

## Circuit-breaker, 3 pole, 4000 A, 66 kA, P measurement, IEC, Withdrawable

Powering Business Worldwide"

1/5

IZMX40B3-P40W-1 Part no. Article no. 183594

## **Delivery program**

Donvory program			
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			IZMX40
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	$I_n = I_u$	Α	4000
up to 440 V 50/60 Hz	I <sub>cu</sub>	kA	66
up to 440 V 50/60 Hz	I <sub>cs</sub>	kA	66
Overload release, min.	I <sub>r</sub>	Α	1600
Overload release, max.	I <sub>r</sub>	Α	4000
Non-delayed	$I_i = I_n x \dots$		2 - 15, OFF
Delayed >	$I_{sd} = I_r x \dots$		1,5 - 10

## **Technical data**

General			
Standards			IEC/EN 60947
Ambient temperature			
Storage	8	°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
Main conducting paths			
Rated current = rated uninterrupted current	$I_n = I_u$	Α	4000

Rated uninterrupted current at 50 °C	l <sub>u</sub>	Α	4000
Rated uninterrupted current at 60 °C	lu	Α	3650
Rated uninterrupted current at 70 °C	Iu	Α	3500
Rated impulse withstand voltage	U <sub>imp</sub>	V AC	12000
Rated operational voltage	U <sub>e</sub>	V AC	690
Use in IT electrical power networks up to U = 440 V	I <sub>IT</sub>	kA	0
Use in IT electrical power networks up to <b>U</b> = 690 V	I <sub>IT</sub>	kA	0
Overvoltage category/pollution degree	*11	NA.	III/3
Rated insulation voltage	Ui	V	1000
Switching capacity	O <sub>I</sub>	•	1000
Rated short-circuit making capacity	I <sub>cm</sub>		
up to 440 V 50/60 Hz	I <sub>cm</sub>	kA	145
up to 690 V 50/60 Hz	I <sub>cm</sub>	kA	145
Rated short-time withstand current 50/60 Hz	·CIII		
t = 1 s	I <sub>cw</sub>	kA	66
t=3 s		kA	53
	I <sub>cw</sub>	NA.	ou .
Rated short-circuit breaking capacity I <sub>cn</sub>	I <sub>cn</sub>		
IEC/EN 60947 operating sequence I <sub>cu</sub> 0-t-C0			
up to 240 V 50/60 Hz	I <sub>cu</sub>	kA	66
up to 440 V 50/60 Hz	I <sub>cu</sub>	kA	66
up to 690 V 50/60 Hz	I <sub>cu</sub>	kA	66
IEC/EN 60947 operating sequence I <sub>cs</sub> 0-t-C0-t-C0			
up to 240 V 50/60 Hz	I <sub>cs</sub>	kA	66
up to 440 V 50/60 Hz	I <sub>cs</sub>	kA	66
up to 690 V 50/60 Hz	I <sub>cs</sub>	kA	66
Operating times			
Closing delay via spring release		ms	35
Total opening delay via shunt release		ms	35
Total opening delay via undervoltage release		ms	40
Total opening delay on non-delayed short-circuit release (up to complete arc quenching)		ms	52
Lifespan		S	
Lifespan, mechanical	Switching cycles (ON/ OFF)		10000
Lifespan, mechanical with maintenance	Switching cycles (ON/ OFF)		20000.
Lifespan, electrical	Switching cycles (ON/ OFF)		5000
Lifespan, electrical with maintenance	Switching cycles (ON/ OFF)		10000.
Maximum operating frequency	Operations/h		60
Heat dissipation at rated current $I_n$			
Withdrawable units (switch with cassette)		W	880
Weight			
Withdrawable			
3-pole		kg	69
Cassette			
3 pole		kg	29
Terminal capacities Copper bar			
Vithdrawable units			
Withdrawable units  Black		mm	4 x 100 x 10
Juur			1 A 100 A 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.
	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.  With vertical universal connection.
Notes	External IZMX-DTP-PTM-1 voltage measuring module required (1 module is suitable for 16 circuit-breakers)

## Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	4000
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	880
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 switch gear must be observed. $\label{eq:constraint}$
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switch gear must be observed. $\label{eq:constraint}$
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])

protection (corespond 27 or or or protection)		
Rated permanent current lu	Α	4000
Rated voltage	V	690 - 690
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	kA	66
Overload release current setting	Α	2000 - 4000
Adjustment range short-term delayed short-circuit release	Α	8000 - 40000
Adjustment range undelayed short-circuit release	Α	8000 - 48000
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**



