection device		Max. MCB	Α	C2	•	
Protection degree				IP20		
Operating temperature			°C	-25+55		
Transportation and storage temperature			°C	-40+70		
Max. altitude			m	2 000	•	

¹⁾ Under nominal conditions

Manual and motorized bypass switches Ordering information for OT160...800E03_Y



Bypass switches accessory guide

- Extended shaft
- Auxiliary contact
- Pistol handle
- 8. Bridging bar

Please note that not all listed accessories are automatically included in your order.

Manual and motorized bypass switches Ordering information for manual OT160...800_Y



OT160...250E03_YP



OT315...400E03_YP



OT630...800E03_YP





OHBZX275

OHBZX200

Manual bypass switches, OT160...800_Y

Delivered with a black plastic IP65 I-0-II pistol handle and a handle extension for enabling smooth manual operation, shaft and bolt set for the cable connection. The handle extension is snap-onmounted on the standard handle for manual operation. The handle extension shall be removed when padlocking the standard handle. Handle padlockable in the 0-position, door interlock in the I- and II-positions and when padlocked.

Open transition

	Rated current and power					
No.	AC-21A/A	C-22A	AC-23A			Weight/
of poles	≤ 415V I[A]	400V S[kVA]	400415V I[A]/P[kW]	Туре	Order number	unit [kg]
3	160	110	160/90	OT160E03YP	1SCA123551R1001	5.6
4	160	110	160/90	OT160E04YP	1SCA123556R1001	7.5
3	200	135	200/110	OT200E03YP	1SCA123552R1001	5.6
4	200	135	200/110	0T200E04YP	1SCA123557R1001	7.5
3	250	170	250/140	0T250E03YP	1SCA123553R1001	5.6
4	250	170	250/140	0T250E04YP	1SCA123558R1001	7.5
3	400	275	400/220	0T400E03YP	1SCA123582R1001	10.1
4	400	275	400/220	OT400E04YP	1SCA124026R1001	13.5
3	630	435	630/355	OT630E03YP	1SCA123590R1001	
4	630	435	630/355	OT630E04YP	1SCA123592R1001	
3	800	550	800/450	OT800E03YP	1SCA123591R1001	
4	800	550	800/450	0T800E04YP	1SCA123593R1001	

Closed transition

	Rated current and power					
No.	AC-21A/A	C-22A	AC-23A			Weight/
of poles	≤ 415V I[A]	400V S[kVA]	400415V I[A]/P[kW]	Туре	Order number	unit [kg]
3	160	110	160/90	OT160E03YLP	1SCA145895R1001	5.6
4	160	110	160/90	OT160E04YLP	1SCA145907R1001	7.5
3	200	135	200/110	OT200E03YLP	1SCA145896R1001	5.6
4	200	135	200/110	OT200E04YLP	1SCA145908R1001	7.5
3	250	170	250/140	0T250E03YLP	1SCA145897R1001	5.6
4	250	170	250/140	0T250E04YLP	1SCA145909R1001	7.5
3	400	275	400/220	0T400E03YLP	1SCA145932R1001	10.1
4	400	275	400/220	OT400E04YLP	1SCA145938R1001	13.5
3	630	435	630/355	0T630E03YLP	1SCA145954R1001	
4	630	435	630/355	0T630E04YLP	1SCA145960R1001	
3	800	550	800/450	0T800E03YLP	1SCA145955R1001	
4	800	550	800/450	OT800E04YLP	1SCA145961R1001	

Shafts, handle, handle extension and bolt kits included as standard

Suitable for switches	Shaft	Handle	Handle extension	Bolt kit
0T160250_Y	0XP6/12x161C	OHB65J12E011	OHBZX200	M8x25
0T315400_Y	0XP12x166	OHB95J12E011	. 0115271200	M10x30
OT630800_Y	0XP12x185	OHB125J12E011	OHBZX275	M12x40

Manual and motorized bypass switches Ordering information for OTM160...800E_YM_C



Bypass switches accessory guide

- Terminal clamp
- Storage for handle and fuses
- Handle extension
- Voltage sensing connector

Manual and motorized bypass switches Ordering information for motorized OTM160...800E_YM_C



OTM160...250E3YM230C



OTM315...400E3YM230C



OTM315...400E4YM230C



OTM630-800E3YM230C



OTM630-800E4YM230C



OTZC13



Motorized bypass switches, open transition, OTM160...800E_YM_C

Included a manual direct handle, bolt set for the cable connection and storage clip for handle and spare fuses. Handle padlockable in the 0-position.

	Rated current and power						
	AC-21A	.AC-22A A	.C-23A				
No. of poles			400415V I[A] / P[kW]	Туре	Order number	Weight/ unit [kg]	
Types -V	W: with wide	ohase distar	nce.				
3	160	110	160/90	OTM160E3YM230C	1SCA141435R1001	7.72	
4	160	110	160/90	OTM160E4YM230C	1SCA141436R1001	8.1	
3	200	135	200/110	OTM200E3YM230C	1SCA141437R1001	7.72	
4	200	135	200/110	OTM200E4YM230C	1SCA141438R1001	8.1	
3	250	170	250/140	OTM250E3YM230C	1SCA141439R1001	7.72	
4	250	170	250/140	OTM250E4YM230C	1SCA140870R1001	8.1	
3	315	215	315/160	OTM315E3YM230C	1SCA141440R1001	14	
4	315	215	315/160	OTM315E4YM230C	1SCA141441R1001	16	
3	400	275	400/220	OTM400E3YM230C	1SCA136735R1001	14	
4	400	275	400/220	OTM400E4YM230C	1SCA136677R1001	16	
3	630	435	630/355	OTM630E3YM230C	1SCA136615R1001	25.9	
4	630	435	630/355	OTM630E4YM230C	1SCA136613R1001	28.5	
3	800	550	800/450	OTM800E3YM230C	1SCA136616R1001	25.9	
4	800	550	800/450	OTM800E4YM230C	1SCA136614R1001	28.5	

Recommended accessories: Bridging bars

Please note that two sets of bridging bars are required to make a complete connection.

Suitable for switches	No. of poles	Туре	Order number	Units/ type [pcs]	Weight/ unit [kg]
OT_160250_C, _Y	3	OTZC13	1SCA022767R6910	3	0.6
OT_160250_C, _Y	4	OTZC14	1SCA022767R7040	4	0.8
OT_315400_C, _Y	3	OTZC23	1SCA022767R7120	3	0.6
OT_315400_C, _Y	4	OTZC24	1SCA022767R7210	4	0.8
OT_600_C800E_C, _Y	3	OTZC33	1SCA022785R7020	3	1.0
OT_600_C800E_C, _Y	4	OTZC34	1SCA022785R7110	4	1.3

Recommended accessories: Phase barriers

Suitable for switches	No. of poles	Height h [mm]	Cutting width W of the phase barrier [mm]	Туре	Order number	Units/ type [pcs]
OT_160250E_C	3	100	55	PB100 low	1SDA054970R1	4
OT_160250E_C	3	200	55	PB200 high	1SDA054972R1	4
OT_160250E_C	4	100	55	PB100 low	1SDA054971R1	6
OT_160250E_C	4	200	55	PB200 high	1SDA054973R1	6
OT_315400E_C	3	100	67	PB100 low	1SDA054970R1	4
OT_315400E_C	3	200	67	PB200 high	1SDA054972R1	4

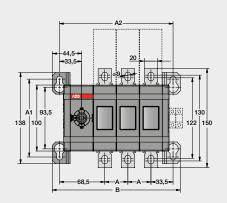
Manual and motorized bypass switches Dimensional drawings for manual bypass switches

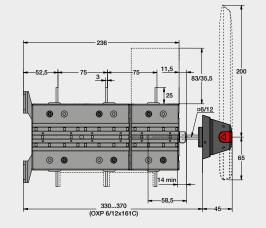
OT160...250E03/04Y

OT160...250_Y_

	E03	E04
A	35	35
A1	118	118
A2	172	207
В	194	229

M00405 / OT160-250E02-04Y A



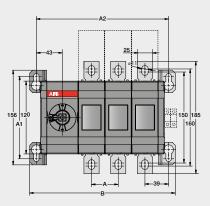


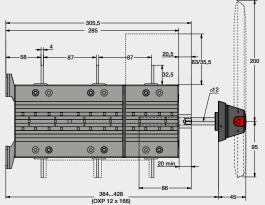
OT315...400E03/04Y

OT315...400E_Y

	E03	E04
A	44	44
A1	136	136
A2	218	262
В	240	284

M00409 / OT315-400E02-04Y B/E



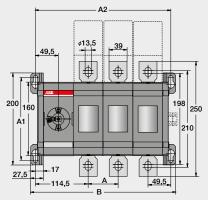


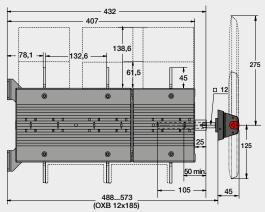
OT630...800E03/04Y

OT630...800F Y

O1000000L_1							
E03	E04						
65	65						
180	180						
294	359						
315	380						
	E03 65 180 294						

M00397 / OT630-800E02-04Y B /ES





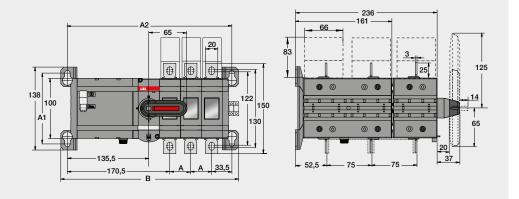
Manual and motorized bypass switches Dimensional drawings motorized bypass switches

OT160...250E03-04Y

OTM160...250_Y

[mm/ln]	E2	E3	E4
A	35	35	35
A1	118	118	118
A2	239	274	309
В	251	296	331

M00339 / OTM160-250E2-4Y A

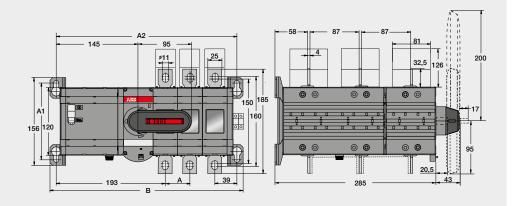


OTM315...400E_Y

OTM315-400E_Y

		_	
[mm/ln]	E2	E3	E4
A	44	44	44
A1	136	136	136
A2	276	320	364
В	298	342	386

M00401 / OTM315-400E_Y A

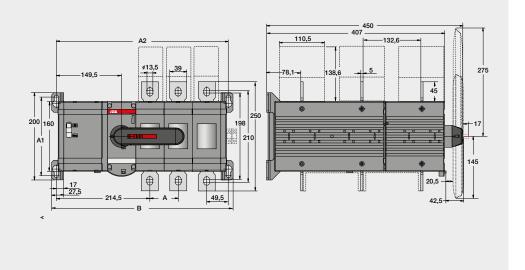


OTM630...800E_Y

OTM630-800E Y

[mm/ln]	E2	E3	E4					
A	65	65	65					
A1	180	180	180					
A2	329	394	459					
В	350	415	480					

M00404 / OTM630-800E2_4Y A



Optional accessories for manual and motorized bypass switches Ordering information for external handles



Handle extension for bypass switches, plastic

The handle extension is snap-on mounted on the standard handle for manual operation. The handle extension shall be removed when padlocking the standard handle. Units / type = 1 pcs.

Suitable for switches	Colour	Туре	Order number	Delivery batch [pcs]	Weight/ unit [kg]
OT160400E_Y	Black	OHBZX200	1SCA125960R1001	1	0.12
OT630800E_Y	Black	OHBZX275	1SCA125963R1001	1	0.12

Ordering information for terminal shrouds



OTS_L_



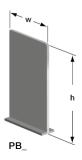
OTS_S_

Terminal shrouds, grey plastic

Snap-on mounting to the switches, IP 20. A kit includes three or four shrouds which can be used on either side of the switch. Suitable for the upperswitch. Transparent shrouds for OT_160...2500 available on request, please replace the letter "G" with "T".

Suitable for switches	No. of poles	Description	Туре	Order number	Units/ type [pcs]	Weight/ unit [kg]
OT_160250_Y	3	Long type	0TS250G1L/3	1SCA022731R8150	3	0.09
OT_160250_Y	3	Short type	0TS250G1S/3	1SCA022731R8310	3	0.06
OT_160250_Y	4	Long type	0TS250G1L/4	1SCA022731R8230	4	0.12
OT_160250_Y	4	Short type	0TS250G1S/4	1SCA022731R8400	4	0.08
OT_315400_Y	3	Long type	0TS400G1L/3	1SCA022736R8840	3	0.15
OT_315400_Y	3	Short type	0TS400G1S/3	1SCA022736R9060	3	0.09
OT_315400_Y	4	Long type	0TS400G1L/4	1SCA022736R9490	4	0.20
OT_315400_Y	4	Short type	0TS400G1S/4	1SCA022736R9650	4	0.12
OT_600800_Y	3	Long type	0TS800G1L/3	1SCA022776R7890	3	0.32
OT_600800_Y	3	Short type	0TS800G1S/3	1SCA022776R8190	3	0.17
OT_600800_Y	4	Long type	0TS800G1L/4	1SCA022776R7970	4	0.42
OT_600800_Y	4	Short type	0TS800G1S/4	1SCA022776R8270	4	0.26

Optional accessories for manual and motorized bypass switches Ordering information for phase barriers



Phase barriers

The phase barriers designed for ABB Tmax T4-T5 MCCB's can also be used for OT_160...800 change-over switches. 3-pole change-overs need 8 barriers and 4-pole change-overs need 12 barriers for full protection.

Suitable for switches	No. of poles	Height h [mm]	Cutting width W of the phase barrier [mm]	Туре	Order number	Units/ type [pcs]
OT_160250E_C	3	100	55	PB100 low	1SDA054970R1	4
OT_160250E_C	3	200	55	PB200 high	1SDA054972R1	4
OT_160250E_C	4	100	55	PB100 low	1SDA054971R1	6
OT_160250E_C	4	200	55	PB200 high	1SDA054973R1	6
OT_315400E_C	3	100	67	PB100 low	1SDA054970R1	4
OT_315400E_C	3	200	67	PB200 high	1SDA054972R1	4
OT_315400E_C	4	100	67	PB100 low	1SDA054971R1	6
OT_315400E_C	4	200	67	PB200 high	1SDA054973R1	6
OT_600800E_C	3	100	90	PB100 low	1SDA054970R1	4
OT_600800E_C	3	200	90	PB200 high	1SDA054972R1	4
OT_600800E_C	4	100	90	PB100 low	1SDA054971R1	6
OT_600800E_C	4	200	90	PB200 high	1SDA054973R1	6

Optional accessories for manual and motorized bypass switches Ordering information for terminal clamps



OZXB2L





Terminal clamp sets for Al- and Cu-cables

Suitable for switches	Cable cross section [mm²]	Suitable shroud	Туре	Order number	Units/ type [pcs]	Delivery batch [pcs]	Weight/ unit [kg]
OT100125F_	1070		0ZXL1	1SCA022439R6770	3	1	0.14
OTM40125F_	1070		0ZXL1	1SCA022439R6770	3	1	0.14
OT_160250E_C, _Y	1070	0TS250_L	0ZXB1L	1SCA022169R2030	3	1	0.15
OT_160250E_C, _Y	1070	0TS250_L	OZXB1L/1	1SCA022194R0030	1	50	0.05
OT_160250E_C, _Y	25120	0ZXB2K	OZXB2	1SCA022119R7610	3	1	0.34
OT_160250E_C, _Y	25120	OZXB2K	0ZXB2/1	1SCA022194R0200	1	50	0.12
OT_160250E_C, _Y	25120	0ZXB2K	0ZXB2L	1SCA022158R7750	3	1	0.43
OT_160250E_C, _Y	25120	0ZXB2K	0ZXB2L/1	1SCA022194R0460	1	50	0.15
OT_160250E_C, _Y	95185	0TS250_L	OZXB8	1SCA022744R1510	3	1	0.50
OT_160250E_C, _Y	95185	0TS250_L	0ZXB8/1	1SCA022744R1600	1	20	0.15
OT_160250E_C, _Y	95240	0TS250_L	OZXB9	1SCA022750R3210	3	1	0.50
OT_160250E_C, _Y	95240	0TS250_L	0ZXB9/1	1SCA022750R3300	1	20	0.15
OT_315400E_C, _Y	25120	0ZXB2K	0ZXB2L	1SCA022158R7750	3	1	0.43
OT_315400E_C, _Y	25120	0ZXB2K	0ZXB2L/1	1SCA022194R0460	1	50	0.15
OT_315400E_C, _Y	70185	0ZXB3K	0ZXB3	1SCA022136R8100	3	1	1.28
OT_315400E_C, _Y	70185	0ZXB3K	0ZXB3/1	1SCA022194R0620	1	20	0.43
OT_315400E_C, _Y	2x(70185)	0ZXB3K	0ZXB4	1SCA022137R4760	3	1	1.71
OT_315400E_C, _Y	2x(70185)	0ZXB3K	0ZXB4/1	1SCA022194R0890	1	20	0.57
OT_315400E_C, _Y	120240	0ZXB5K	OZXB7	1SCA022185R0040	3	1	1.00
OT_315400E_C, _Y	120240	0ZXB5K	0ZXB7/1	1SCA022194R1430	1	20	0.34
OT_315400E_C, _Y	120240	0ZXB5K	0ZXB7L	1SCA022185R7130	3	1	1.17
OT_315400E_C, _Y	120240	0ZXB5K	0ZXB7L/1	1SCA022194R1600	1	20	0.40
OT_315400E_C, _Y	95185	0TS400_L	OZXB8	1SCA022744R1510	3	1	0.50
OT_315400E_C, _Y	95185	0TS400_L	0ZXB8/1	1SCA022744R1600	1	20	0.15
OT_315400E_C, _Y	95240	0TS400_L	OZXB9	1SCA022750R3210	3	1	0.50
OT_315400E_C, _Y	95240	0TS400_L	0ZXB9/1	1SCA022750R3300	1	20	0.15

Optional accessories for manual and motorized bypass switches Ordering information for bridging- and reversing bars



OTZC13...34

Bridging bars

The bridging bars provide a connection link either on the incoming or outcoming side of the switch. Please note that two sets of bridging bars are required to make a complete connection.

Suitable for switches	No. of poles	Туре	Order number	Units/ type [pcs]	Weight/ unit [kg]
OT_160250_C, _Y	3	OTZC13	1SCA022767R6910	3	0.6
OT_160250_C, _Y	4	OTZC14	1SCA022767R7040	4	0.8
OT_315400_C, _Y	3	OTZC23	1SCA022767R7120	3	0.6
OT_315400_C, _Y	4	OTZC24	1SCA022767R7210	4	0.8
OT_600_C800E_C, _Y	3	OTZC33	1SCA022785R7020	3	1.0
OT_600_C800E_C, _Y	4	OTZC34	1SCA022785R7110	4	1.3



OTZR_

Reversing bars

A reversing switch can be built by using phase sequence bars in two phases. The kit includes two phase sequence conversion bars. The missing bridging bars must be ordered separately, see above. For example 3-pole switches: one 4-pole standard bridging bar kit is required (one bar for the reversing side, three bars for the other side).

Suitable for	_		Units/ type	Weight/ unit
switches	Туре	Order number	[pcs]	[kg]
OT_160250_C	OTZR1	1SCA100352R1001	2	0.3
OT_315400_C		1SCA104647R1001	2	0.3
OT_600_C800E_C	OTZR3	1SCA100355R1001	2	0.4

Optional accessories for manual and motorized bypass switches Ordering information and technical data for auxiliary contacts



OA1G01 OA7G10



OA1G10 OA8G01



Auxiliary contact blocks for OT_160...800

Mounting on the right side of the switch: Max. 4 auxiliary contact blocks/switch (totally 8 blocks). Types _AU have gold plated contacts for harsh environments and low operating voltages. Simultaneous action with the main contacts, IP20. The type and ordering numbers are for one piece.

Suitable for switches	Contact	Installation side	Туре	Order number		Weight/ unit [kg]
OT_160800	1NO	Right	OA1G10	1SCA022353R4970	10	0.03
OT_160800	1NC	Right	0A3G01	1SCA022456R7410	10	0.03
OT_160800	1NO	Right	OA1G10AU	1SCA022436R7910	10	0.03
OT_160800	1NC	Right	OA3G01AU	1SCA022819R5260	10	0.03

Auxiliary contacts

Technical da	ita for auxiliary co	ntacts according t	o IEC 60947-5-1,	for OA1G_, OA2G_,	, OA3G_, OA7G_, C	DA8G_	
	AC15			DC12		DC13	
U _e /[V]	I _e /[A]	U _e /[V]	I₀/[A]	P/[W]	I _e /[A]	P/[W]	
230	6	24	10	240	2	50	
400	4	72	4	290	0.8	60	
415	4	125	2	250	0.55	70	
690	2	250	0.55	140	0.27	70	
		440	0.1	44			

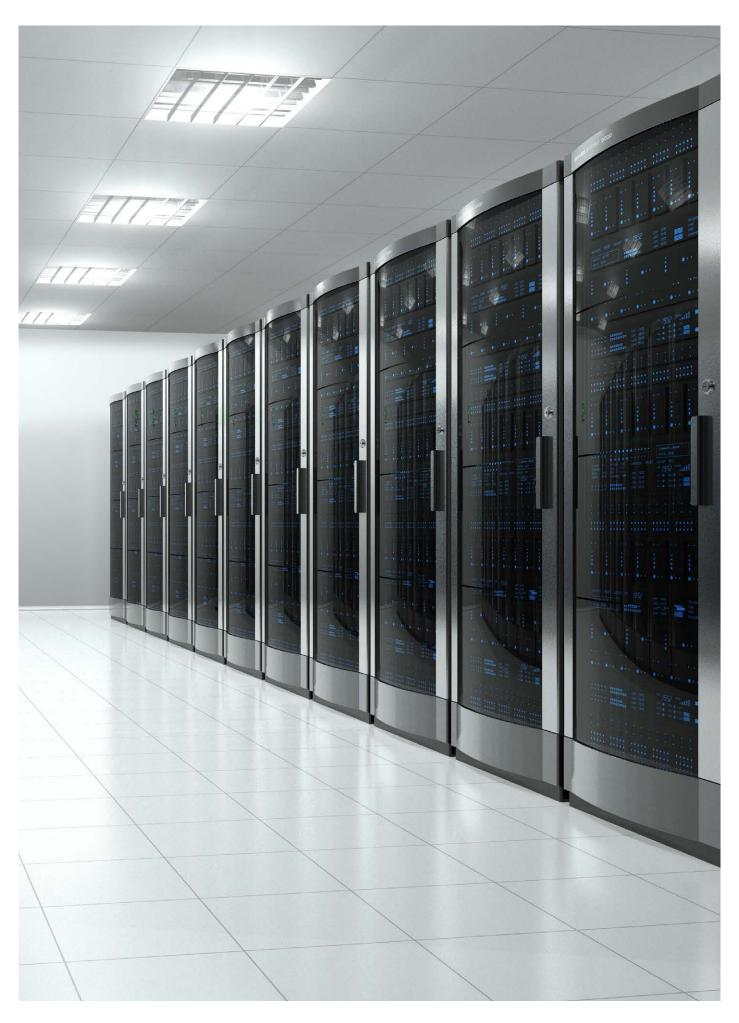
Function tables

|--|

Handle position	Main contacts	OA1G10 NO	OA3G01 NC
I	closed	closed	open
0	open	open	closed
II	closed	open	closed

Function table of OT160...3200, OT160...800 Y and OTM160...2500 auxiliary contacts / Switch II (max. 2+2)

Handle position	Main contacts	OA1G10 NO	OA3G01 NC	
1	closed	open	closed	
0	open	open	closed	
	closed	closed	open	



Description	Туре	Order number	Page
Automatic control units	OMD200E480C-A1	1SCA123789R1001	72
	OMD300E480C-A1	1SCA123790R1001	72
	OMD800E480C-A1	1SCA123791R1001	72
	OMD200E480C-A1	1SCA123789R1001	99
	OMD300E480C-A1	1SCA123790R1001	99
	OMD800E480C-A1	1SCA123791R1001	99
Automatic transfer switches,	OTM160E4C2D230C	1SCA106230R1001	88
open transition	OTM160E4WC2D230C	1SCA101033R1001	88
	OTM200E4C2D230C	1SCA106671R1001	88
	OTM200E4WC2D230C	1SCA101034R1001	88
	OTM250E4WC2D230C	1SCA101035R1001	88
	OTM315E4C2D230C	1SCA101059R1001	88
	OTM400E4C2D230C	1SCA101060R1001	88
	OTM630E4C2D230C	1SCA108434R1001	88
	OTM800E4C2D230C	1SCA108439R1001	88
	OTM1000E4C2D230C	1SCA112858R1001	88
	OTM1250E4C2D230C	1SCA112857R1001	88
	OTM1600E4C2D230C	1SCA112854R1001	88
	OTM160E4C3D230C	1SCA106305R1001	88
	OTM160E4WC3D230C	1SCA106306R1001	88
	OTM200E4C3D230C	1SCA106309R1001	88
	OTM200E4WC3D230C	1SCA106310R1001	88
	OTM250E4C3D230C	1SCA106313R1001	88
	OTM250E4WC3D230C	1SCA106314R1001	88
	OTM315E4C3D230C	1SCA106317R1001	88
	OTM400E4C3D230C	1SCA106318R1001	88
	OTM630E4C3D230C	1SCA108726R1001	88
	OTM800E4C3D230C	1SCA108728R1001	88
	OTM1000E4C3D230C	1SCA112852R1001	88
	OTM1250E4C3D230C	1SCA112851R1001	88
	OTM1600E4C3D230C	1SCA112848R1001	88
	OTM160E3C8D230C	1SCA101017R1001	89
	OTM160E3WC8D230C	1SCA101036R1001	89
	OTM160E4C8D230C	1SCA101020R1001	89
	OTM160E4WC8D230C	1SCA101039R1001	89
	OTM200E3C8D230C	1SCA101018R1001	89
	OTM200E3WC8D230C	1SCA101037R1001	89
	OTM200E4C8D230C	1SCA101021R1001	89
	OTM200E4WC8D230C	1SCA101040R1001	89
	OTM250E3C8D230C	1SCA101019R1001	89
	OTM250E3WC8D230C	1SCA101038R1001	89
	OTM250E4C8D230C	1SCA101022R1001	89
	OTM250E4WC8D230C	1SCA101041R1001	89
	OTM315E3C8D230C	1SCA101062R1001	89
	OTM315E4C8D230C	1SCA101063R1001	89
	OTM400E3C8D230C	1SCA101061R1001	89
	OTM400E4C8D230C	1SCA101064R1001	89
	OTM630E3C8D230C	1SCA108452R1001	89
	OTM630E4C8D230C	1SCA108453R1001	89
	071100000000000		

Description	Туре	Order number	Page
Automatic transfer switches,	OTM800E4C8D230C	1SCA108455R1001	89
open transition	OTM1000E3C8D230C	1SCA112868R1001	89
	OTM1000E4C8D230C	1SCA112861R1001	89
	OTM1250E3C8D230C	1SCA112862R1001	89
	OTM1250E4C8D230C	1SCA112864R1001	89
	OTM1600E3C8D230C	1SCA112866R1001	89
	OTM1600E4C8D230C	1SCA112867R1001	89
Auxiliary contact blocks	0A1G10	1SCA022353R4970	43
•	0A8G01	1SCA022744R2240	43
	0A7G10	1SCA022673R1140	43
	0A1G01	1SCA022353R4890	43
	0A2G11	1SCA022379R8100	43
	0A1G10	1SCA022353R4970	43
	0A3G01	1SCA022456R7410	43
	OA1G10AU	1SCA022436R7910	43
	OA3G01AU	1SCA022819R5260	43
	0A1G10	1SCA022353R4970	71
	0A8G01	1SCA022744R2240	71
	0A7G10	1SCA022673R1140	71
	0A1G01	1SCA022353R4890	71
	0A2G11	1SCA022379R8100	-
	0A1G10	1SCA022379110100	·
	0A3G01	1SCA022355N4970	71 71 71 71
		1SCA022436R7910	
	0A1G10AU		·
	0A3G01AU	1SCA022819R5260	71
	0A1G10	1SCA022353R4970	······
	0A8G01	1SCA022744R2240	.
	0A7G10	1SCA022673R1140	98
	0A1G01	1SCA022353R4890	98
	0A2G111)	1SCA022379R8100	98
	0A1G10	1SCA022353R4970	98
	0A3G01	1SCA022456R7410	98
	OA1G10AU	1SCA022436R7910	98
	0A3G01AU	1SCA022819R5260	98
	0A1G10	1SCA022353R4970	120
	0A3G01	1SCA022456R7410	120
	OA1G10AU	1SCA022436R7910	120
	0A3G01AU	1SCA022819R5260	120
Bridging bars	OTZC13	1SCA022767R6910	42
	OTZC14	1SCA022767R7040	42
	OTZC23	1SCA022767R7120	42
	OTZC24	1SCA022767R7210	42
	OTZC33	1SCA022785R7020	42
	OTZC34	1SCA022785R7110	42
	OTZC43	1SCA022868R0710	42
	OTZC44	1SCA022868R0800	42
	OTZC53	1SCA022868R0980	42
	OTZC54	1SCA022868R1010	42
	OTZC63	1SCA022868R1100	42

OTZC64

1SCA022868R1360 42

OTM800E3C8D230C 1SCA108454R1001 89

Description	Туре	Order number	Page
Bridging bars	OTZC73	1SCA128843R1001	42
	OTZC74	1SCA128844R1001	42
	OTZC13	1SCA022767R6910	69
	OTZC14	1SCA022767R7040	69
	OTZC23	1SCA022767R7120	69
	OTZC24	1SCA022767R7210	69
	OTZC33	1SCA022785R7020	69
	OTZC34	1SCA022785R7110	69
	OTZC43	1SCA022868R0710	69
	OTZC44	1SCA022868R0800	69
	OTZC53	1SCA022868R0980	69
	OTZC54	1SCA022868R1010	69
	OTZC63	1SCA022868R1100	69
	OTZC64	1SCA022868R1360	69
	OTZC73	1SCA128843R1001	69
	OTZC74	1SCA128844R1001	69
	0TZC13	1SCA022767R6910	97
	OTZC14	1SCA022767R7040	97
	0TZC23	1SCA022767R7120	97
	0TZC24	1SCA022767R7120	97
	0TZC34	1SCA022785R7020	97
	0TZC34	1SCA022785R7110	97
	01/204/3	1SCA022868R0710	97
	01/2044	1SCA022868R0800	97
	0TZC53	1SCA022868R0980	97
	0TZC54	1SCA022868R1010	97
	0TZC63	1SCA022868R1100	97
	0TZC64	1SCA022868R1360	97
	0TZC73	1SCA128843R1001	97
	OTZC74	1SCA128844R1001	97
	OTZC13	1SCA022767R6910	113
	OTZC14	1SCA022767R7040	113
	OTZC23	1SCA022767R7120	113
	OTZC24	1SCA022767R7210	113
	OTZC33	1SCA022785R7020	113
	OTZC34	1SCA022785R7110	113
	OTZC13	1SCA022767R6910	119
	OTZC14	1SCA022767R7040	119
	OTZC23	1SCA022767R7120	119
	OTZC24	1SCA022767R7210	119
	OTZC33	1SCA022785R7020	119
	OTZC34	1SCA022785R7110	119
Cover plate	OMZC2	1SCA101001R1001	72
	OMZC2	1SCA101001R1001	99
Oual power source	ODPSE230C	1SCA116892R1001	74
	ODPSE230C	1SCA116892R1001	100
Oual power source	0DPS230	1SCA122946R1001	74
ncluding ATS functionality	ODPS230	1SCA122946R1001	100
ourth poles	OTPS40FPN1	1SCA105001R1001	42
•	OTPS40FPN2	1SCA105000R1001	42
ourth poles	OTPS80FP	1SCA105461R1001	42
•	OTPS125FP	1SCA105099R1001	42

Description	Туре	Order number	Page
Handle and spare fuse	OTVS0	1SCA117524R1001	66
storage clip	OTVS1	1SCA111413R1001	66
	0TVS2	1SCA111414R1001	66
Handle extension	OHBZX200	1SCA125960R1001	116
for bypass switches	OHBZX275	1SCA125963R1001	116
Handle knobs, non-padlockable	OHBS3/1	1SCA108319R1001	34
	OHBS3	1SCA108320R1001	34
	OHRS3/1	1SCA108688R1001	34
	OHRS3	1SCA108667R1001	34
	OHBS9/1	1SCA108689R1001	34
	OHBS9	1SCA108665R1001	34
	OHRS9/1	1SCA108690R1001	34
	OHRS9	1SCA108666R1001	34
Handle knobs, padlockable	OHBS2/1	1SCA109090R1001	34
	OHBS2	1SCA109089R1001	34
	OHRS2/1	1SCA108599R1001	34
	OHRS2	1SCA108598R1001	34
	OHBS12/1	1SCA109094R1001	34
	OHBS12	1SCA108252R1001	34
	OHRS12/1	1SCA109097R1001	34
	OHRS12	1SCA108253R1001	34
	OHBS11/1	1SCA109093R1001	34
	OHBS11	1SCA109092R1001	34
Manual bypass switches,	0T160E03YP	1SCA123551R1001	111
open transition	0T160E04YP	1SCA123556R1001	111
	0T200E03YP	1SCA123552R1001	111
	0T200E04YP	1SCA123557R1001	111
	0T250E03YP	1SCA123553R1001	111
	0T250E04YP	1SCA123558R1001	111
	0T315E03YP	1SCA123581R1001	111
	0T315E04YP	1SCA123583R1001	111
	0T400E03YP	1SCA123582R1001	111
	0T400E04YP	1SCA124026R1001	111
	0T630E03YP	1SCA123590R1001	111
	0T630E04YP	1SCA123592R1001	111
	0T800E03YP	1SCA123591R1001	111
	0T800E04YP	1SCA123593R1001	111
Manual change-over switches,	0T160E03CLP	1SCA108468R1001	26
closed transition	OT160E03WCLP	1SCA108486R1001	26
	OT160E04CLP	1SCA108491R1001	26
	OT160E04WCLP	1SCA108494R1001	26
	OT200E03CLP	1SCA108522R1001	26
	OT200E03WCLP	1SCA108525R1001	26
	OT200E04CLP	1SCA108530R1001	26
	OT200E04WCLP	1SCA108532R1001	26
	0T250E03CLP	1SCA108593R1001	26
	OT250E03WCLP	1SCA107576R1001	26
	·	····•	· į
	OT250E04CLP	1SCA108605R1001	26

Manual change-over switches, closed transition OT250E04WCLP ISCA108607R1001 26 07315E03CLP ISCA108630R1001 26 07315E04CLP ISCA1086404R1001 26 07400E03CLP ISCA106404R1001 26 07400E04CLP ISCA106695R1001 26 07630E03CLP ISCA106947R1001 26 07800E04CLP ISCA106928R1001 26 07800E04CLP ISCA106952R1001 26 07800E04CLP ISCA106952R1001 26 07800E04CLP ISCA106952R1001 26 07800E04CP ISCA106898R1001 25 07160E04CPP ISCA108498R1001 25 07160E04CPP ISCA108492R1001 25 07160E04CPP ISCA108492R1001 25 07200E03WCPP ISCA108520R1001 25 07200E04WCPP ISCA108528R1001 25 07250E03WCPP ISCA108528R1001 25 07250E03WCPP ISCA108600R1001 25 07250E03WCPP ISCA108600R1001 25 07250E03WCPP ISCA	Description	Туре	Order number	Page
01315E03CLP 13CA106404R1001 26 07400E03CLP 13CA106404R1001 26 07400E03CLP 13CA106405R1001 26 07630E03CLP 13CA10669TR1001 26 07630E03CLP 13CA10695R1001 26 07630E04CLP 13CA10692RR1001 26 07800E03CLP 13CA10692RR1001 26 07800E03CLP 13CA106952R1001 26 07800E04CLP 13CA106952R1001 26 07800E04CLP 13CA106952R1001 26 07800E04CLP 13CA1068952R1001 25 07160E03WCFP 13CA108498R1001 25 07160E04WCFP 13CA108498R1001 25 07160E04WCFP 13CA108492R1001 25 07200E03WCFP 13CA108492R1001 25 07200E03WCFP 13CA108520R1001 25 07200E03WCFP 13CA108520R1001 25 07200E04WCFP 13CA108520R1001 25 07200E04WCFP 13CA108520R1001 25 07250E03WCFP 13CA108591R1001 25 07250E04WCFP 13CA10850R1001 25 07250E04WCFP 13CA108600R1001 25 07250E04WCFP 13CA10860R1001 25 07315E04CFP 13CA10830R1001 25 07315E04CFP 13CA10830R1001 25 0730E04CFP 13CA10830R1001 26 0730E04CFP 13CA1080B0R1001 27 0730E04CFP 13CA1080B0R1001 27 0730E04CFP 13CA1080B0R1001 27 0730E04CFP		OT250E04WCLP	1SCA108607R1001	26
OT400E03CLP	closed transition	OT315E03CLP	1SCA108630R1001	26
OT400E04CLP		OT315E04CLP	1SCA106404R1001	26
OT630E03CLP		OT400E03CLP	1SCA108641R1001	26
OT630E04CLP		OT400E04CLP	1SCA106405R1001	26
Manual change-over switches, fast transition		OT630E03CLP	1SCA106917R1001	26
Manual change-over switches, fast transition 0T160E03CFP 1SCA106085R1001 25 Manual change-over switches, fast transition 0T160E03WCFP 1SCA108484R1001 25 0T160E04WCFP 1SCA108489R1001 25 0T160E04WCFP 1SCA108492R1001 25 0T200E03CFP 1SCA108520R1001 25 0T200E03WCFP 1SCA108528R1001 25 0T200E04WCFP 1SCA108531R1001 25 0T200E04WCFP 1SCA108531R1001 25 0T250E03WCFP 1SCA108591R1001 25 0T250E03WCFP 1SCA108591R1001 25 0T250E04WCFP 1SCA10860R1001 25 0T315E03CFP 1SCA10860R1001 25 0T315E04CFP 1SCA108696R1001 25 0T400E03CFP 1SCA106360R1001 25 0T400E03CFP 1SCA106915R1001 25 0T630E03CFP 1SCA106915R1001 25 0T800E03CFP 1SCA106945R1001 25 0T800E03CFP 1SCA106945R1001 25 0T800E03CFP 1SCA104868R1001 19		OT630E04CLP	1SCA106947R1001	26
Manual change-over switches, fast transition 0T160E03CFP 1SCA106086R1001 25 0T160E03WCFP 1SCA108484R1001 25 0T160E04CFP 1SCA108489R1001 25 0T160E04WCFP 1SCA108492R1001 25 0T200E03CFP 1SCA108520R1001 25 0T200E04WCFP 1SCA108528R1001 25 0T200E04WCFP 1SCA108528R1001 25 0T200E04WCFP 1SCA108591R1001 25 0T250E03WCFP 1SCA108591R1001 25 0T250E03WCFP 1SCA108591R1001 25 0T250E04WCFP 1SCA10860R1001 25 0T250E04WCFP 1SCA10860R1001 25 0T315E03CFP 1SCA10860R1001 25 0T315E03CFP 1SCA10863PR1001 25 0T400E03CFP 1SCA106360R1001 25 0T630E03CFP 1SCA106915R1001 25 0T630E04CFP 1SCA106915R1001 25 0T630E04CFP 1SCA106915R1001 25 0T630E04CFP 1SCA106915R1001 25 0T60E04CFP 1SCA1069		OT800E03CLP	1SCA106928R1001	26
fast transition OT160E03WCFP 1SCA108484R1001 25 0T160E04CFP 1SCA108489R1001 25 0T160E04WCFP 1SCA108492R1001 25 0T200E03CFP 1SCA108520R1001 25 0T200E03WCFP 1SCA108528R1001 25 0T200E04WCFP 1SCA108531R1001 25 0T250E03WCFP 1SCA108591R1001 25 0T250E03WCFP 1SCA108591R1001 25 0T250E03WCFP 1SCA108608R1001 25 0T250E04WCFP 1SCA108608R1001 25 0T315E03CFP 1SCA108608R1001 25 0T315E03CFP 1SCA108608R1001 25 0T315E03CFP 1SCA108608R1001 25 0T315E04CFP 1SCA108608R1001 25 0T315E03CFP 1SCA108608R1001 25 0T400E03CFP 1SCA10860R1001 25 0T400E03CFP 1SCA10860R1001 25 0T630E03CFP 1SCA108650R1001 25 0T630E03CFP 1SCA108758R1001 25 0T800E03CFP 1SCA108758R1001 25		OT800E04CLP	1SCA106952R1001	26
OT160E03WCFP ISCA108488R1001 25 0T160E04CFP 1SCA108489R1001 25 0T160E04WCFP 1SCA108492R1001 25 0T200E03CFP 1SCA108520R1001 25 0T200E04WCFP 1SCA108528R1001 25 0T200E04WCFP 1SCA108531R1001 25 0T250E03CFP 1SCA108591R1001 25 0T250E03WCFP 1SCA108591R1001 25 0T250E03WCFP 1SCA108609R1001 25 0T250E04WCFP 1SCA108600R1001 25 0T315E03CFP 1SCA108609R1001 25 0T315E04CFP 1SCA108609R1001 25 0T315E04CFP 1SCA106360R1001 25 0T315E04CFP 1SCA106360R1001 25 0T400E03CFP 1SCA106915R1001 25 0T630E03CFP 1SCA106915R1001 25 0T630E04CFP 1SCA106915R1001 25 0T800E04CFP 1SCA106945R1001 25 0T80E04CFP 1SCA106945R1001 19 0T25F3C 1SCA10483R1001 19	,	OT160E03CFP	1SCA106086R1001	25
OT160E04WCFP 1SCA108492R1001 25	fast transition	OT160E03WCFP	1SCA108484R1001	25
OT200E03CFP 1SCA108520R1001 25 OT200E03WCFP 1SCA107578R1001 25 OT200E04CFP 1SCA108528R1001 25 OT200E04WCFP 1SCA108531R1001 25 OT250E03CFP 1SCA108591R1001 25 OT250E03WCFP 1SCA108591R1001 25 OT250E04WCFP 1SCA108600R1001 25 OT250E04WCFP 1SCA108600R1001 25 OT315E03CFP 1SCA108629R1001 25 OT315E04CFP 1SCA108629R1001 25 OT400E03CFP 1SCA106360R1001 25 OT400E03CFP 1SCA106360R1001 25 OT630E03CFP 1SCA106915R1001 25 OT630E04CFP 1SCA106916R1001 25 OT800E04CFP 1SCA106916R1001 25 OT800E04CFP 1SCA106945R1001 25 OT800E04CFP 1SCA106945R1001 25 OT16F4C 1SCA104831R1001 19 OT25F3C 1SCA10483R1001 19 OT25F4C 1SCA104863R1001 19 OT40F4C <td></td> <td>OT160E04CFP</td> <td>1SCA108489R1001</td> <td>25</td>		OT160E04CFP	1SCA108489R1001	25
OT200E03WCFP 1SCA107578R1001 25 OT200E04CFP 1SCA108528R1001 25 OT200E04WCFP 1SCA108531R1001 25 OT250E03CFP 1SCA108591R1001 25 OT250E03WCFP 1SCA108591R1001 25 OT250E04CFP 1SCA108600R1001 25 OT250E04WCFP 1SCA108606R1001 25 OT315E03CFP 1SCA108629R1001 25 OT315E04CFP 1SCA108629R1001 25 OT400E03CFP 1SCA106360R1001 25 OT400E04CFP 1SCA106360R1001 25 OT630E03CFP 1SCA106915R1001 25 OT630E04CFP 1SCA106915R1001 25 OT800E03CFP 1SCA106915R1001 25 OT800E04CFP 1SCA106945R1001 25 OT800E04CFP 1SCA106945R1001 25 OT800E04CFP 1SCA106945R1001 19 OT16F4C 1SCA104831R1001 19 OT25F4C 1SCA104863R1001 19 OT40F3C 1SCA104934R1001 19 OT63F4C <td></td> <td>OT160E04WCFP</td> <td>1SCA108492R1001</td> <td>25</td>		OT160E04WCFP	1SCA108492R1001	25
OT200E04CFP 1SCA108528R1001 25 OT200E04WCFP 1SCA108531R1001 25 OT250E03CFP 1SCA108591R1001 25 OT250E03WCFP 1SCA108591R1001 25 OT250E04WCFP 1SCA108600R1001 25 OT250E04WCFP 1SCA108600R1001 25 OT315E03CFP 1SCA108629R1001 25 OT315E04CFP 1SCA108629R1001 25 OT400E03CFP 1SCA106360R1001 25 OT400E03CFP 1SCA106360R1001 25 OT630E03CFP 1SCA106915R1001 25 OT630E04CFP 1SCA106915R1001 25 OT800E03CFP 1SCA106916R1001 25 OT800E03CFP 1SCA106916R1001 25 OT800E04CFP 1SCA106945R1001 25 OT800E04CFP 1SCA106945R1001 19 OT25F3C 1SCA104831R1001 19 OT25F4C 1SCA104863R1001 19 OT25F4C 1SCA104877R1001 19 OT40F4C 1SCA105338R1001 19 OT63F4C		OT200E03CFP	1SCA108520R1001	25
OT200E04WCFP		OT200E03WCFP	1SCA107578R1001	25
OT250E03CFP 1SCA108591R1001 25		OT200E04CFP	1SCA108528R1001	25
0T250E03WCFP 1SCA107577R1001 25 0T250E04CFP 1SCA108600R1001 25 0T250E04WCFP 1SCA108606R1001 25 0T315E03CFP 1SCA108629R1001 25 0T315E04CFP 1SCA108629R1001 25 0T400E03CFP 1SCA106360R1001 25 0T400E04CFP 1SCA108650R1001 25 0T630E03CFP 1SCA106915R1001 25 0T630E04CFP 1SCA106915R1001 25 0T800E03CFP 1SCA106916R1001 25 0T800E03CFP 1SCA106916R1001 25 0T800E04CFP 1SCA106945R1001 25 0T800E04CFP 1SCA104816R1001 19 0T16F3C 1SCA104816R1001 19 0T16F3C 1SCA104831R1001 19 0T25F4C 1SCA104863R1001 19 0T40F4C 1SCA104934R1001 19 0T63F3C 1SCA105338R1001 19 0T63F4C 1SCA105402R1001 19 0T80F3C 1SCA105408R1001 19 0T80F4C 1SCA		OT200E04WCFP	1SCA108531R1001	25
OT250E04CFP 1SCA108600R1001 25 OT250E04WCFP 1SCA108606R1001 25 OT315E03CFP 1SCA108629R1001 25 OT315E04CFP 1SCA106360R1001 25 OT400E03CFP 1SCA106360R1001 25 OT400E04CFP 1SCA108650R1001 25 OT630E03CFP 1SCA106915R1001 25 OT800E03CFP 1SCA106916R1001 25 OT800E03CFP 1SCA106916R1001 25 OT800E03CFP 1SCA106945R1001 25 OT800E04CFP 1SCA106945R1001 25 OT800E04CFP 1SCA104816R1001 19 OT16F3C 1SCA104831R1001 19 OT25F3C 1SCA104831R1001 19 OT25F4C 1SCA104877R1001 19 OT40F3C 1SCA104934R1001 19 OT63F3C 1SCA105338R1001 19 OT80F3C 1SCA105369R1001 19 OT80F4C 1SCA105402R1001 19 OT80F4C 1SCA105008R1001 19 OT100F4C 1SCA1050		OT250E03CFP	1SCA108591R1001	25
OT250E04WCFP 1SCA108606R1001 25 OT315E03CFP 1SCA108629R1001 25 OT315E04CFP 1SCA114535R1001 25 OT400E03CFP 1SCA106360R1001 25 OT400E04CFP 1SCA106650R1001 25 OT630E03CFP 1SCA106915R1001 25 OT630E03CFP 1SCA106915R1001 25 OT630E04CFP 1SCA106916R1001 25 OT800E03CFP 1SCA106916R1001 25 OT800E03CFP 1SCA106916R1001 25 OT800E04CFP 1SCA106945R1001 25 OT800E04CFP 1SCA106945R1001 25 OT800E04CFP 1SCA104816R1001 19 OT25F3C 1SCA104831R1001 19 OT25F3C 1SCA104863R1001 19 OT40F3C 1SCA104877R1001 19 OT40F3C 1SCA104934R1001 19 OT63F3C 1SCA104934R1001 19 OT63F4C 1SCA105338R1001 19 OT63F4C 1SCA105338R1001 19 OT80F3C 1SCA105402R1001 19 OT80F3C 1SCA105402R1001 19 OT80F4C 1SCA105418R1001 19 OT80F4C 1SCA105418R1001 19 OT80F4C 1SCA105418R1001 19 OT100F4C 1SCA105019R1001 19 OT100F4C 1SCA105019R1001 19		OT250E03WCFP	1SCA107577R1001	25
OT315E03CFP 1SCA108629R1001 25 OT315E04CFP 1SCA114535R1001 25 OT400E03CFP 1SCA106360R1001 25 OT400E04CFP 1SCA106360R1001 25 OT630E03CFP 1SCA106915R1001 25 OT630E04CFP 1SCA106915R1001 25 OT630E04CFP 1SCA106916R1001 25 OT800E03CFP 1SCA106916R1001 25 OT800E04CFP 1SCA106945R1001 25 OT800E04CFP 1SCA106945R1001 25 OT800E04CFP 1SCA104816R1001 19 OT16F4C 1SCA104831R1001 19 OT25F3C 1SCA104831R1001 19 OT25F4C 1SCA104877R1001 19 OT40F3C 1SCA104934R1001 19 OT40F4C 1SCA104934R1001 19 OT63F3C 1SCA104934R1001 19 OT63F4C 1SCA105338R1001 19 OT63F4C 1SCA105369R1001 19 OT80F3C 1SCA105402R1001 19 OT80F4C 1SCA105402R1001 19 OT80F4C 1SCA105402R1001 19 OT80F4C 1SCA105408R1001 19 OT100F4C 1SCA105019R1001 19 OT100F4C 1SCA105019R1001 19		OT250E04CFP	1SCA108600R1001	25
0T315E04CFP 1SCA114535R1001 25 0T400E03CFP 1SCA106360R1001 25 0T400E04CFP 1SCA108650R1001 25 0T630E03CFP 1SCA106915R1001 25 0T630E04CFP 1SCA106916R1001 25 0T800E03CFP 1SCA106916R1001 25 0T800E04CFP 1SCA106945R1001 25 0T800E04CFP 1SCA104816R1001 19 0pen transition 0T16F3C 1SCA104816R1001 19 0T25F3C 1SCA104831R1001 19 0T25F4C 1SCA104863R1001 19 0T40F3C 1SCA104913R1001 19 0T40F4C 1SCA104934R1001 19 0T63F3C 1SCA105338R1001 19 0T80F3C 1SCA105402R1001 19 0T80F4C 1SCA105418R1001 19 0T100F4C 1SCA105008R1001 19		OT250E04WCFP	1SCA108606R1001	25
0T400E03CFP 1SCA106360R1001 25 0T400E04CFP 1SCA108650R1001 25 0T630E03CFP 1SCA106915R1001 25 0T630E04CFP 1SCA106915R1001 25 0T800E03CFP 1SCA106916R1001 25 0T800E04CFP 1SCA106945R1001 25 0T800E04CFP 1SCA104816R1001 19 0pen transition 0T16F3C 1SCA104816R1001 19 0T25F3C 1SCA104863R1001 19 0T25F4C 1SCA104863R1001 19 0T40F3C 1SCA104913R1001 19 0T40F4C 1SCA104934R1001 19 0T63F3C 1SCA105338R1001 19 0T80F3C 1SCA105402R1001 19 0T80F3C 1SCA105402R1001 19 0T80F4C 1SCA105408R1001 19 0T100F3C 1SCA105008R1001 19 0T100F4C 1SCA105019R1001 19		0T315E03CFP	1SCA108629R1001	25
0T400E04CFP 1SCA108650R1001 25 0T630E03CFP 1SCA106915R1001 25 0T630E04CFP 1SCA108753R1001 25 0T800E03CFP 1SCA106916R1001 25 0T800E04CFP 1SCA106945R1001 25 0T800E04CFP 1SCA104816R1001 19 0T16F3C 1SCA104816R1001 19 0T16F4C 1SCA104831R1001 19 0T25F3C 1SCA104863R1001 19 0T25F4C 1SCA104877R1001 19 0T40F3C 1SCA104913R1001 19 0T63F3C 1SCA105338R1001 19 0T63F4C 1SCA105369R1001 19 0T80F3C 1SCA105402R1001 19 0T80F4C 1SCA105408R1001 19 0T100F3C 1SCA105008R1001 19 0T100F4C 1SCA105019R1001 19		OT315E04CFP	1SCA114535R1001	25
OT630E03CFP 1SCA106915R1001 25 OT630E04CFP 1SCA108753R1001 25 OT800E03CFP 1SCA106916R1001 25 OT800E04CFP 1SCA106945R1001 25 Manual change-over switches, open transition OT16F3C 1SCA104816R1001 19 OT25F3C 1SCA104831R1001 19 OT25F4C 1SCA104877R1001 19 OT40F3C 1SCA104913R1001 19 OT63F3C 1SCA104934R1001 19 OT63F4C 1SCA105338R1001 19 OT80F3C 1SCA105402R1001 19 OT80F3C 1SCA105402R1001 19 OT80F4C 1SCA105402R1001 19 OT100F3C 1SCA105019R1001 19 OT100F4C 1SCA105019R1001 19		OT400E03CFP	1SCA106360R1001	25
OT630E04CFP 1SCA108753R1001 25 OT800E03CFP 1SCA106916R1001 25 OT800E04CFP 1SCA106945R1001 25 Manual change-over switches, open transition OT16F3C 1SCA104816R1001 19 OT25F3C 1SCA104831R1001 19 OT25F4C 1SCA104863R1001 19 OT40F3C 1SCA104913R1001 19 OT40F4C 1SCA104934R1001 19 OT63F3C 1SCA105338R1001 19 OT63F4C 1SCA105369R1001 19 OT80F3C 1SCA105402R1001 19 OT80F4C 1SCA105408R1001 19 OT100F4C 1SCA105019R1001 19		OT400E04CFP	1SCA108650R1001	25
OT800E03CFP 1SCA106916R1001 25 OT800E04CFP 1SCA106945R1001 25 Manual change-over switches, open transition OT16F3C 1SCA104816R1001 19 OT25F3C 1SCA104831R1001 19 OT25F4C 1SCA104863R1001 19 OT40F3C 1SCA104913R1001 19 OT40F4C 1SCA104934R1001 19 OT63F3C 1SCA105338R1001 19 OT63F4C 1SCA105369R1001 19 OT80F3C 1SCA105402R1001 19 OT80F4C 1SCA105418R1001 19 OT100F3C 1SCA105008R1001 19 OT100F4C 1SCA105019R1001 19		OT630E03CFP	1SCA106915R1001	25
Manual change-over switches, open transition OT800E04CFP 1SCA106945R1001 25 Manual change-over switches, open transition OT16F3C 1SCA104831R1001 19 OT25F3C 1SCA104863R1001 19 OT25F4C 1SCA104877R1001 19 OT40F3C 1SCA104913R1001 19 OT40F4C 1SCA104934R1001 19 OT63F3C 1SCA105338R1001 19 OT63F4C 1SCA105402R1001 19 OT80F3C 1SCA105402R1001 19 OT80F4C 1SCA105408R1001 19 OT100F3C 1SCA105008R1001 19 OT100F4C 1SCA105019R1001 19		OT630E04CFP	1SCA108753R1001	25
Manual change-over switches, open transition OT16F3C 1SCA104816R1001 19 0T16F4C 1SCA104831R1001 19 0T25F3C 1SCA104863R1001 19 0T25F4C 1SCA104877R1001 19 0T40F3C 1SCA104913R1001 19 0T40F4C 1SCA104934R1001 19 0T63F3C 1SCA105338R1001 19 0T63F4C 1SCA105369R1001 19 0T80F3C 1SCA105402R1001 19 0T80F4C 1SCA105408R1001 19 0T100F3C 1SCA105009R1001 19 0T100F4C 1SCA105019R1001 19		OT800E03CFP	1SCA106916R1001	25
open transition OT16F4C 1SCA104831R1001 19 0T25F3C 1SCA104863R1001 19 0T25F4C 1SCA104877R1001 19 0T40F3C 1SCA104913R1001 19 0T40F4C 1SCA104934R1001 19 0T63F3C 1SCA105338R1001 19 0T63F4C 1SCA105369R1001 19 0T80F3C 1SCA105402R1001 19 0T80F4C 1SCA105418R1001 19 0T100F3C 1SCA105019R1001 19 0T100F4C 1SCA105019R1001 19		OT800E04CFP	1SCA106945R1001	25
0T16F4C ISCA104831R1001 19 0T25F3C 1SCA104863R1001 19 0T25F4C 1SCA104877R1001 19 0T40F3C 1SCA104913R1001 19 0T40F4C 1SCA104934R1001 19 0T63F3C 1SCA105338R1001 19 0T63F4C 1SCA105369R1001 19 0T80F3C 1SCA105402R1001 19 0T80F4C 1SCA105418R1001 19 0T100F3C 1SCA105008R1001 19 0T100F4C 1SCA105019R1001 19	Manual change-over switches,	OT16F3C	1SCA104816R1001	19
0T25F4C 1SCA104877R1001 19 0T40F3C 1SCA104913R1001 19 0T40F4C 1SCA104934R1001 19 0T63F3C 1SCA105338R1001 19 0T63F4C 1SCA105369R1001 19 0T80F3C 1SCA105402R1001 19 0T80F4C 1SCA105418R1001 19 0T100F3C 1SCA105008R1001 19 0T100F4C 1SCA105019R1001 19	open transition	OT16F4C	1SCA104831R1001	19
0T40F3C 1SCA104913R1001 19 0T40F4C 1SCA104934R1001 19 0T63F3C 1SCA105338R1001 19 0T63F4C 1SCA105369R1001 19 0T80F3C 1SCA105402R1001 19 0T80F4C 1SCA105418R1001 19 0T100F3C 1SCA105008R1001 19 0T100F4C 1SCA105019R1001 19		OT25F3C	1SCA104863R1001	19
0T40F4C 1SCA104934R1001 19 0T63F3C 1SCA105338R1001 19 0T63F4C 1SCA105369R1001 19 0T80F3C 1SCA105402R1001 19 0T80F4C 1SCA105418R1001 19 0T100F3C 1SCA105008R1001 19 0T100F4C 1SCA105019R1001 19		OT25F4C	1SCA104877R1001	19
0T63F3C 1SCA105338R1001 19 0T63F4C 1SCA105369R1001 19 0T80F3C 1SCA105402R1001 19 0T80F4C 1SCA105418R1001 19 0T100F3C 1SCA105008R1001 19 0T100F4C 1SCA105019R1001 19		OT40F3C	1SCA104913R1001	19
0T63F4C 1SCA105369R1001 19 0T80F3C 1SCA105402R1001 19 0T80F4C 1SCA105418R1001 19 0T100F3C 1SCA105008R1001 19 0T100F4C 1SCA105019R1001 19		OT40F4C	1SCA104934R1001	19
0T80F3C 1SCA105402R1001 19 0T80F4C 1SCA105418R1001 19 0T100F3C 1SCA105008R1001 19 0T100F4C 1SCA105019R1001 19		OT63F3C	1SCA105338R1001	19
0T80F4C 1SCA105418R1001 19 0T100F3C 1SCA105008R1001 19 0T100F4C 1SCA105019R1001 19		OT63F4C	1SCA105369R1001	19
0T100F3C 1SCA105008R1001 19 0T100F4C 1SCA105019R1001 19		OT80F3C	1SCA105402R1001	19
0T100F4C 1SCA105019R1001 19		OT80F4C	1SCA105418R1001	19
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0T125F3C 1SCA105037R1001 19		OT100F4C	1SCA105019R1001	19
		0T125F3C	1SCA105037R1001	19
0T125F4C 1SCA105054R1001 19		OT125F4C	1SCA105054R1001	19
OT160E03CP 1SCA022772R6510 21		0T160E03CP	1SCA022772R6510	21
0T160E03WCP 1SCA022772R8210 21		0T160E03WCP	1SCA022772R8210	21
OT160E04CP 1SCA022775R9440 21		OT160E04CP	1SCA022775R9440	21
OT160E04WCP 1SCA022775R0220 21		OT160E04WCP	1SCA022775R0220	21
0T200E03CP 1SCA022771R7520 21		OT200E03CP	1SCA022771R7520	21
0T200E03WCP 1SCA022772R8720 21		OT200E03WCP	1SCA022772R8720	21
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	0T250E03WCP	1SCA022772R8300	21
	0T250E04CP	1SCA022775R4640	21
	OT250E04WCP	1SCA022775R0810	21
	0T250E13CP	1SCA022777R0330	21
	0T250E33CP	1SCA118551R1001	21
	0T250E33WCP	1SCA118608R1001	21
	0T315E03CP	1SCA022772R6780	22
	0T315E12CP	1SCA022776R9910	22
	0T315E04CP	1SCA022775R7150	22
	OT315E13CP	1SCA022777R0410	22
	OT315E33CP	1SCA118635R1001	22
	OT400E03CP	1SCA022771R8500	22
Manual change-over switches,	0T400E12CP	1SCA022776R9590	22
open transition	OT400E04CP	1SCA022771R8680	22
	OT400E13CP	1SCA022777R0500	22
	OT400E33CP	1SCA118629R1001	22
	OT630E03CP	1SCA022785R6050	22
	OT630E12CP	1SCA022785R8690	22
	OT630E04CP	1SCA022785R6130	22
	OT630E13CP	1SCA022785R9070	22
	OT630E33CP	1SCA118652R1001	22
	OT800E03CP	1SCA022785R6300	22
	OT800E12CP	1SCA022785R8850	22
	OT800E04CP	1SCA022785R6210	22
	OT800E13CP	1SCA022785R9230	22
	OT800E33CP	1SCA118649R1001	22
	OT1000E03CP	1SCA022872R1680	24
	OT1000E04CP	1SCA022872R1500	24
	OT1000E22CP	1SCA103289R1001	24
	OT1250E03CP	1SCA022872R0790	24
	OT1250E04CP	1SCA022872R1250	24
	OT1250E22CP	1SCA103311R1001	24
	OT1600E03CP	1SCA022872R1840	24
pen transition	OT1600E04CP	1SCA022872R2310	24
	OT1600E22CP	1SCA103303R1001	24
	0T2000E03CP	1SCA103908R1001	24
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	0T2500E03CP	1SCA105615R1001	24
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	OTM400E3YM230C	1SCA136735R1001	113
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	OTM630E3YM230C	1SCA136615R1001	113
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	OTM800E3YM230C	1SCA136616R1001	113
	OTM800E4YM230C	1SCA136614R1001	113
	OTM40F3CMA230V	1SCA120096R1001	55
	OTM40F4CMA230V	1SCA120102R1001	55
	OTM63F3CMA230V	1SCA120095R1001	55
	OTM63F4CMA230V	1SCA120101R1001	55
	OTM80F3CMA230V	1SCA120093R1001	55
	OTM80F4CMA230V	1SCA120100R1001	55
	OTM100F3CMA230V	1SCA120071R1001	55
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	OTM250E3CM110V	1SCA022845R9180	59
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	OTM250E4WCM110V	1SCA022846R8170	
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	OTM800E3CM110V	1SCA022872R5750	59
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	OTM1250E4CM48D	1SCA113665R1001	60
	OTM1600E3CM48D	1SCA113664R1001	60
	OTM1600E4CM48D	1SCA113667R1001	60
	OTM2000E3CM48D	1SCA113689R1001	60
	OTM2000E4CM48D	1SCA113691R1001	60
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	PB100 low	1SDA054970R1	40
	PB200 high	1SDA054972R1	40
	PB100 low	1SDA054971R1	40
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	PB200 high	1SDA054972R1	95
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	PB100 low	1SDA054970R1	95
	PB200 high	1SDA054972R1	95
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	PB200 high	1SDA054973R1	95
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	PB200 high	1SDA054972R1	113
	PB100 low	1SDA054971R1	113
	PB200 high	1SDA054973R1	113
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	PB100 low	1SDA054971R1	117
	PB200 high	1SDA054973R1	117
	PB100 low	1SDA054970R1	117
	PB200 high	1SDA054972R1	117
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nandle not padlockable and no door interlocking	OHB95J12E69	1SCA112058R1001	35
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	OHB125J12E011	1SCA022589R3340	35
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	0ZXB8	1SCA022744R1510	96
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	0ZXB2L	1SCA022158R7750	96
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	OZXB8/1	1SCA022744R1600	41
	OZXB9	1SCA022750R3210	41
	OZXB9/1	1SCA022750R3300	41
	0ZXL1	1SCA022439R6770	118
	0ZXL1	1SCA022439R6770	118
	0ZXB1L	1SCA022169R2030	118
	OZXB1L/1	1SCA022194R0030	118
	OZXB2	1SCA022119R7610	118
	OZXB2/1	1SCA022194R0200	118
	0ZXB2L	1SCA022158R7750	118
	OZXB2L/1	1SCA022194R0460	118
	OZXB8	1SCA022744R1510	118
	OZXB8/1	1SCA022744R1600	118
	OZXB9	1SCA022750R3210	118
	0ZXB9/1	1SCA022750R3300	118
	0ZXB2L	1SCA022158R7750	118
	OZXB2L/1	1SCA022194R0460	118
	OZXB3	1SCA022136R8100	118
	0ZXB3/1	1SCA022194R0620	118
	OZXB4	1SCA022137R4760	118
	0ZXB4/1	1SCA022194R0890	118
	OZXB7	1SCA022185R0040	118
	OZXB7/1	1SCA022194R1430	118
	OZXB7L	1SCA022185R7130	118
	OZXB7L/1	1SCA022194R1600	118
	OZXB8	1SCA022744R1510	118
	OZXB8/1	1SCA022744R1600	118
	OZXB9	1SCA022750R3210	118
	OZXB9/1	1SCA022750R3300	118
Terminal clamp sets for Al- and Cu-cables insulated versions	0ZXT1	1SCA022469R6310	41
	OZXT2	1SCA022620R7200	41
	OZXT3	1SCA022639R0720	41
Terminal clamp sets for AI- and	0ZXT1	1SCA022469R6310	41
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Terminal shrouds,	OTS40T1	1SCA105314R1001	39
for fourth pole switches	0TS40T1	1SCA105314R1001	39
	0TS63T1	1SCA022353R6910	39
	0TS125T1	1SCA022379R9760	39
Terminal shrouds,	OTS40T3	1SCA105317R1001	39
for three pole switches	OTS63T3	1SCA022353R6750	39
	0TS125T3	1SCA022379R9680	39
Terminal shrouds,	0TS250G1L/3	1SCA022731R8150	39
grey plastic	0TS250G1S/3	1SCA022731R8310	39
	0TS250G1L/4	1SCA022731R8230	39
	0TS250G1S/4	1SCA022731R8400	39
	0TS400G1L/3	1SCA022736R8840	39
	0TS400G1S/3	1SCA022736R9060	39
	0TS400G1L/4	1SCA022736R9490	39
	0TS400G1S/4	1SCA022736R9650	39
	0TS800G1L/3	1SCA022776R7890	39
	0TS800G1S/3	1SCA022776R8190	39
	0TS800G1L/4	1SCA022776R7970	39
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	0TS2500G1S/3	1SCA107260R1001	39
	0TS2500G1L/4	1SCA107262R1001	39
	0TS2500G1S/4	1SCA107271R1001	39
	0TS4000G1L/3	1SCA129042R1001	39
	0TS4000G1S/3	1SCA129044R1001	39
	0TS4000G1L/4	1SCA129043R1001	39
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	0TS125T3	1SCA022379R9680	67
	0TS250G1L/3	1SCA022731R8150	67
	0TS250G1S/3	1SCA022731R8310	67
	0TS250G1L/4	1SCA022731R8230	67
	0TS250G1S/4	1SCA022731R8400	67
	0TS400G1L/3	1SCA022736R8840	67
	0TS400G1S/3	1SCA022736R9060	67
	0TS400G1L/4	1SCA022736R9490	67
	0TS400G1S/4	1SCA022736R9650	67
	0TS800G1L/3	1SCA022776R7890	67
	0TS800G1S/3	1SCA022776R8190	67
	0TS800G1L/4	1SCA022776R7970	67
	0TS800G1S/4	1SCA022776R8270	67
	0TS1600G1L/3	1SCA022871R9510	67
	0TS1600G1S/3	1SCA022871R9600	67
	0TS1600G1L/4	1SCA022871R9780	67
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Terminal shrouds,	0TS2500G1L/3	1SCA107261R1001	67
grey plastic	0TS2500G1S/3	1SCA107260R1001	67
	OTS2500G1L/4	1SCA107262R1001	67
	OTS2500G1S/4	1SCA107271R1001	67
	OTS4000G1L/3	1SCA129042R1001	67
	0TS4000G1S/3	1SCA129044R1001	67
	OTS4000G1L/4	1SCA129043R1001	67
	OTS4000G1S/4	1SCA129045R1001	67
	0TS250G1L/3	1SCA022731R8150	94
	0TS250G1S/3	1SCA022731R8310	94
	0TS250G1L/4	1SCA022731R8230	94
	0TS250G1S/4	1SCA022731R8400	94
	0TS400G1L/3	1SCA022736R8840	94
	0TS400G1S/3	1SCA022736R9060	94
	0TS400G1L/4	1SCA022736R9490	94
	0TS400G1S/4	1SCA022736R9650	94
	0TS800G1L/3	1SCA022776R7890	94
	0TS800G1S/3	1SCA022776R8190	94
	OTS800G1L/4	1SCA022776R7970	94
	OTS800G1S/4	1SCA022776R8270	94
	OTS1600G1L/3	1SCA022871R9510	94
	0TS1600G1S/3	1SCA022871R9600	94
	0TS1600G1L/4	1SCA022871R9780	94
	0TS1600G1S/4	1SCA022871R9860	94
	0TS250G1L/3	1SCA022731R8150	116
	0TS250G1S/3	1SCA022731R8310	116
	0TS250G1L/4	1SCA022731R8230	116
	0TS250G1S/4	1SCA022731R8400	116
	0TS400G1L/3	1SCA022736R8840	116
	0TS400G1S/3	1SCA022736R9060	116
	0TS400G1L/4	1SCA022736R9490	116
	0TS400G1S/4	1SCA022736R9650	116
	0TS800G1L/3	1SCA022776R7890	116
	0TS800G1S/3	1SCA022776R8190	116
	0TS800G1L/4	1SCA022776R7970	116
	OTS800G1S/4	1SCA022776R8270	116
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manual change-over switches	0T200U04CP	1SCA022771R6210	27
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	OT600U03CP	1SCA022785R5320	27
	0T600U04CP	1SCA022785R5410	27
	0T800U03CP	1SCA104031R1001	27
	0T800U04CP	1SCA104036R1001	27
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	0T250E03YLP	1SCA145897R1001	111
	OT250E04YLP	1SCA145909R1001	111
	OT400E03YLP	1SCA145932R1001	111
	OT400E04YLP	1SCA145938R1001	111
	0T630E03YLP	1SCA145954R1001	111
	OT630E04YLP	1SCA145960R1001	111
	OT800E03YLP	1SCA145955R1001	111
	OT800E04YLP	1SCA145961R1001	111
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	OT60F4C	1SCA146053R1001	27
	0T100F3C	1SCA105008R1001	27
	OT100F4C	1SCA105019R1001	27

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