

Circuit-breaker, 3 pole, 1600 A, 42 kA, P measurement, IEC, Withdrawable

Part no. Article no. IZMX16B3-P16W-1 183473

Delivery programme			
Product range			Air circuit-breakers/switch-disconnectors
Product range			Open circuit-breakers
Current Range			Up to 4000 A
Protective function			P measurement
Installation type			Withdrawable
			Cassette must be separately ordered.
			IZMX-DTP-PTM external voltage measuring module required
Construction size			IZMX16
Release system			Electronic release
Standard/Approval			IEC
Number of poles			3 pole
Degree of Protection			IP31 with door seals, IP55 with protective cover
			suitable for zone selectivity suitable for communication with integrated system monitor with integrated test possibility With graphic LCD display optionally fittable by user with comprehensive accessories
Rated current = rated uninterrupted current	$I_n = I_u$	А	1600
up to 440 V 50/60 Hz	l <sub>cu</sub>	kA	42
up to 440 V 50/60 Hz	I <sub>cs</sub>	kA	42
Overload release, min.	I <sub>r</sub>	А	640
Overload release, max.	l <sub>r</sub>	А	1600
Non-delayed	l <sub>i</sub> = l <sub>n</sub> x		2 - 15, OFF
Delayed	$I_{sd} = I_r x \dots$		1,5 - 10

## **Technical data**

General			
Standards			IEC/EN 60947
Ambient temperature			
Storage	9	°C	-20 - +70
Operating (open)		°C	-20 - +70
Mounting position			30° 30°
			30° 30°
Utilization category			В
Degree of Protection			IP31 with door seals, IP55 with protective cover
Direction of incoming supply			as required

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IECEN 5847 openning sequence 4_0 + 0 + 0   I <td>t = 1 s</td> <td>I<sub>cw</sub></td> <td>kA</td> <td>42</td>	t = 1 s	I <sub>cw</sub>	kA	42
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quenching   interval   interval <t< td=""><td>iotal opening delay via undervoltage release</td><td></td><td>ms</td><td>50</td></t<>	iotal opening delay via undervoltage release		ms	50
quenching     interpart     interpart <t< td=""><td>Total opening delay on non-delayed short-circuit release (up to complete arc</td><td></td><td>ms</td><td>27</td></t<>	Total opening delay on non-delayed short-circuit release (up to complete arc		ms	27
Lifespan, mechanical   Switching cycles (0N/ FF   2500     Lifespan, mechanical with maintenance   Switching cycles (0N/ FF   2500     Lifespan, electrical   Switching cycles (0N/ FF   1000     Lifespan, electrical with maintenance   Switching cycles (0N/ FF   0000     Lifespan, electrical with maintenance   Switching cycles (0N/ FF   0000     Aximum operating frequency   Operationsh   0000     Matharawable units (switch with cassette)   V   0000     Vichdrawable units (switch with cassette)   V   0000     Spole   V   00000     Spole   V   000000000000000				
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vccles (0N/ OFF)     vccles (0N/ OFF)       Lifespan, electrical     Switching vccles (0N/ OFF)     0000       Lifespan, electrical with maintenance     Switching vccles (0N/ OFF)     0000.       Aximum operating frequency     Operators/h     0       Maintawable units (switch with cassette)     Operators/h     0       Withdrawable units (switch with cassette)     V     30       Spole     V     30       Assette     V     30       Spole     Kg     30       Spole     Kg     30       Emminal capacities     Kg     30       Emminal capacities     V     10       Withdrawable units     Main and m	Lifespan, mechanical	cycles (ON/		12500
Lifespan, electrical with maintenance   Switching voles (ON/ OFF)   2000.     Aximum operating frequency   Operations/h of OFF)   6     Aximum operating frequency   Operations/h of OFF)   6     Withdrawable units (switch with cassette)   Ow   30     Veright   Veright   30     Vithdrawable   Image: Switch with cassette)   Image: Switch with cassette)     Synther   Image: Switch with cassette)   Image: Switch with cassette)     Vithdrawable   Image: Switch with cassette)   Image: Switch with cassette)     Synther   Image: Switch with cassette)   Image: Switch with cassette)     Synther   Image: Switch with cassette)   Image: Switch with cassette)     Synther   Image: Switch with cassette)   Image: Switch with cassette)     Synther   Image: Switch with cassette)   Image: Switch with cassette)     Synther   Image: Switch with cassette)   Image: Switch with cassette)     Synther   Image: Switch with cassette)   Image: Switch with cassette)     Synther   Image: Switch with cassette)   Image: Switch with cassette)     Synther   Image: Switch with cassette)   Image: Switch with cassette)     Synthe	Lifespan, mechanical with maintenance	cycles (ON/		25000.
Aximum operating frequency   Operations/h   6     Aximum operating frequency   Operations/h   6     Ate at dissipation at rated current In   Image: Constraint of the second of the se	Lifespan, electrical	cycles (ON/		10000
Heat dissipation at rated current InImage: Second content of the second content of th	Lifespan, electrical with maintenance	cycles (ON/		20000.
Heat dissipation at rated current InImage: Second content of the second content of th	Maximum operating frequency	Operations/h		60
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Cassette Image: Cassette   3 pole kg   3 pole kg   6 reminal capacities Image: Cassette   Copper bar Image: Cassette   Withdrawable units Image: Cassette	Withdrawable			
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withdrawable units Image: Comparison of the second secon	Cassette			
Copper bar Image: Copper bar   Withdrawable units Image: Copper bar	3 pole		kg	18
Withdrawable units	Terminal capacities			
	Copper bar			
Black mm 2 x 5 x 100	Withdrawable units			
	Black		mm	2 x 5 x 100

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 crosssectional area. Temperature rise tests in the specific switchgear can provide specific and detailed information.

Permissible continuous current for circuit-breakers operating in switchboards at various internal ambient temperatures. The switchboard's internal ambient temperature should be estimated using the calculation methods of IEC regulation.

External IZMX-DTP-PTM-1 voltage measuring module required (1 module is suitable for 16 circuit-breakers)

Notes

## **Design verification as per IEC/EN 61439**

Technical data for design verification			
Rated operational current for specified heat dissipation	I <sub>n</sub>	А	1600
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	320
Operating ambient temperature min.		°C	-20
Operating ambient temperature max.		°C	70
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures			Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat			Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation			Meets the product standard's requirements.
10.2.5 Lifting			Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact			Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions			Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES			Does not apply, since the entire switchgear needs to be evaluated.
10.4 Clearances and creepage distances			Meets the product standard's requirements.
10.5 Protection against electric shock			Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components			Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections			Is the panel builder's responsibility.
10.8 Connections for external conductors			Is the panel builder's responsibility.
10.9 Insulation properties			
10.9.2 Power-frequency electric strength			Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage			Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material			Is the panel builder's responsibility.
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) / Power circuit-breaker for trafo/generator/installation prot. (EC000228)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Circuit breaker for power transformer, generator and system protection (ecl@ss8.1-27-37-04-09 [AJZ716010])

Rated permanent current lu	А	1600
Rated voltage	V	690 - 690
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	kA	42
Overload release current setting	А	800 - 1600
Adjustment range short-term delayed short-circuit release	А	3200 - 16000
Adjustment range undelayed short-circuit release	А	3200 - 19200
Integrated earth fault protection		No
Type of electrical connection of main circuit		Rail connection

Device construction	Built-in device slide-in technique (withdrawable)
Suitable for DIN rail (top hat rail) mounting	No
DIN rail (top hat rail) mounting optional	No
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
Switched-off indicator available	Yes
With under voltage release	No
Number of poles	3
Position of connection for main current circuit	Back side
Type of control element	Push button
Complete device with protection unit	Yes
Motor drive integrated	No
Motor drive optional	Yes
Degree of protection (IP)	IP31

## Dimensions

