DATASHEET - EMR6-IM1-A-1



Current monitoring relays, 3 - 30 mA, 10 - 100 mA, 0.1 - 1 A, 24 - 240 V AC, 50/60 Hz, 24 - 240 V DC

Part no.	**EMR6-IM1-A-1**
Catalog No.	**184780**
Eaton Catalog No.	**EMR6-IM1-A-1**

Technical data

General

Standards			UL 508, CAN/CSA C22.2 No.14, GL, EAC, CCC, RMRS
Lifespan, mechanical	Operations	x 10^6	30
Climatic proofing			Damp heat, cyclical to IEC 60068-2-30: 24 h cycle, 55° C, 93% relative humidity, 96 h
Ambient temperature			
Operation		°C	
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	+ 60
Storage		°C	- 40 - 85
Mounting position			As required
Shock resistance			Class 2
Degree of protection			
Terminals			IP20
Enclosures			IP50
Terminal capacities		mm^2	
Solid		mm^2	1 x 0.5-2.5 (1 x 18-14 AWG)
Flexible with ferrule		mm^2	2 x 0.5-1.5 (2 x 18-16 AWG)
Standard screwdriver		mm	4 x 0.8
Tightening torque		Nm	0.6 - 0.8
Fixing			Snap fixing, top-hat rail IEC/EN 60715

Contacts

Rated impulse withstand voltage	U_{imp}	V AC	4000
Overvoltage category/pollution degree			III/3

Power supply

Supply voltage			24 - 240 V AC, 50/60 Hz 24 - 240 V DC
Voltage tolerance		x U_c	0.85 - 1.1
Power consumption		VA	2.6
Rated frequency	f	Hz	50 - 60
Duty factor		% DF	100

Timing cycle

Response delay time		s	Adjustable from 0.1 - 30
Reset delay/Off-delay time		s	30
On-delay time		s	Adjustable from 0.1 – 30
Time error within supply voltage		%	0.5
Time error within temperature range		%/°C	0.06

Measuring circuits

Inputs		Number	
B1-C		A	0.003 - 0.03
B2-C		A	0.01 - 0.1
B3-C		A	0.1 - 1
Hysteresis		%	3 … 30
Measuring cycle		ms	80
Temperature error		%/°C	0.06
Error within supply voltage		%	0.5

Status indication

Supply voltage			LED, green
Output relay energized			LED, yellow
Measured value			LED, red
Status indicator (LED)			Green, solid: Supply voltage Other states depending on fault (see IL): Measured value

Relay output contacts

Rated operational voltage	U_e	V AC	250
Rated operational current	I_e	A	
AC-12 at 230 V	I_e	A	4
AC-15 with 230 V	I_e	A	3
DC-12 at 24 V	I_e	A	4
DC-13 at 24 V	I_e	A	2
Lifespan, electrical (AC-12/230 V/4 A)	Operations	x 10^6	
Lifespan, electrical	Operations	x 10^6	0.1
Short-circuit rating			
max. fuse	Fast/gL	A	10

Electromagnetic compatibility (EMC)

Electromagnetic compatibility			IEC/EN 60947-6-2
ESD	Air/contact discharge	kV	IEC/EN 61000-4-2 level 3
HF-immunity to radiation			IEC/EN 61000-4-3 level 3
Burst			IEC/EN 61000-4-4 level 3
Surge			IEC/EN 61000-4-5 Level 4
HF-immunity to line-conducted interference			IEC/EN 61000-4-6 level 3

Design verification as per IEC/EN 61439

Technical data for design verification			
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	60

Technical data ETIM 7.0

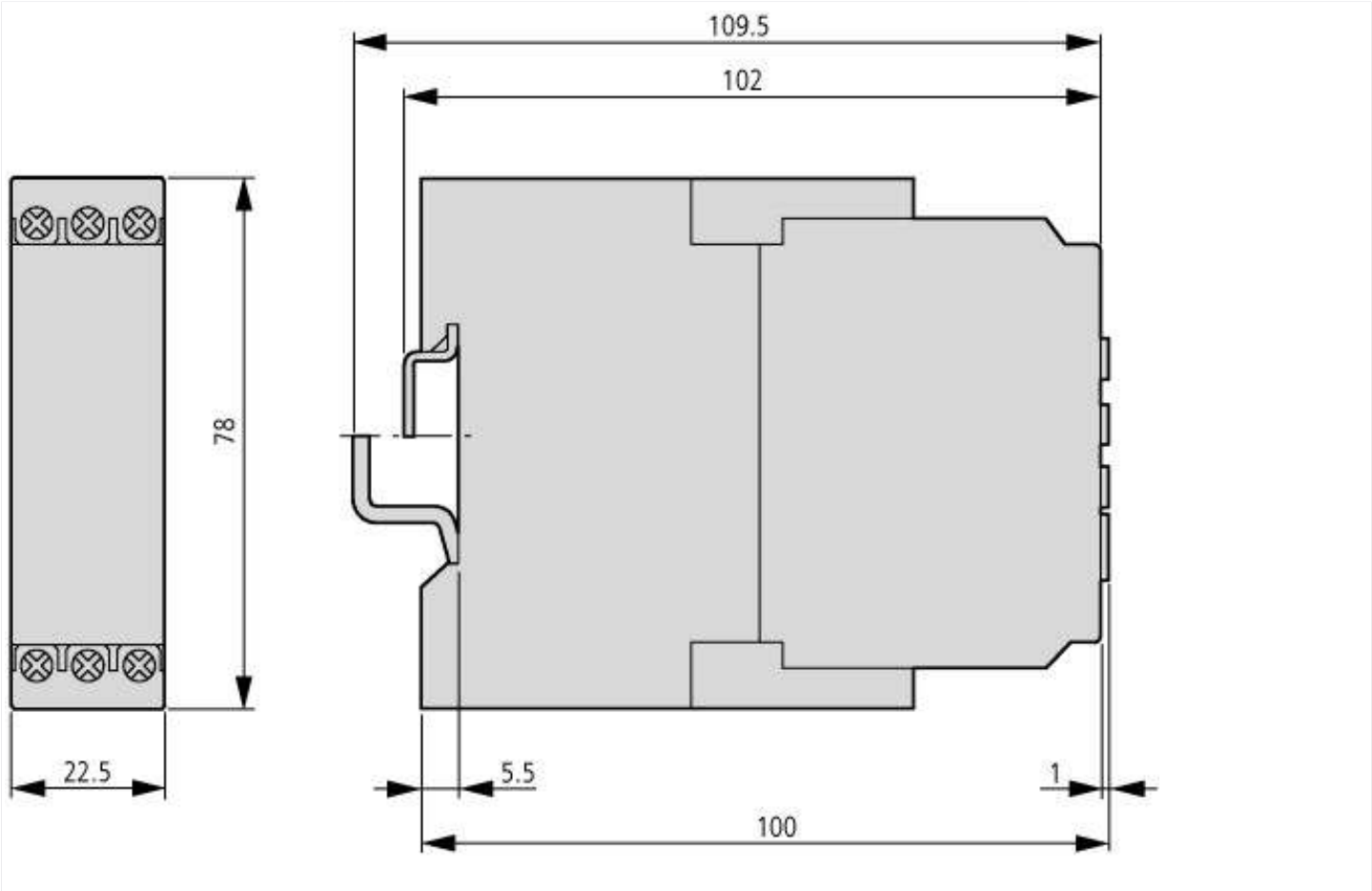
Relays (EG000019) / Current monitoring relay (EC001440)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Monitoring equipment (low-voltage switch technology) / Current monitoring equipment (ecl@ss10.0.1-27-37-18-02 [AKF096014])

Type of electric connection			Screw connection
With detachable clamps			No
Single-phase under current possible			Yes
Three-phase under current possible			No
Single-phase over current possible			Yes
Three-phase over current possible			No
Single-phase hysteresis possible			No
Three-phase hysteresis possible			No
Contains function DC-voltage under current			Yes
Contains function DC-voltage over current			Yes
Function DC-current hysteresis			No
Rated control supply voltage Us at AC 50HZ		V	24 - 240
Rated control supply voltage Us at AC 60HZ		V	24 - 240
Rated control supply voltage Us at DC		V	24 - 240
Voltage type for actuating			AC/DC
Current measurement range		A	0.01 - 1
Min. adjustable delay-on energization time		s	0.1
Max. permitted delay-on energization time		s	30
Min. adjustable off-delay time		s	0
Max. permitted off-delay time		s	0
Number of contacts as normally closed contact			0

Number of contacts as normally open contact			0
Number of contacts as change-over contact			2
External current transformer			
Width		mm	23
Height		mm	85
Depth		mm	110

Dimensions



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