

### Circuit-breaker, 4p, 800 A, withdrawable

Powering Business Worldwide<sup>™</sup>

IZMX40B4-V08W Part no. Article no. 149957

Catalog No. RES6084W52-NMNN2MNDX

# **Delivery program**

Don'to, 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			Withdrawable
			Cassette must be separately ordered.
			Main terminals must be separately ordered.
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	800
up to 440 V 50/60 Hz	I <sub>cu</sub>	kA	66
up to 440 V 50/60 Hz	I <sub>cs</sub>	kA	66
Overload release, min.	I <sub>r</sub>	Α	400
Overload release, max.	I <sub>r</sub>	Α	800
Non-delayed  I	$I_i = I_n x \dots$		2 - 12, OFF
Delayed >	$I_{sd} = I_r x \dots$		2 - 10

# **Technical data**

General			
Standards			IEC/EN 60947
Ambient temperature			
Storage	9	°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	800
Rated uninterrupted current at 50 °C	Iu	Α	800

Rated uninterrupted current at 60 °C

800

Rated impulse withstand voltage  Rated operational voltage  Use in IT electrical power networks up to U = 440 V  Overvoltage category/pollution degree  Rated insulation voltage  Switching capacity  Rated short-circuit making capacity  up to 440 V 50/60 Hz  up to 690 V 50/60 Hz  Rated short-time withstand current 50/60 Hz  t = 1 s  t = 3 s	Iu Uimp Ue IIT Ui Icm Icm Icm	A VAC VAC kA V	800 12000 690 36 III/3 1000  145
Rated operational voltage  Use in IT electrical power networks up to U = 440 V  Overvoltage category/pollution degree  Rated insulation voltage  Switching capacity  Rated short-circuit making capacity  up to 440 V 50/60 Hz  up to 690 V 50/60 Hz  Rated short-time withstand current 50/60 Hz  t = 1 s  t = 3 s  Rated short-circuit breaking capacity I <sub>cn</sub>	Ue Iπ Ui Icm Icm	V AC  kA  V  kA  kA	690 36 III/3 1000
Use in IT electrical power networks up to U = 440 V  Overvoltage category/pollution degree  Rated insulation voltage  Switching capacity  Rated short-circuit making capacity  up to 440 V 50/60 Hz  up to 690 V 50/60 Hz  Rated short-time withstand current 50/60 Hz  t = 1 s  t = 3 s  Rated short-circuit breaking capacity I <sub>cn</sub>	Ui  Lom Lom Lom Lom	kA V kA kA	36 III/3 1000
Overvoltage category/pollution degree  Rated insulation voltage  Switching capacity  Rated short-circuit making capacity  up to 440 V 50/60 Hz  up to 690 V 50/60 Hz  Rated short-time withstand current 50/60 Hz  t = 1 s  t = 3 s  Rated short-circuit breaking capacity I <sub>cn</sub>	Ui I <sub>cm</sub> I <sub>cm</sub> I <sub>cm</sub>	V kA kA	III/3 1000 145
Rated insulation voltage  Switching capacity  Rated short-circuit making capacity  up to 440 V 50/60 Hz  up to 690 V 50/60 Hz  Rated short-time withstand current 50/60 Hz  t = 1 s  t = 3 s  Rated short-circuit breaking capacity I <sub>cn</sub>	I <sub>cm</sub> I <sub>cm</sub> I <sub>cm</sub>	kA kA	145
Switching capacity  Rated short-circuit making capacity  up to 440 V 50/60 Hz  up to 690 V 50/60 Hz  Rated short-time withstand current 50/60 Hz  t = 1 s  t = 3 s  Rated short-circuit breaking capacity I <sub>cn</sub>	I <sub>cm</sub> I <sub>cm</sub> I <sub>cm</sub>	kA kA	145
Rated short-circuit making capacity  up to 440 V 50/60 Hz  up to 690 V 50/60 Hz  Rated short-time withstand current 50/60 Hz  t = 1 s  t = 3 s  Rated short-circuit breaking capacity I <sub>cn</sub>	I <sub>cm</sub>	kA	
up to 440 V 50/60 Hz  up to 690 V 50/60 Hz  Rated short-time withstand current 50/60 Hz  t = 1 s  t = 3 s  Rated short-circuit breaking capacity I <sub>cn</sub>	I <sub>cm</sub>	kA	
up to 690 V 50/60 Hz   Rated short-time withstand current 50/60 Hz $t=1 \ s$ $t=3 \ s$ Rated short-circuit breaking capacity $I_{cn}$	I <sub>cm</sub>	kA	
Rated short-time withstand current 50/60 Hz $t = 1  s$ $t = 3  s$ Rated short-circuit breaking capacity $I_{cn}$	I <sub>cw</sub>		145
t = 1 s t = 3 s  Rated short-circuit breaking capacity I <sub>cn</sub>			
$t=3\ s$ Rated short-circuit breaking capacity $I_{cn}$			
Rated short-circuit breaking capacity I <sub>cn</sub>	I <sub>cw</sub>	kA	66
		kA	53
IEC/EN 60947 operating sequence I <sub>cu</sub> O-t-CO	I <sub>cn</sub>		
up to 240 V 50/60 Hz	I <sub>cu</sub>	kA	66
	I <sub>cu</sub>	kA	66
·	I <sub>cu</sub>	kA	66
IEC/EN 60947 operating sequence I <sub>cs</sub> 0-t-C0-t-C0	·cu	N/ 1	
		LΛ	66
	I <sub>cs</sub>	kA	
	I <sub>cs</sub>	kA	66
	I <sub>cs</sub>	kA	66
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
	Operations/h		60
Heat dissipation at rated current I <sub>n</sub>	•		
Withdrawable units (switch with cassette)		W	65
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			4.00.40
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.
B 1 10 10 10 10 10 10 10 10 10 10 10 10 1			
Design verification as per IEC/EN 61439			

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	800

Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	65
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	70
EC/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 voltage Rated voltage Rated voltage Rated short-circuit breaking capacity lcu at 400 V, 50 Hz Rated short-circuit lcu had	protection (eci@sso.1-27-37-04-09 [AJZ/10010])		
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz  Overload release current setting  A 400 - 800  Adjustment range short-term delayed short-circuit release  A 1600 - 8000  Adjustment range undelayed short-circuit release  A 1600 - 9600  Integrated earth fault protection  Type of electrical connection of main circuit  Device construction  Built-in device slide-in technique (withdrawable)  No  DIN rail (top hat rail) mounting  DIN rail (top hat rail) mounting optional  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  Switched-off indicator available  KA 66  400 - 800  A 1600 - 8000  No  Rail connection  Built-in device slide-in technique (withdrawable)  No  O  Valuet of auxiliary contacts as normally open contact  O  Switched-off indicator available  Yes	Rated permanent current lu	Α	800
Overload release current setting Adjustment range short-term delayed short-circuit release Adjustment range undelayed short-circuit rel	Rated voltage	V	690 - 690
Adjustment range short-term delayed short-circuit release Adjustment range undelayed short-circuit release A 1600 - 8000 Adjustment range undelayed short-circuit release A 1600 - 8000 Adjustment range undelayed short-circuit release A 1600 - 8000 Adjustment range undelayed short-circuit release A 1600 - 8000 Adjustment range undelayed short-circuit release A 1600 - 9600 An 1600 - 9600 A	Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	kA	66
Adjustment range undelayed short-circuit release  A 1600 - 9600  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  A 1600 - 9600  No  Rail connection  Built-in device slide-in technique (withdrawable)  No  No  O  Ves	Overload release current setting	А	400 - 800
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  No  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  Switched-off indicator available  No  No  No  No  No  No  No  No  No  N	Adjustment range short-term delayed short-circuit release	Α	1600 - 8000
Type of electrical connection of main circuit  Device construction  Suitable for DIN rail (top hat rail) mounting  No  DIN rail (top hat rail) mounting optional  Number of auxiliary contacts as normally closed contact  Number of auxiliary contacts as normally open contact  O  Number of auxiliary contacts as change-over contact  Switched-off indicator available  Rail connection  Built-in device slide-in technique (withdrawable)  No  No  No  O  Suitable for DIN rail (top hat rail) mounting optional  No  Vo  Yes	Adjustment range undelayed short-circuit release	Α	1600 - 9600
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  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  Switched-off indicator available  Built-in device slide-in technique (withdrawable)  No  Po  No  Yes	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 2 Switched-off indicator available Yes	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  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  Switched-off indicator available  No  No  Ves	Device construction		Built-in device slide-in technique (withdrawable)
Number of auxiliary contacts as normally closed contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  2  Switched-off indicator available  Yes	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	DIN rail (top hat rail) mounting optional		No
Number of auxiliary contacts as change-over contact  2 Switched-off indicator available  Yes	Number of auxiliary contacts as normally closed contact		0
Switched-off indicator available  Yes	Number of auxiliary contacts as normally open contact		0
	Number of auxiliary contacts as change-over contact		2
to the second se	Switched-off indicator available		Yes
With under voltage release No	With under voltage release		No
Number of poles 4	Number of poles		4
Position of connection for main current circuit  Back side	Position of connection for main current circuit		Back side
Type of control element Push button	Type of control element		Push button
Complete device with protection unit  Yes	Complete device with protection unit		Yes
Motor drive integrated No	Motor drive integrated		No

Motor drive optional	Yes
Degree of protection (IP)	IP20