

Circuit-breaker, 3p, 1250 A, fixed

Part no. Article no. Catalog No. IZMX40B3-V12F 149671 RES6133B52-NMNN2MN1X



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			Fixed
Construction size			IZMX40
Release system			Electronic release
Standard/Approval			IEC
Number of poles			3 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	$I_n = I_u$	А	1250
Breaking capacity Icu = Ics to 440 V 50/60 Hz	l _{cu}	kA	66
Breaking capacity Ics to 440 V 50/60 Hz	I _{cs}	kA	66
Overload release, min.	Ir	А	625
Overload release, max.	l _r	А	1250
Non-delayed	I _i = I _n x		2 - 12, OFF
Delayed	$I_{sd} = I_r x \dots$		2 - 10
Notes			
Main terminals not included, need to be ordered separately.			

Technical data

General			
Standards			IEC/EN 60947
Ambient temperature			
Storage	9	°C	-40 - +70
Operating (open)		°C	-25 - +70
Mounting position			
			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	$I_n = I_u$	A	1250
Rated uninterrupted current at 50 °C	I _u	А	1250
Rated uninterrupted current at 60 °C	Iu	А	1250

Rated uninterrupted current at 70 °C	l _u	А	1250
Rated impulse withstand voltage	U _{imp}	V AC	12000
Rated operational voltage	U _e	V AC	690
Use in IT electrical power networks up to U = 440 V	I _{IT}	kA	36
Overvoltage category/pollution degree			111/3
Rated insulation voltage	Ui	V	1000
Switching capacity			
Rated short-circuit making capacity	I _{cm}		
up to 440 V 50/60 Hz	I _{cm}	kA	145
up to 690 V 50/60 Hz	I _{cm}	kA	145
Rated short-time withstand current 50/60 Hz			
t = 1 s	I _{cw}	kA	66
t = 3 s	I _{cw}	kA	53
Rated short-circuit breaking capacity I _{cn}	I _{cn}		
IEC/EN 60947 operating sequence I _{cu} O-t-CO			
up to 240 V 50/60 Hz	I _{cu}	kA	66
up to 440 V 50/60 Hz	I _{cu}	kA	66
up to 690 V 50/60 Hz	I _{cu}	kA	66
IEC/EN 60947 operating sequence I _{cs} O-t-CO-t-CO			
up to 240 V 50/60 Hz	I _{cs}	kA	66
up to 440 V 50/60 Hz	I _{cs}	kA	66
up to 690 V 50/60 Hz	I _{cs}	kA	66
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 In			
Fixed mounting		W	90
Weight			
Fixed mounting			
3-pole		kg	43
4-pole Terminal capacities		kg	56
Copper bar			
Fixed mounting			
Black		mm	1 x 60 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	In	А	1250
Equipment heat dissipation, current-dependent	P _{vid}	W	90
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	70

C/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 wi provide heat dissipation data for the devices.
10.11 Short-circuit rating	Is the panel builder's responsibility. The specifications for the switchgear mus observed.
10.12 Electromagnetic compatibility	Is the panel builder's responsibility. The specifications for the switchgear mus observed.
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])

Type of electrical connection of main circuit Image: Construction Rail connection Device construction Built-in device fixed built-in technique 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 O Number of auxiliary contacts as normally open contact O Number of auxiliary contacts as change-over contact Sector of the construction Number of auxiliary contacts as change-over contact Sector of the construction Number of auxiliary contacts as change-over contact Sector of the construction Number of auxiliary contacts as change-over contact Sector of the construction Number of poles Sector of the construction Number of poles No Position of connection for main current circuit Sector of the construction Type of control element Sector of the construction Complete device with protection unit Sector of the construction Motor drive integrated Sector of the construction	protection (eci@ss8.1-27-37-04-09 [AJ2716010])		
Acta short-circuit breaking capacity lou at 400 V, 50 Hz A B Adia short-circuit breaking capacity lou at 400 V, 50 Hz A 250 - 1250 Adjustment range short-term delayed short-circuit release A 200 - 12500 Adjustment range undelayed short-circuit release A 200 - 15000 Integrated earth fault protection A 81 connection Type of eletrical connection of main circuit A 81 connection Divice construction B Bilt-in device fixed built-in technique Divice for DIN rail (top hat rail) mounting A No Number of auxiliary contacts as normally closed contact M No Number of auxiliary contacts as change-over contact M No Number of auxiliary contacts as change-over contact M No Number of auxiliary contacts as change-over contact M No Number of auxiliary contacts as change-over contact M No Number of poles No S Number of poles No No Number of poles No S Number of poles No No	Rated permanent current lu	А	1250
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Adjustment range undelayed short-circuit release A S00 - 15000 Integrated earth fault protection No No Type of electrical connection of main circuit No No Davice construction Built-in device fixed built-in technique No Suitable for DN rail (top hat rail) mounting optional No No Number of auxiliary contacts as normally closed contact No No Number of auxiliary contacts as change-over contact Ye No With under voltage release Ye Image: Solid Contact Contact Ye Number of polis Ye Solid Contact Contact Ye Ye Ye of control element Ye Solid Contact Contact Ye Solid Contact Contact Ye Ye of control element Ye Solid Contact Contact Ye Solid Contact Contact Ye Ye of control element Ye Solid Contact Contact Ye Solid Contact Contact Ye Ye of control element Ye Solid Contact Contact Ye Solid Contact Contact Ye Ye of Control element Ye	Overload release current setting	А	625 - 1250
Integrate dearth fault protection No Type of electrical connection of main circuit No Davice construction Bail connection Suitable for DIN rail (top hat rail) mounting Baile DIN rail (top hat rail) mounting optional No Number of auxiliary contacts as normally closed contact No Number of auxiliary contacts as normally closed contact No Number of auxiliary contacts as normally closed contact No Number of auxiliary contacts as change-over contact Set No Number of auxiliary contacts as change-over contact Set Set Number of auxiliary contacts as change-over contact Set Set Set Number of auxiliary contacts as change-over contact Set Set Set Number of auxiliary contacts as change-over contact Set Set Set Number of poles Set Set <td>Adjustment range short-term delayed short-circuit release</td> <td>Α</td> <td>2500 - 12500</td>	Adjustment range short-term delayed short-circuit release	Α	2500 - 12500
Type of electrical connection of main circuit Figure 2 Rail connection Davice construction Built-in device fixed built-in technique Suitable for DIN rail (top hat rail) mounting No DIN rail (top hat rail) mounting optional Mo Number of auxiliary contacts as normally closed contact Mo Number of auxiliary contacts as normally contact Mo Number of auxiliary contacts as change-over contact G Switched-off indicator available Mo Vith under voltage release Mo Number of for formain current circuit Mo Type of control element Mo Complete device with protection unit Mo Motor drive integrated Mo Motor drive optional Mo <td>Adjustment range undelayed short-circuit release</td> <td>А</td> <td>2500 - 15000</td>	Adjustment range undelayed short-circuit release	А	2500 - 15000
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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 normally open contact 0 Number of auxiliary contacts as normally open contact 2 Number of auxiliary contacts as change-over contact Section Number of auxiliary contacts as change-over contact Ves Number of auxiliary contacts as normally open contact No Number of auxiliary contacts as change-over contact Ves Number of auxiliary contacts as normality open contact No Number of auxiliary contacts as change-over contact No Number of auxiliary contacts as change-over contact No Number of poles No Number of poles No Position of connection formain current circuit Push button Type of control element Ves Notor drive pritoral No Motor drive potional No	Type of electrical connection of main circuit		Rail connection
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Number of auxiliary contacts as change-over contactImage: Content of the section of th	Number of auxiliary contacts as normally closed contact		0
Switched-off indicator availableKesWith under voltage releaseNoNumber of poles3Position of connection for main current circuitSec Sec Sec Sec Sec Sec Sec Sec Sec Sec	Number of auxiliary contacts as normally open contact		0
With under voltage releaseNoNumber of poles3Position of connection for main current circuitEType of control elementMoComplete device with protection unitMoNotor drive integratedMoNotor drive optionalMoMotor drive optional <td>Number of auxiliary contacts as change-over contact</td> <td></td> <td>2</td>	Number of auxiliary contacts as change-over contact		2
Number of poles3Position of connection for main current circuitGCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	Switched-off indicator available		Yes
Position of connection for main current circuitBack sideType of control elementPush buttonComplete device with protection unitYesMotor drive integratedNoMotor drive optionalSease	With under voltage release		No
Type of control element Push button Complete device with protection unit Yes Motor drive integrated No Motor drive optional Yes	Number of poles		3
Complete device with protection unit Moder Motor drive integrated Moder Motor drive optional Moder	Position of connection for main current circuit		Back side
Motor drive optional Motor	Type of control element		Push button
Motor drive optional Yes	Complete device with protection unit		Yes
	Motor drive integrated		No
Degree of protection (IP)	Motor drive optional		Yes
	Degree of protection (IP)		IP20