### DATASHEET - IZMX40H3-V32W-1



Circuit-breaker, 3 pole, 3200A, 105 kA, Selective operation, IEC, Withdrawable



Part no. Catalog No. IZMX40H3-V32W-1 183748

EL-Nummer (Norway) 4398237

### **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			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 optionally fittable by user with comprehensive accessories
Rated current = rated uninterrupted current	$I_n = I_u$	А	3200
up to 440 V 50/60 Hz	l <sub>cu</sub>	kA	105
up to 440 V 50/60 Hz	I <sub>cs</sub>	kA	105
Overload release, min.	l <sub>r</sub>	А	1280
Overload release, max.	l <sub>r</sub>	А	3200
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°
			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 <sub>n</sub> = I <sub>u</sub>	А	3200
Rated uninterrupted current at 50 °C	lu	A	3200
Rated uninterrupted current at 60 °C	l <sub>u</sub>	A	3200
Rated uninterrupted current at 70 °C	l <sub>u</sub>	A	3200
Rated impulse withstand voltage	U <sub>imp</sub>	V AC	12000
Rated operational voltage		V AC	690
	Ue		
Use in IT electrical power networks up to	U	V	440
Overvoltage category/pollution degree		V	111/3
Rated insulation voltage Switching capacity	Ui	v	1000
Rated short-circuit making capacity	I <sub>cm</sub>		
up to 440 V 50/60 Hz	I <sub>cm</sub>	kA	231
up to 690 V 50/60 Hz		kA	166
	I <sub>cm</sub>	NA .	
Rated short-time withstand current 50/60 Hz t = 1 s		kA	85
	I <sub>cw</sub>		
t=3s	I <sub>cw</sub>	kA	66
Rated short-circuit breaking capacity I <sub>cn</sub>	I <sub>cn</sub>		
IEC/EN 60947 operating sequence I <sub>cu</sub> 0-t-CO			
up to 240 V 50/60 Hz	I <sub>cu</sub>	kA	105
up to 440 V 50/60 Hz	I <sub>cu</sub>	kA	105
up to 690 V 50/60 Hz	I <sub>cu</sub>	kA	85
IEC/EN 60947 operating sequence $\rm I_{cs}$ 0-t-C0-t-C0			
up to 240 V 50/60 Hz	I <sub>cs</sub>	kA	105
up to 440 V 50/60 Hz	I <sub>cs</sub>	kA	105
up to 690 V 50/60 Hz	I <sub>cs</sub>	kA	75
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		ms	52
quenching)		S	
Lifespan Lifespan, mechanical	Switching	3	10000
Litespan, mechanicai	cycles (ON/ OFF)		1000
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 <sub>n</sub>			
Withdrawable units (switch with cassette)		W	560
Weight			
Withdrawable			
3-pole		kg	69
Cassette			
3 pole		kg	29
Terminal capacities			
Copper bar			
Withdrawable units			2 ~ 90 ~ 10
Black		mm	3 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.

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** Technical data for design verification 3200 Rated operational current for specified heat dissipation I<sub>n</sub> А $\mathsf{P}_{\mathsf{vid}}$ Equipment heat dissipation, current-dependent w 560 Operating ambient temperature min. °C -20 °C 70 Operating ambient temperature max. IEC/EN 61439 design verification 10.2 Strength of materials and parts 10.2.2 Corrosion resistance Meets the product standard's requirements. Meets the product standard's requirements. 10.2.3.1 Verification of thermal stability of enclosures 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 Meets the product standard's requirements. and fire due to internal electric effects 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. Does not apply, since the entire switchgear needs to be evaluated. 10.6 Incorporation of switching devices and components 10.7 Internal electrical circuits and connections Is the panel builder's responsibility. Is the panel builder's responsibility. 10.8 Connections for external conductors 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	А	3200
Rated voltage	V	690 - 690
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	kA	105
Overload release current setting	А	1280 - 3200
Adjustment range short-term delayed short-circuit release	А	1920 - 32000
Adjustment range undelayed short-circuit release	А	6400 - 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
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



