

Circuit-breaker, 3p, 4000 A, fixed

Part no. Article no. Catalog No. IZMX40H3-V40F 149740 RESC403B52RNMNN2MN1X



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			Fixed
			Main terminals must be separately ordered.
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	4000
up to 440 V 50/60 Hz	l _{cu}	kA	105
up to 440 V 50/60 Hz	I _{cs}	kA	105
Overload release, min.	l _r	А	2000
Overload release, max.	l _r	А	4000
Non-delayed	l _i = l _n x		2 - 12, OFF
Delayed	I _{sd} = I _r x		2 - 10

Technical data

General			
Standards			IEC/EN 60947
Ambient temperature			
Storage	θ	°C	-40 - +70
Ambient temperature		°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	4000
Rated uninterrupted current at 50 °C	lu	А	4000
Rated uninterrupted current at 60 °C	lu	А	3650
Rated uninterrupted current at 70 °C	lu	А	3500

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		kA	57.6
Overvoltage category/pollution degree	IIT	NA	111/3
Rated insulation voltage	Ui	V	1000
Switching capacity	01	v	1000
Rated short-circuit making capacity	I _{cm}		
up to 440 V 50/60 Hz	I _{cm}	kA	231
up to 690 V 50/60 Hz	I _{cm}	kA	166
Rated short-time withstand current 50/60 Hz	· cm		
t=1s	I _{cw}	kA	85
t=3 s		kA	66
	I _{cw}	NA .	
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	105
up to 440 V 50/60 Hz	I _{cu}	kA	105
up to 690 V 50/60 Hz	I _{cu}	kA	75
IEC/EN 60947 operating sequence $\rm I_{\rm cs}$ 0-t-C0-t-C0			
up to 240 V 50/60 Hz	I _{cs}	kA	105
up to 440 V 50/60 Hz	I _{cs}	kA	105
up to 690 V 50/60 Hz	I _{cs}	kA	75
Operating times			
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 _n			
Fixed mounting		W	600
Weight			
Fixed mounting			
3-pole		kg	43
4-pole Terminal capacities		kg	56
Copper bar			
Fixed mounting			
Black		mm	4 x 100 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. With vertical universal connection.

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I _n	Α	4000
Equipment heat dissipation, current-dependent	P _{vid}	W	600
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	70

10.2 Strength of materials and parts	
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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 observed.
10.12 Electromagnetic compatibility	Is the panel builder's responsibility. The specifications for the switchgear must observed.
10.13 Mechanical function	The device meets the requirements, provided the information in the instruction

Technical data ETIM 6.0

 Low-voltage industrial components (EG000017) / Power circuit-breaker for trafo/generator/installation prot. (EC00228)

 Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker for power transformer, generator and system protection (ecl@ss8.1-27-37-04-09 [AJZ716010])

 Rated permanent current lu
 A
 4000

 Rated voltage
 V
 690 - 690

 Rated short-circuit breaking capacity Icu at 400 V, 50 Hz
 kA
 105

Overload release current setting A 2000 - 4000 Adjustment range short-terruit release A 8000 - 40000 Adjustment range undelayed short-circuit release A 8000 - 40000 Integrated earth fault protection A 8000 - 40000 Type of electrical connection of main circuit A No Divice construction A No Stable for DIN rail top hat rail mounting optional A No Number of auxiliary contacts as normally closed contact A No Number of auxiliary contacts as change-over contact A No Number of auxiliary contact mounting A No Number of auxiliary contact as change-over contact A No Number of auxiliary contact as change-over contact A No Number of auxiliary contact as change-over contact A No Number of auxiliary contact as change-over contact A No Number of auxiliary contact as change-over contact A No Number of auxiliary contact as change-over contact B No Number of auxiliary contact as change-over contact	Rated short-circuit dreaking capacity icu at 400 V, 50 Hz	КА	105
Adjustment ange undelayed short-circuit release A 8000 - 48000 Integrated earth fault protection No Rail connection Type of electrical connection of main circuit Rail connection Rail connection Device construction Suitable for DIN rail (top hat rail) mounting optional No DIN rail (top hat rail) mounting optional Mo No Number of auxiliary contacts as normally closed contact Mo No Number of auxiliary contacts as normally closed contact Mo No Number of auxiliary contacts as change-over contact Mo No Number of poles No No No Number of poles Mo No No Number of poles No No No Number of poles No No No Notor direi orient circuit Mo No No Notor direi orient circuit No No No No contaction orient circuit <td< td=""><td>Overload release current setting</td><td>А</td><td>2000 - 4000</td></td<>	Overload release current setting	А	2000 - 4000
Integrate earth fault protectionNoType of electrical connection of main circuitRail connectionDevice constructionBuilt-in device fixed built-in techniqueSuitable for DIN rail (top hat rail) mountingNoDIN rail (top hat rail) mounting optionalNoNumber of auxiliary contacts as normally closed contactNoNumber of auxiliary contacts as normally closed contactONumber of auxiliary contacts as normally closed contactONumber of auxiliary contacts as change-over contactSecteeNumber of auxiliary contacts as change-over contactSecteeNumber of plesNoNumber of plesNoNumber of polesSecteeNumber of control elementSecteeNumber of control elementSecteeNumber of polesSecteeNumber of control elementSecteeNumber of outrin unitSecteeNumber of polesSecteeNumber of poleSecteeNumber of pole<	Adjustment range short-term delayed short-circuit release	А	8000 - 40000
Type of electrical connection of main circuit Page of electrical connection of element Page of electrical connection circuit Page of electrical connection on electrical connection element Page of electrical connection connection element Page of electrical connection element Page of electrical connection element Page of electrical connelectrical connection element Page of el	Adjustment range undelayed short-circuit release	А	8000 - 48000
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 No Number of auxiliary contacts as normally open contact O Number of auxiliary contacts as change-over contact O Number of auxiliary contacts as change-over contact Sector Number of poles No Number of poles No Number of poles Sector Position of connection formain current circuit Sector Type of control element Push button Kotor drive optional Sector Motor drive optional Sector	Integrated earth fault protection		No
Suitable for DIN rail (top hat rail) mounting Image: Comparison of the com	Type of electrical connection of main circuit		Rail connection
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 change-over contact 2 Number of auxiliary contacts as change-over contact Yes With under voltage release No Number of poles 3 Position of connection for main current circuit Back side Type of control element Yes Complete device with protection unit Yes Motor drive optional Yes	Device construction		Built-in device fixed built-in technique
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 Vith under voltage release No Number of poles 3 Position of connection for main current circuit Set of the set of t	Suitable for DIN rail (top hat rail) mounting		No
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 3 Position of connection for main current circuit Yes Type of control element Yes Complete device with protection unit Yes Motor drive integrated Yes Motor drive optional Yes	DIN rail (top hat rail) mounting optional		No
Number of auxiliary contacts as change-over contact 2 Switched-off indicator available Yes With under voltage release No Number of poles 3 Position of connection for main current circuit See Type of control element See Complete device with protection unit See Motor drive integrated See Motor drive optional See	Number of auxiliary contacts as normally closed contact		0
Switched-off indicator available Image: Subscript of the subsc	Number of auxiliary contacts as normally open contact		0
With under voltage releaseNoNumber of poles3Position of connection for main current circuitMoType of control elementBack sideComplete device with protection unitYesMotor drive integratedNoMotor drive optionalSee See See See See See See See See See	Number of auxiliary contacts as change-over contact		2
Number of poles 3 Position of connection for main current circuit Image: Sector Secto	Switched-off indicator available		Yes
Position of connection for main current circuit Position Type of control element Push button Complete device with protection unit Yes Motor drive optional Image: State Sta	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 Mode Yes Motor drive integrated Mode No Motor drive optional Mode Yes	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) IP20	Motor drive optional		Yes
	Degree of protection (IP)		IP20