



## Switch-disconnector, 3 pole, 1600 A, without protection, IEC, Fixed

**Part no.** INX40B3-16F-1  
**Article no.** 184043

### Delivery programme

Product range			Air circuit-breakers/switch-disconnectors
Product range			Open switch-disconnectors
Current Range			Up to 4000 A
Protective function			without protection
Installation type			Fixed
Construction size			INX40
Release system			without releases
Standard/Approval			IEC
Number of poles			3 pole
Degree of Protection			IP31 with door seals, IP55 with protective cover optionally fittable by user with comprehensive accessories
Rated current = rated uninterrupted current	$I_n = I_u$	A	1600
Bemessungskurzschlusseschaltvermögen bis 440V/690V 42/42	$I_{cm}$	kA	145
Bemessungskurzzeitstromfestigkeit t = 1 s	$I_{cw}$	kA	66
Bemessungskurzzeitstromfestigkeit t = 3 s	$I_{cw}$	kA	53

### Technical data

#### General

Standards			IEC/EN 60947
Ambient temperature			
Storage	$\theta$	°C	-40 - +70
Ambient temperature		°C	-25 - +70
Mounting position			
Utilization category			B
Degree of Protection			IP31 with door seals, IP55 with protective cover
Direction of incoming supply			as required

#### Main conducting paths

Rated current = rated uninterrupted current	$I_n = I_u$	A	1600
Rated uninterrupted current at 50 °C	$I_u$	A	1600
Rated uninterrupted current at 60 °C	$I_u$	A	1600
Rated uninterrupted current at 70 °C	$I_u$	A	1600
Rated impulse withstand voltage	$U_{imp}$	V AC	12000
Rated operational voltage	$U_e$	V AC	690
Overvoltage category/pollution degree			III/3
Rated insulation voltage	$U_i$	V	1000

#### Switching capacity

Rated short-circuit making capacity	$I_{cm}$		
up to 440 V 50/60 Hz	$I_{cm}$	kA	145
up to 690 V 50/60 Hz	$I_{cm}$	kA	145
Rated short-time withstand current 50/60 Hz			
Rated short-time withstand current (t=1s)	$I_{cw}$	kA	66
t = 3 s	$I_{cw}$	kA	53
Operating times			
Closing delay via spring release		ms	30

Total opening delay via shunt release		ms	35
Total opening delay via undervoltage release		ms	40
Lifespan		S	
Lifespan, mechanical	Switching cycles (ON/OFF)		12500
Lifespan, mechanical with maintenance	Switching cycles (ON/OFF)		25000.
Lifespan, electrical	Switching cycles (ON/OFF)		10000
Lifespan, electrical with maintenance	Switching cycles (ON/OFF)		20000.
Maximum operating frequency		Ops./h	
Maximum operating frequency	Operations/h		60
Heat dissipation at rated current $I_n$			
Fixed mounting		W	140

## Weight

Fixed mounting			
3-pole		kg	43

## Terminal capacities

Copper bar			
Fixed mounting			
Black		mm	1 x 80 x 10
			These are values used in separate switchgear. The actual values will depend on the temperature around the circuit-breaker, which is influenced by the ambient temperature, the degree of protection (IP), the mounting height, the partitions, and any external ventilation. Depending on the specific switchgear design, this may result in derating, which can then be compensated for by increasing the cross-sectional area. Temperature rise tests in the specific switchgear can provide specific and detailed information.

## Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	$I_n$	A	1600
Equipment heat dissipation, current-dependent	$P_{vid}$	W	140
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	70
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			
10.2.3 Verification of thermal stability of enclosures			
10.2.3.1 Verification of resistance of insulating materials to normal heat			
10.2.3.2 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			
10.2.4 Resistance to ultra-violet (UV) radiation			
10.2.5 Lifting			
10.2.6 Mechanical impact			
10.2.7 Inscriptions			
10.3 Degree of protection of ASSEMBLIES			
10.4 Clearances and creepage distances			
10.5 Protection against electric shock			
10.6 Incorporation of switching devices and components			
10.7 Internal electrical circuits and connections			
10.8 Connections for external conductors			
10.9 Insulation properties			
10.9.2 Power-frequency electric strength			
10.9.3 Impulse withstand voltage			
10.9.4 Testing of enclosures made of insulating material			

10.10 Temperature rise		The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating		Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.12 Electromagnetic compatibility		Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.13 Mechanical function		The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

## Technical data ETIM 6.0

Low-voltage industrial components (EG000017) / Switch disconnecter (EC000216)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnecter (ecl@ss8.1-27-37-14-03 [AKF060010])			
Version as main switch			Yes
Version as maintenance-/service switch			No
Version as safety switch			No
Version as emergency stop installation			No
Version as reversing switch			No
Max. rated operation voltage Ue AC		V	690
Rated operating voltage		V	690 - 690
Rated permanent current Iu		A	1600
Rated permanent current at AC-21, 400 V		A	0
Rated operation power at AC-3, 400 V		kW	0
Rated short-time withstand current Icw		kA	66
Rated operation power at AC-23, 400 V		kW	0
Switching power at 400 V		kW	0
Conditioned rated short-circuit current Iq		kA	144
Number of poles			3
Number of auxiliary contacts as normally closed contact			0
Number of auxiliary contacts as normally open contact			0
Number of auxiliary contacts as change-over contact			2
Motor drive optional			Yes
Motor drive integrated			No
Voltage release optional			Yes
Device construction			Built-in device fixed built-in technique
Suitable for ground mounting			Yes
Suitable for front mounting 4-hole			No
Suitable for front mounting center			No
Suitable for distribution board installation			Yes
Suitable for intermediate mounting			No
Colour control element			Green
Type of control element			Push button
Interlockable			Yes
Type of electrical connection of main circuit			Rail connection
Degree of protection (IP), front side			IP31

## Dimensions

