### DATASHEET - IZMX16N3-P06F-1



Circuit-breaker, 3 pole, 630A, 50 kA, P measurement, IEC, Fixed



4398035



EL-Nummer (Norway)

Part no. Catalog No.

# Delivery 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			Fixed
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	$I_n = I_u$	Α	630
up to 440 V 50/60 Hz	I <sub>cu</sub>	kA	50
up to 440 V 50/60 Hz	I <sub>cs</sub>	kA	50
Overload release, min.	l <sub>r</sub>	А	252
Overload release, max.	l <sub>r</sub>	А	630
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	θ	°C -20 - +70
Ambient temperature		°C -20 - +70
Mounting position		
		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	$I_n = I_u$	А	630
Rated uninterrupted current at 50 °C	l <sub>u</sub>	A	630
Rated uninterrupted current at 60 °C	lu	A	630
Rated uninterrupted current at 70 °C	lu	A	630
Rated impulse withstand voltage	U <sub>imp</sub>	V AC	12000
Rated operational voltage	Ue	V AC	690
Use in IT electrical power networks up to	U	V	440
Overvoltage category/pollution degree			III/3
Rated insulation voltage	Ui	V	1000
Switching capacity			
Rated short-circuit making capacity	I <sub>cm</sub>		
up to 440 V 50/60 Hz	I <sub>cm</sub>	kA	105
up to 690 V 50/60 Hz	I <sub>cm</sub>	kA	88
Rated short-time withstand current 50/60 Hz			
t = 1 s	I <sub>cw</sub>	kA	42
Rated short-circuit breaking capacity I <sub>cn</sub>	l <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	50
up to 440 V 50/60 Hz	I <sub>cu</sub>	kA	50
up to 690 V 50/60 Hz	I <sub>cu</sub>	kA	42
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	50
up to 440 V 50/60 Hz	I <sub>cs</sub>	kA	50
up to 690 V 50/60 Hz		kA	42
Operating times	I <sub>cs</sub>	NA .	72
Closing delay via spring release		ms	30
Total opening delay via shunt release		ms	30
Total opening delay via undervoltage release		ms	50
······································			-
Total opening delay on non-delayed short-circuit release (up to complete arc		ms	27
quenching)		c	
Lifespan Lifespan, mechanical	Switching	S	12500
Liespan, mechanica	cycles (ON/		12300
	OFF)		05000
Lifespan, mechanical with maintenance	Switching cycles (ON/ OFF)		25000.
Lifespan, electrical	Switching cycles (ON/		10000
	OFF)		
Lifespan, electrical with maintenance	Switching cycles (ON/ OFF)		20000.
Maximum operating frequency	Operations/h		60
Heat dissipation at rated current I <sub>n</sub>			
Fixed mounting		W	36
Weight			
Fixed mounting			
3-pole		kg	19
Terminal capacities			
Copper bar			
Fixed mounting		mm	2 ~ 5 ~ 50
Black		mm	2 x 5 x 50 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.

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

### Design verification as per IEC/EN 61439

Notes

besign vermeation as per indy into 1405			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	А	630
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	36
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 7.0**

Low-voltage industrial components (EG000017) / Power circuit-breaker for trafo/generator/installation protection (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@ss10.0.1-27-37-04-09 [AJZ716013])

Rated permanent current lu   A   630     Rated voltage   V   690 - 690     Rated short-circuit breaking capacity lcu at 400 V, 50 Hz   KA   50     Overload release current setting   A   315 - 630     Adjustment range short-term delayed short-circuit release   A   1260 - 6300     Adjustment range undelayed short-circuit release   A   1260 - 7560     Integrated earth fault protection   No   No     Type of electrical connection of main circuit   Built-in device fixed built-in technique     Device construction   No   No		
Rated short-circuit breaking capacity lcu at 400 V, 50 Hz   KA   50     Overload release current setting   A   315 - 630     Adjustment range short-term delayed short-circuit release   A   1260 - 6300     Adjustment range undelayed short-circuit release   A   1260 - 7560     Integrated earth fault protection   No   Rail connection     Type of electrical connection of main circuit   Built-in device fixed built-in technique	ated permanent current lu	A 630
Overload release current setting A 315 - 630   Adjustment range short-term delayed short-circuit release A 1260 - 6300   Adjustment range undelayed short-circuit release A 1260 - 7560   Integrated earth fault protection No Rail connection   Type of electrical connection of main circuit Rail connection Built-in device fixed built-in technique	ated voltage	V 690 - 690
Adjustment range short-term delayed short-circuit release   A   1260 - 6300     Adjustment range undelayed short-circuit release   A   1260 - 7560     Integrated earth fault protection   No   No     Type of electrical connection of main circuit   Bail connection   Bailt-in device fixed built-in technique	ated short-circuit breaking capacity Icu at 400 V, 50 Hz	kA 50
Adjustment range undelayed short-circuit release A 1260 - 7560   Integrated earth fault protection No Rail connection   Type of electrical connection of main circuit Rail connection Built-in device fixed built-in technique	verload release current setting	A 315 - 630
Integrated earth fault protection No   Type of electrical connection of main circuit Mo   Device construction Mo	djustment range short-term delayed short-circuit release	A 1260 - 6300
Type of electrical connection of main circuit Rail connection   Device construction Built-in device fixed built-in technique	djustment range undelayed short-circuit release	A 1260 - 7560
Device construction Built-in device fixed built-in technique	tegrated earth fault protection	No
· · · · · · · · · · · · · · · · · · ·	/pe of electrical connection of main circuit	Rail connection
	evice construction	Built-in device fixed built-in technique
Suitable for DIN rail (top nat rail) mounting	uitable for DIN rail (top hat rail) mounting	No
DIN rail (top hat rail) mounting optional No	IN 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
With switched-off indicator	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

