DATASHEET - IZMX40N3-P12F



Circuit-breaker, 3p, 1250 A, fixed

Part no. IZMX40N3-P12F

Catalog No. 149719

Eaton Catalog No. RES8133B12-NMNN2MN1X

EL-Nummer (Norway)

4357454



Delivery program

Delivery program			
Product range			Air circuit-breakers/switch-disconnectors
Product range			Open circuit-breakers
Current Range			Up to 4000 A
Protective function			Professional protection
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 suitable for communication with integrated system monitor with integrated test possibility with graphic LCD color display optionally fittable by user with comprehensive accessories
Rated current = rated uninterrupted current	$I_n = I_u$	Α	1250
up to 440 V 50/60 Hz	I _{cu}	kA	85
up to 440 V 50/60 Hz	I _{cs}	kA	85
Overload release, min.	I _r	Α	625
Overload release, max.	I _r	Α	1250
Non-delayed	$I_i = I_n x \dots$		2 - 12, OFF
Delayed	$I_{sd} = I_r x \dots$		2 - 10

Technical data

General

General			
Standards			IEC/EN 60947
Ambient temperature			
Storage	9	°C	-25 - +70 (device with LCD-display -20 - +70)
Operating (open)		°C	-25 - +70 (device with LCD-display -20 - +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

Rated uninterrugated current at 50°C	Main conducting paths			
Reade uninterrouged current at 00 °C	Rated current = rated uninterrupted current	$I_n = I_u$	Α	1250
Name or uniter rugued content a 17 °C	Rated uninterrupted current at 50 °C	I _u	Α	1250
National products with based on systems 1,000 1,	Rated uninterrupted current at 60 °C	Iu	Α	1250
Name of purposing surposing by U = 40 V X V X V X V X V X V X V X V X V X V	Rated uninterrupted current at 70 °C	l _u	Α	1250
Use in February or watworks up to U = 440 V	Rated impulse withstand voltage	U _{imp}	V AC	12000
	Rated operational voltage	U _e	V AC	690
No.	Use in IT electrical power networks up to U = 440 V	I _{IT}	kA	57.6
Maked stort cream making capacity	Overvoltage category/pollution degree			III/3
Relect of Long Long Long Long Long Long Long Long	Rated insulation voltage	Ui	V	1000
μ to 440 75 800 Hz lon IA 187 Bate of Short-are withstand current \$1980 Hz lon 1A 160 E = 1 s lon IA 86 E = 2 s lon IA 86 Rated short-are withstand current \$1980 Hz lon IA 86 ELECEN 8000 x counting sequence l ₁₀ 0+CO lon IA 85 in pro 240 x 1980 Nz lon IA 85 in pro 240 x 1980 Nz lon IA 85 in pro 240 x 1980 Nz lon IA 85 in pro 240 x 1980 Nz lon IA 85 in pro 240 x 1980 Nz lon IA 85 in pro 240 x 1980 Nz lon IA 85 in pro 240 x 1980 Nz lon IA 85 in pro 240 x 1980 Nz lon IA 85 in pro 240 x 1980 Nz lon IA 85 in pro 240 x 1980 Nz lon IA 85 in pro 240 x 1980 Nz lon IA 85	Switching capacity			
No 100 M 5 No 100 H 2 No 100 H	Rated short-circuit making capacity	I _{cm}		
Test S	up to 440 V 50/60 Hz	I _{cm}	kA	187
1	up to 690 V 50/60 Hz	I _{cm}	kA	166
Fired mounting delay on non-delayed short-circuit release (up to complete are fixed mounting delay on non-delayed short-circuit release) V	Rated short-time withstand current 50/60 Hz			
Rated short-circuit breaking capacity l _{cn} c ₁ c c c c c c c c c	t = 1 s	I _{cw}	kA	85
ECEN 86947 operating sequence c ₀ O+CO up to 240 V 5060 Hz up to 400 V 5060 Hz up to 5000 V 5060 Hz up to 5000 V 5060 Hz up to 400 V 5060 Hz up to 400 V 5060 Hz up to 400 V 5060 Hz up to 5000 V 5060	t=3s	I _{cw}	kA	66
Fired mounting Fired	Rated short-circuit breaking capacity I _{cn}	I _{cn}		
up to 240 V 5080 Hz	IEC/EN 60947 operating sequence I _{CII} 0-t-CO			
up to 480 V 50/80 Hz up to 890 V 50/80 Hz up to 240 V 50/80 Hz lea		leu	kA	85
tup to 880 V 50/60 Hz Les				
EE/EN 60947 operating sequence s 0-1-CO-1-CO				
up to 240 V 5060 Hz up to 440 V 5060 Hz up to 650 V 5060 Hz les Les Les Les Les Les Les Les	,	'cu	KA.	13
up to 440 V 50/60 Hz				07
up to 890 V 50/60 Hz Operating times Closing delay via spring release Total opening delay via sunt release Total opening delay via undervoltage release Tota	,			
Operating times Closing delay via spring release Total opening delay via undervoltage release Total opening delay on non-delayed short-circuit release (up to complete arc quenching) Maximum operating frequency Operations/h Fixed mounting We 60 Weight Fixed mounting 3-pole kg 43 4-pole kg 43 4-pole kg 56 Terminal capacities Copper bar Fixed mounting Black Fixed mounting 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 large are of protection (IP), the mounting hight, the partitions, and any external ventilation. Depending on the specific switchgear casing, this may result in derparature rise tests in the specific switchgear casing, this may result indirecting, which can the the specific switchgear can provide study and are released in temperature. The switchboard's internal ambient temperatures. The switchboard's internal ambient temperatures. The switchboard's internal ambient temperatures. The switchboard's internal ambient temperatures bould be estimated using the calculation methods of IEC regulation.	<u>'</u>	I _{cs}	kA	
Closing delay via spring release Total opening delay via shunt release Total opening delay via undervoltage release Total opening delay on non-delayed short-circuit release (up to complete arc quenching) Maximum operating frequency Operations/h Fixed mounting Weight Fixed mounting Apole Apole Apole Apole Black Black Total opening delay on non-delayed short-circuit release (up to complete arc quenching) Maximum operating frequency Operations/h W 60 Weight Fixed mounting Apole	up to 690 V 50/60 Hz	I _{cs}	kA	75
Total opening delay via undervoltage release ms 37 Total opening delay on non-delayed short-circuit release (up to complete arc quenching) Maximum operating frequency Heat dissipation at rated current In Fixed mounting W 60 Weight Fixed mounting 3-pole kg 43 4-pole kg 56 Terminal capacities Copper bar Fixed mounting Black Black Mm 1 x 60 x 10 These are values used in separate switchgear. The actual values will depend on the temperature, the degree of protection (IP), the mounting health, this may result in derating, which can then be compensated for by increasing the cortisors sectional area. Temperature is 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 switchboards internal ambient temperatures. The switchboar	Operating times			
Total opening delay via undervoltage release Total opening delay on non-delayed short-circuit release (up to complete arc quenching) Maximum operating frequency Operations/h Fixed mounting 3-pole 4-pole 4-pole 5-pore bar Fixed mounting Black Minume of the delay of the d	Closing delay via spring release		ms	35
Total opening delay on non-delayed short-circuit release (up to complete arc quenching) Maximum operating frequency Met dissipation at rated current In Fixed mounting Weight Fixed mounting 3-pole kg 43 4-pole kg 56 Terminal capacities Copper bar Fixed mounting Black mm	Total opening delay via shunt release		ms	22
quenching) Querations/h 60 Heat dissipation at rated current In W 60 Fixed mounting W 60 Weight Fixed mounting S 40 3-pole kg 43 4-pole kg 56 Terminal capacities Copper bar Fixed mounting mm 1 x 60 x 10 Black mm 1 x 60 x 10 These are values used in separate switchgear. The actual values will depend on the 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 switchboard's at various internal ambient temperatures. The switchboard's internal ambient temperature should be estimated using the calculation methods of IEC regulation.	Total opening delay via undervoltage release		ms	37
Maximum operating frequency Moverating freq				
Heat dissipation at rated current In Fixed mounting Weight Fixed mounting 3-pole			ms	45
Fixed mounting 3-pole kg 43 4-pole kg 56 Terminal capacities 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 can provide specific and detailed information. Permissible continuous current for circuit-breakers operating in switchboard's at various internal ambient temperatures. The switchboard's internal ambient temperature should be estimated using the calculation methods of IEC regulation.	Maximum operating frequency	Operations/h		60
Weight Fixed mounting 3-pole kg 43 4-pole kg 56 Terminal capacities 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 switchboard's at various internal ambient temperatures. The switchboard's internal ambient temperature should be estimated using the calculation methods of IEC regulation.	Heat dissipation at rated current I _n			
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Notes IZMX-DTP-PTM external voltage measuring module required				at various internal ambient temperatures. The switchboard's internal ambient
	Notes			IZMX-DTP-PTM external voltage measuring module required

Design verification as per IEC/EN 61439

Rated operational current for specified heat dissipation	In	Α	1250
Equipment heat dissipation, current-dependent	P _{vid}	W	60
Operating ambient temperature min.		°C	-25
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 switch gear must be observed. $\label{eq:constraint}$
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switch gear must be observed. $\label{eq:constraint}$
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])

Rated permanent current lu	Α	1250
Rated voltage	V	690 - 690
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	kA	85
Overload release current setting	Α	625 - 1250
Adjustment range short-term delayed short-circuit release	Α	2500 - 12500
Adjustment range undelayed short-circuit release	А	2500 - 15000
Integrated earth fault protection		No
Type of electrical connection of main circuit		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		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		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)	IP20