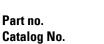
## DATASHEET - IZMX40B4-V16F-1



Circuit-breaker, 4 pole, 1600A, 66 kA, Selective operation, IEC, Fixed



IZMX40B4-V16F-1 183897

4398307

EL-Nummer (Norway)



#### **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			4 pole
Degree of Protection			IP31 with door seals, IP55 with protective cover
			suitable for zone selectivity optionally fittable by user with comprehensive accessories
Rated current = rated uninterrupted current	$I_n = I_u$	А	1600
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.	l <sub>r</sub>	А	640
Overload release, max.	l <sub>r</sub>	А	1600
Non-delayed	l <sub>i</sub> = l <sub>n</sub> x		2 - 15, OFF
Delayed	$I_{sd} = I_r \times \dots$		1,5 - 10

## **Technical data**

General			
Standards			IEC/EN 60947
Ambient temperature			
Storage	θ	°C	-20 - +70
Ambient temperature		°C	-20 - +70
Mounting position			
			30°+ 30°
Utilization category			В
Degree of Protection			IP31 with door seals, IP55 with protective cover
Direction of incoming supply			as required
Main conducting paths			
Rated current = rated uninterrupted current	$I_n = I_u$	А	1600

Rated uninterrupted current at 50 °CIuA100Rated uninterrupted current at 50 °CIuA100Rated uninterrupted current at 70 °CIuV100Rated annulse withstand voltageUmpVAC60Use in IT electrical power networks up toUV40Overvoltage category/pollution degreeIuV100Switching capacityIunV100Switching capacityIunKAC15Rated short-circuit making capacityIunKAC15Iu pt 0400 V50/60 H2IunKAC15It at at short-circuit making capacity IunIunKAC16I = 1 sIunKAC15Rated short-circuit making capacity IunIunKAC16I = 1 sIunKAC1610I = 1 sIunIunKAC16I = 1 sIunKAC1610I = 1 sIunKAC1610I = 1 sIun<	
Rated uninterrupted current at 70 °C     Iµ     A     160       Rated impulse withstand voltage     Ump     VAC     12000       Rated operational voltage     U     VAC     690       Use in IT electrical power networks up to     U     VAC     690       Overvoltage category/pollution degree     U     VAC     690       Rated short-ficial making capacity     U     VAC     100       Watto Mage Category/pollution degree     Icm     KA     145       Switching capacity     Icm     KA     145       Test short-ficuit making capacity     Icm     KA     145       Rated short-ficuit making capacity Icm     Icm     KA     145       Rated short-ficuit making capacity Icm     Icm     KA     145       Rated short-ficuit breaking capacity Icm     Icm     KA     160       It of 240 V 5060 Hz     Icm     KA     160       Ip to 240 V 5060 Hz     Icm     KA     160       Ip to 240 V 5060 Hz     Icm     KA     160       Ip to 240 V 5060 Hz     Icm     KA <td< td=""><td></td></td<>	
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Rated operational voltage     Ue     VAC     60       Use in IT electrical power networks up to     U     V     440       Overvoltage category/pollution degree     III/3     III/3       Rated insulation voltage     U     V     0000       Switching capacity     Image: Switching capacity     Image: Switching capacity     Image: Switching capacity       Pated short-circuit making capacity     Icm     KAC     145       Rated short-circuit making capacity [m     Icm     KAC     66       Rated short-circuit breaking capacity [m     Icm     KAC     66       t = 1 s     Icw     KAC     66       t = 3 s     Icw     KAC     66       t = 3 s     Icw     KAC     66       t = 0 to 400 V 50/00 Hz     Icw     KAC     66       up to 580 V 50/00 Hz     Icw     KAC     66       up to 680 V 50/00 Hz     Icw     KAC     66       up to 680 V 50/00 Hz     Icw     KAC     66       up to 440 V 50/00 Hz     Icw     KAC     66       up to 580 V	
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Switching capacity   Icm   Icm </td <td></td>	
Switching capacity   Icm   Icm     Rated short-circuit making capacity   Icm	
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up to 680 V 50/60 Hz     KA     KA     KA       Rated short-time withstand current 50/60 Hz	
Rated short-time withstand current 50/60 Hz   Icw   KA   66     t = 1 s   Icw   KA   66     t = 3 s   Icw   KA   53     Rated short-circuit breaking capacity Icm   Icm   Icm   53     IEC/EN 60947 operating sequence Icw 0-t-CO   Icm   Icm   Icm     up to 240 V 50/60 Hz   Icu   KA   66     up to 580 V 50/60 Hz   Icu   KA   66     up to 580 V 50/60 Hz   Icu   KA   66     up to 240 V 50/60 Hz   Icu   KA   66     up to 240 V 50/60 Hz   Icu   KA   66     up to 540 V 50/60 Hz   Icu   KA   66     up to 540 V 50/60 Hz   Icu   KA   66     Up to 540 V 50/60 Hz   Icu   KA   66     Up to 540 V 50/60 Hz   Icu   KA   66     Up to 540 V 50/60 Hz   Icu   KA   66     Up to 540 V 50/60 Hz   Icu   KA   66     Icosing delay via spring release   ms   35     Total opening delay via spring release   ms   35	
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IEC/EN 60947 operating sequence I <sub>cu</sub> 0-t-CO   Icu   KA   6     up to 240 V 50/60 Hz   Icu   KA   66     up to 690 V 50/60 Hz   Icu   KA   66     up to 690 V 50/60 Hz   Icu   KA   66     up to 690 V 50/60 Hz   Icu   KA   66     up to 240 V 50/60 Hz   Icu   KA   66     up to 240 V 50/60 Hz   Icus   KA   66     up to 440 V 50/60 Hz   Icus   KA   66     up to 690 V 50/60 Hz   Icus   KA   66     up to 690 V 50/60 Hz   Icus   KA   66     Up to 690 V 50/60 Hz   Icus   KA   66     Up to 690 V 50/60 Hz   Icus   KA   66     Up to 690 V 50/60 Hz   Icus   KA   66     Up to 690 V 50/60 Hz   Icus   Ma   66     Up to 690 V 50/60 Hz   Icus   Ma   66     Up to 690 V 50/60 Hz   Icus   Ma   66     Up to 690 V 50/60 Hz   Icus   Ms   35     Total opening delay via shunt release   Ms   5     Up t	
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up to 440 V 50/60 Hz   Ics   KA   66     up to 690 V 50/60 Hz   Ics   KA   66     Operating times   Ics   KA   66     Closing delay via spring release   ms   35     Total opening delay via shunt release   ms   35     Total opening delay via undervoltage release   ms   40     Itespan, mechanical   Switching cycles (ON/   Switching cycles (ON/   Switching cycles (ON/	
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quenching) Image: Compare the second secon	
Lifespan S S Lifespan, mechanical Switching cycles (0N/	
Lifespan, mechanical Switching 12500 cycles (0N/	
cycles (ON/	
Lifespan, mechanical with maintenance Switching cycles (ON/ OFF) 25000.	
Lifespan, electrical Switching cycles (ON/ OFF) 10000	
Lifespan, electrical with maintenance Switching cycles (ON/ OFF) 20000.	
Maximum operating frequency Operations/h 60	
Heat dissipation at rated current I <sub>n</sub>	
Fixed mounting W 140	
Weight	
Fixed mounting	
4-pole kg 56	
Terminal capacities	
Copper bar	
Fixed mounting	
Black mm 1 x 80 x 10	
These are values used in separate switchgear the temperature around the circuit-breaker, w temperature, the degree of protection (IP), the any external ventilation. Depending on the spe result in derating, which can then be compens	which is influenced by the ambient e mounting height, the partitions, and ecific switchgear design, this may

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	1600
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	140
Operating ambient temperature min.		°C	-20
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 switchgear must be observed.
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.13 Mechanical function			The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

### **Technical data ETIM 7.0**

Low-voltage industrial components (EG000017) / Power circuit-breaker for trafo/generator/installation protection (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@ss10.0.1-27-37-04-09 [AJZ716013])	

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Rated permanent current lu	A	4	1600
Rated voltage	V	/	690 - 690
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	k	A	66
Overload release current setting	А	4	640 - 1600
Adjustment range short-term delayed short-circuit release	А	4	960 - 16000
Adjustment range undelayed short-circuit release	A	4	3200 - 24000
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
With switched-off indicator	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
Degree of protection (IP)	IP31

## Dimensions

