# **DATASHEET - IZMX16N3-V10W-1**



Circuit-breaker, 3 pole, 1000A, 50 kA, Selective operation, IEC, Withdrawable



Part no. IZMX16N3-V10W-1

Catalog No. 183348

EL-Nummer (Norway) 4398022

## **Delivery program**

Delivery program			
Product range			Air circuit-breakers/switch-disconnectors
Product range			Open circuit-breakers
Current Range			Up to 4000 A
Protective function			Selective operation
Installation type			Withdrawable
			Cassette must be separately ordered.
			Main terminals must be separately ordered.
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 optionally fittable by user with comprehensive accessories
Rated current = rated uninterrupted current	$I_n = I_u$	Α	1000
up to 440 V 50/60 Hz	Icu	kA	50
up to 440 V 50/60 Hz	I <sub>cs</sub>	kA	50
Overload release, min.	I <sub>r</sub>	Α	400
Overload release, max.	I <sub>r</sub>	Α	1000
Non-delayed	$I_i = I_n x \dots$		2 - 15, OFF
Delayed >	$I_{sd} = I_r x \dots$		1,5 - 10

## **Technical data**

#### General

Storage Ambient temperature  Storage Ambient memperature  Mounting position  Willization category Degree of Protection Direction of incoming supply  BCC -20 + 70  *C -20 + 70  *C -20 + 70  *C -20 + 70  *B   P31 with door seals, IP55 with protective cover as required	General			
Storage Ambient temperature  **C -20 - +70  **C -20 - +70  **Mounting position  **Jordan 30° 30° 30°  30° 30° 30°  **Jordan 30°	Standards			IEC/EN 60947
Ambient temperature  Mounting position  C -20 - +70  30° † 30° † 30°  30° † 30°  30° † 30°  30° † 30°  40°  B  Utilization category  Degree of Protection  B  IP31 with door seals, IP55 with protective cover	Ambient temperature			
Mounting position  30° 30° 30° 30°  Willization category  B  Degree of Protection  IP31 with door seals, IP55 with protective cover	Storage	9	°C	-20 - +70
Utilization category  Degree of Protection  B  IP31 with door seals, IP55 with protective cover	Ambient temperature		°C	-20 - +70
Utilization category  B  Degree of Protection  IP31 with door seals, IP55 with protective cover	Mounting position			30° 30°
Degree of Protection IP31 with door seals, IP55 with protective cover				30° 30°
	Utilization category			В
Direction of incoming supply as required	Degree of Protection			IP31 with door seals, IP55 with protective cover
	Direction of incoming supply			as required

#### Main conducting paths

Main conducting paths			
Rated current = rated uninterrupted current	$I_n = I_u$	Α	1000
Rated uninterrupted current at 50 °C	l <sub>u</sub>	Α	1000
Rated uninterrupted current at 60 °C	Iu	Α	1000
Rated uninterrupted current at 70 °C	Iu	Α	1000
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	V	440
Overvoltage category/pollution degree		•	III/3
Rated insulation voltage	Ui	V	1000
Switching capacity	-1		
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	CIII		
t = 1 s	I <sub>cw</sub>	kA	42
Rated short-circuit breaking capacity I <sub>cn</sub>		IG (	
	I <sub>cn</sub>		
IEC/EN 60947 operating sequence I <sub>cu</sub> 0-t-C0		LA	or.
up to 240 V 50/60 Hz	I <sub>cu</sub>	kA	85
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	I <sub>cs</sub>	kA	42
Operating times			
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 quenching)		ms	27
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	Operations/h		60
Heat dissipation at rated current I <sub>n</sub>			
Withdrawable units (switch with cassette)		W	125
Weight			
Withdrawable			
3-pole		kg	28
Cassette			
3 pole		kg	18
Terminal capacities			
Copper bar			
Withdrawable units			
Black		mm	2 x 5 x 60
			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.

Design verification as per IEC/EN 61439

200.9			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	1000
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	125
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 voltage Rated short-circuit breaking capacity lcu at 400 V, 50 Hz  Vs 690 - 690  KA 50  Overload release current setting Adjustment range short-term delayed short-circuit release Adjustment range undelayed short-circuit release Adjustment range undelayed short-circuit release Adjustment range undelayed short-circuit release A 2000 - 12000  Integrated earth fault protection  No	protection (eci@5510.0.1-27-07-09 [AJZ/10013])		
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz  0 verload release current setting  Adjustment range short-term delayed short-circuit release  Adjustment range undelayed short-circuit release  Adjustment range undelayed short-circuit release  Appended a connection of main circuit  Type of electrical connection of main circuit  Rail connection	Rated permanent current lu	А	1000
Overload release current setting  A 500 - 1000  Adjustment range short-term delayed short-circuit release  A 2000 - 10000  Adjustment range undelayed short-circuit release  A 2000 - 12000  Integrated earth fault protection  Type of electrical connection of main circuit  Rail connection	Rated voltage	V	690 - 690
Adjustment range short-term delayed short-circuit release Adjustment range undelayed s	Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	kA	50
Adjustment range undelayed short-circuit release  A 2000 - 12000  Integrated earth fault protection  Type of electrical connection of main circuit  A 2000 - 12000  No  Rail connection	Overload release current setting	А	500 - 1000
Integrated earth fault protection  Type of electrical connection of main circuit  No  Rail connection	Adjustment range short-term delayed short-circuit release	А	2000 - 10000
Type of electrical connection of main circuit  Rail connection	Adjustment range undelayed short-circuit release	А	2000 - 12000
	Integrated earth fault protection		No
Device construction  Built-in device slide-in technique (withdrawable)	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	Suitable for DIN rail (top hat rail) mounting		No
DIN rail (top hat rail) mounting optional 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
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**

