

# Circuit-breaker, 4p, 3200 A, AF

Powering Business Worldwide\*

Part no. IZMX40N4-V32W
Article no. 149995
Catalog No. RES8324W52QNMNN2MNDX

**Delivery programme** 

Delivery programme			
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
Construction size			IZMX40
Release system			Electronic release
Standard/Approval			IEC
Number of poles			4 pole
Degree of Protection			IP20, IP55 with protective cover, IP41 door sealing frame
			suitable for zone selectivity optionally fittable by user with comprehensive accessories
Rated current = rated uninterrupted current	$I_n = I_u$	Α	3200
Breaking capacity Icu = Ics to 440 V 50/60 Hz	I <sub>cu</sub>	kA	85
Breaking capacity Ics to 440 V 50/60 Hz	I <sub>cs</sub>	kA	85
Overload release, min.	I <sub>r</sub>	Α	1600
Overload release, max.	I <sub>r</sub>	Α	3200
Non-delayed  I	$I_i = I_n \times \dots$		2 - 12, OFF
Delayed X >	$I_{sd} = I_r x \dots$		2 - 10
Notes			
Main terminals not included, need to be ordered separately.			
Note concerning the product			
Cassette needs to be ordered separately.			

# **Technical data**

### General

General			
Standards			IEC/EN 60947
Ambient temperature			
Storage	θ	°C	-40 - +70
Operating (open)		°C	-25 - +70
Mounting position			30° 30°
			30° 30°
Utilization category			В
Degree of Protection			IP20, IP55 with protective cover, IP41 door sealing frame
Direction of incoming supply			as required
Main conducting paths			
Rated current = rated uninterrupted current	$I_n = I_u$	Α	3200

Rated uninterrupted current at 50 °C	Iu	Α	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		V AC	12000
	U <sub>imp</sub>		
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	57.6
Overvoltage category/pollution degree			III/3
Rated insulation voltage	Ui	V	1000
Switching capacity  Rated short-circuit making capacity			
	I <sub>cm</sub>	LΛ	107
up to 440 V 50/60 Hz	I <sub>cm</sub>	kA	187
up to 690 V 50/60 Hz	I <sub>cm</sub>	kA	166
Rated short-time withstand current 50/60 Hz			
t=1s	I <sub>cw</sub>	kA	85
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-C0			
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	85
up to 690 V 50/60 Hz	I <sub>cu</sub>	kA	75
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	85
up to 440 V 50/60 Hz	I <sub>cs</sub>	kA	85
up to 690 V 50/60 Hz	I <sub>cs</sub>	kA	75
Operating times	CS		
Closing delay via spring release		ms	35
Total opening delay via shunt release		ms	22
Total opening delay via undervoltage release		ms	37
Total opening delay on non-delayed short-circuit release (up to complete arc quenching)		ms	45
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	70
4-pole		kg	86
Cassette			
3 pole		kg	27
4 pole		kg	35
Terminal capacities Copper bar			
Withdrawable units			
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 Rated operational current for specified heat dissipation Equipment heat dissipation, current-dependent Pvid W 560

°C

°C

-25

70

Meets the product standard's requirements.

Operating ambient temperature max.	
IEC/EN 61439 design verification	

Operating ambient temperature min.

10.2.4 Resistance to ultra-violet (UV) radiation

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

Meets the product standard's requirements.

and fire due to internal electric effects

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.

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

## **Technical data ETIM 6.0**

10.12 Electromagnetic compatibility

10.13 Mechanical function

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 (eci@ss8.1-2/-3/-04-09 [AJZ/16010])		
Rated permanent current lu	А	3200
Rated voltage	V	690 - 690
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	kA	85
Overload release current setting	А	1600 - 3200
Adjustment range short-term delayed short-circuit release	А	6400 - 32000
Adjustment range undelayed short-circuit release	А	6400 - 38400
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		4

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)	IP20