

Circuit-breaker, 4p, 2500 A, fixed

Powering Business Worldwide™

1/3

Part no. IZMX40B4-A25F Article no. 149858 Catalog No.

RES6254B22NNMNN2MN1X

Delivery programme

Delivery programme			
Product range			Air circuit-breakers/switch-disconnectors
Product range			Open circuit-breakers
Current Range			Up to 4000 A
Protective function			System protection
Installation type			Fixed
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
			optionally fittable by user with comprehensive accessories
Rated current = rated uninterrupted current	$I_n = I_u$	Α	2500
Breaking capacity Icu = Ics to 440 V 50/60 Hz	I _{cu}	kA	66
Breaking capacity Ics to 440 V 50/60 Hz	I _{cs}	kA	66
Overload release, min.	I _r	Α	1250
Overload release, max.	I _r	Α	2500
Non-delayed	$I_i = I_n \times \dots$		2 - 12
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Notes			
Main terminals must be separately ordered.			

Technical data

Rated operational voltage

General			
Standards			IEC/EN 60947
Ambient temperature			
Storage	8	°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	2500
Rated uninterrupted current at 50 °C	Iu	Α	2500
Rated uninterrupted current at 60 °C	Iu	Α	2500
Rated uninterrupted current at 70 °C	Iu	Α	2280
Rated impulse withstand voltage	U_{imp}	V AC	12000

V AC

690

Use in IT electrical power networks up to U = 440 V	I _{IT}	kA	36
Overvoltage category/pollution degree			III/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} 0-t-C0-t-C0			
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		kA	66
'	I _{cs}	KA	00
Operating times			as .
Closing delay via spring release		ms	35
Total opening delay via shunt release		ms	22
Total opening delay via undervoltage release		ms	37
Total appains dalay on pan dalayad abort airauit ralagge (up to complete are		ma	AE
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	345
Weight Find mounting			
Fixed mounting		ka	43
3-pole		kg	
4-pole Terminal capacities		kg	56
Copper bar			
Fixed mounting			
Black		mm	2 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	In	Α	2500
Equipment heat dissipation, current-dependent	P_{vid}	W	345
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.
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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 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 voltage Rated short-circuit breaking capacity lou at 400 V, 50 Hz Avious delease current setting Adjustment range short-term delayed short-circuit release Adjustment range undelayed short-circuit release Adjustment range undel			
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz Overload release current setting A 1250 - 2500 Adjustment range short-term delayed short-circuit release A 0 - 0 Adjustment range undelayed short-circuit release A 5000 - 30000 Integrated earth fault protection Type of electrical connection of main circuit Device construction Suitable for DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Switched-off indicator available With under voltage release Number of poles A 6 5000 - 30000 No Rail connection No No No No No 1 0 0	Rated permanent current lu	Α	2500
Overload release current setting A 1250 - 2500 Adjustment range short-term delayed short-circuit release A 0 - 0 Adjustment range undelayed short-circuit release A 5000 - 30000 Integrated earth fault protection No Rail connection Type of electrical connection of main circuit Built-in device fixed built-in technique Device construction Built-in device fixed built-in technique Suitable for DIN rail (top hat rail) mounting optional No Number of auxiliary contacts as normally closed contact No 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	Rated voltage	V	690 - 690
Adjustment range short-term delayed short-circuit release Adjustment range undelayed short-circuit release A 5000 - 30000 No Rail connection Built-in device fixed built-in technique Built-in device fixed built-in technique Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Switched-off indicator available With under voltage release With under voltage release No Number of poles Position of connection for main current circuit Adjustment range undelayed short-circuit release No Motor drive integrated No Wes Motor drive optional	Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	kA	66
Adjustment range undelayed short-circuit release A 5000 - 30000 Integrated earth fault protection No Type of electrical connection of main circuit Device construction Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Vitual of auxiliary contacts as change-over contact Vitual of nicitor available Vitual under voltage release No Number of poles Vitual of connection for main current circuit Vitye of control element Complete device with protection unit Motor drive integrated Motor drive optional A 5000 - 30000 Rail connection Rail conn	Overload release current setting	Α	1250 - 2500
Integrated earth fault protection Type of electrical connection of main circuit Device construction Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Switched-off indicator available With under voltage release With under voltage release Number of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive optional Motor drive optional	Adjustment range short-term delayed short-circuit release	Α	0 - 0
Type of electrical connection of main circuit Device construction Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting optional No Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Switched-off indicator available With under voltage release With under voltage release No Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive optional	Adjustment range undelayed short-circuit release	Α	5000 - 30000
Device construction Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting optional No Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Switched-off indicator available With under voltage release With under voltage release No Number of poles Position of connection for main current circuit Back side Type of control element Complete device with protection unit Motor drive integrated Motor drive optional	Integrated earth fault protection		No
Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting optional 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 0 Number of auxiliary contacts as change-over contact 2 Switched-off indicator available With under voltage release With under voltage release No Number of poles Position of connection for main current circuit Back side Type of control element Complete device with protection unit Motor drive integrated No Motor drive optional No	Type of electrical connection of main circuit		Rail connection
DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Switched-off indicator available Yes With under voltage release With under voltage release No Number of poles A Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive optional No Motor drive optional	Device construction		Built-in device fixed built-in technique
Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact 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 Complete device with protection unit Yes Motor drive integrated Motor drive optional O O Number of poles Ves No Yes	Suitable for DIN rail (top hat rail) mounting		No
Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Switched-off indicator available With under voltage release No Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive optional O Q Q Q Q Q Q Q Q Q Q Q Q	DIN rail (top hat rail) mounting optional		No
Number of auxiliary contacts as change-over contact Switched-off indicator available With under voltage release With under of poles No Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive optional 2 Yes Accident Side Push button Yes Motor drive optional	Number of auxiliary contacts as normally closed contact		0
Switched-off indicator available With under voltage release No Number of poles 4 Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated No Motor drive optional Yes Yes Yes Yes Yes Yes Yes Yes	Number of auxiliary contacts as normally open contact		0
With under voltage release No Number of poles 4 Position of connection for main current circuit Type of control element Complete device with protection unit Wotor drive integrated No Motor drive optional No	Number of auxiliary contacts as change-over contact		2
Number of poles 4 Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive optional 4 Author drive optional 4 Author drive integrated Author drive optional 4 Push button Yes Motor drive optional 4 Author drive integrated No Yes	Switched-off indicator available		Yes
Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive optional Back side Push button Yes Yes Yes	With under voltage release		No
Type of control element Complete device with protection unit Motor drive optional Push button Yes Yes Yes	Number of poles		4
Complete device with protection unit Yes Motor drive integrated No Motor drive optional Yes	Position of connection for main current circuit		Back side
Motor drive integrated No Yes	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