Overcurrent and undercurrent monitor, Current measuring range: 0.3 - 1.5 A, 1 - 5 A, 3 - 15 A, Supply voltage: 24 - 240 V AC, 50/60 Hz, 24 - 240 V DC



Part no. EMR6-I15-A-1

184754

EL Number

4101950

(Norway)

(Nurway)	
General specifications	
Product name	Eaton Moeller® series EMR6 Overcurrent and undercurrent monitor
Part no.	EMR6-I15-A-1
EAN	4015081787906
Product Length/Depth	103.7 millimetre
Product height	85.6 millimetre
Product width	22.5 millimetre
Product weight	0.179 kilogram
Certifications	CSA-C22.2 No. 14 UL 508 GL RMRS CCC EAC
Product Tradename	EMR6
Product Type	Overcurrent and undercurrent monitor
Product Sub Type	None
Catalog Notes	Extension of the measurement range possible with current transformers
Features & Functions	
Current measurement - min	0.3 A
Current measurement - max	15 A
Electric connection type	Screw connection
Functions	Monitoring of single-phase DC and AC networks DC-voltage under current DC-voltage over current Single-phase under current possible Single-phase over current possible
Monitoring function	Overcurrent Undercurrent
Voltage measurement - min	24 V
Voltage measurement - max	240 V
General information	
Degree of protection	Enclosure: IP50 Terminals: IP20
Lifespan, mechanical	30,000,000 Operations
Mounting position	As required
Overvoltage category	III
Pollution degree	3
Product category	EMR Measuring and monitoring relays
Rated impulse withstand voltage (Uimp)	4000 V AC
Shock resistance	Class 2
LED indicator	Status indication of energized output relay: Yellow LED Status indication of Supply voltage: Green, solid light Status indication of measured value: Red LED Status indication of Supply voltage: Green LED Status indication of active release delay: Green, flashing light Status indication of Output relay excited: Yellow, solid light Status indication of Undercurrent: Red, flashing light
Туре	Current monitoring relay
Voltage type	AC/DC
Climatic environmental conditions	
Ambient operating temperature - min	-25 °C
Ambient operating temperature - max	0° C
Ambient storage temperature - min	40 °C

Ambient storage temperature - max	85 °C
Climatic proofing	Damp heat, cyclic, to IEC 60068-2-30
Electro magnetic compatibility	
Air discharge	Air/contact discharge, according to IEC/EN 61000-4-2, level 3
Burst impulse	According to IEC/EN 61000-4-4, level 3
Electromagnetic compatibility	According to IEC/EN 60947-6-2
Immunity to line-conducted interference	Level 3 (according to IEC/EN 61000-4-6)
Immunity to radiation	Level 3 (according to IEC/EN 61000-4-3)
Surge rating	According to IEC/EN 61000-4-5 Level 4
Terminal capacities	
Connection type	Snap fixing, top-hat rail IEC/EN 60715
Terminal capacity (flexible with ferrule)	2 x 0.5-1.5 mm ²
Terminal capacity (flexible with ferrule AWG)	2 x 18-16
Terminal capacity (solid)	1 x 0.5-2.5 mm ²
Terminal capacity (solid AWG)	18 - 14
Screwdriver size	4 x 0.8 mm, Terminal screw
Tightening torque	0.8 Nm, Screw terminals Min. 0.6 Nm, Screw terminals
Timing cycle	
Delay time	On delay: None = 0 or adjustable from 0.1 to 30 s
Timing cycle	0.06 %/°C, Time error within temperature range Adjustable from 0.1 – 30 s, Reset delay/Off-delay time 0.5 % Error within supply voltage (Measuring circuits) 0.5 %, Time error within supply voltage
Power supply	
Duty factor	100 %, Power supply
Power consumption	2.6 VA
Rated control supply voltage (Us) at AC, 50 Hz - min	24 V
Rated control supply voltage (Us) at AC, 50 Hz - max	240 V
Rated control supply voltage (Us) at AC, 60 Hz - min	24 V
Rated control supply voltage (Us) at AC, 60 Hz - max	240 V
Rated control supply voltage (Us) at DC - min	24 V
Rated control supply voltage (Us) at DC - max	240 V
Rated frequency - min	50 Hz
Rated frequency - max	60 Hz
Supply voltage	24 - 240 V AC, 50/60 Hz 24 - 240 V DC
Voltage tolerance	1.1 x Uc 0.85 x Uc
Measuring circuits	
Input current	3 - 30 % Input B3-C: 3 - 15 A Input B1-C: 0.3 - 1.5 A
	Input B2-C: 1 - 5 A
Measuring cycle	80 ms
Temperature error	0.06 %/°C, Measuring circuits
Relay output contacts	
Number of contacts (change-over contacts)	2
Number of contacts (normally closed contacts)	0
Number of contacts (normally open contacts)	0
Lifespan, electrical	100,000 Operation (at 230 V, AC-12, 4 A)
Rated operational current (le)	4 A at DC-12, 24 V 4 A at AC-12, 230 V
Rated operational current (Ie) at AC-15, 220 V, 230 V, 240 V	3 A
Rated operational current (Ie) at DC-13, 24 V	2 A
Rated operational voltage (Ue) at AC - max	250 V
Short-circuit protection rating	Max. 10 A Fast/gL, Fuse, Relay output contacts

Technical data ETIM 9.0

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@ss13-27-37-18-02 [AKF096019])

Type of lestinct commettion Image: 10 months of the commetting	(ecl@ss13-2/-3/-18-02 [AKF096019])		
External power supply required Image: Company to Stanger (Company)	Type of electric connection		Screw connection
Votege type (supply voltage) AC/DC Supply voltage AC 50 Hz Y 4 - 240 Supply voltage AC 50 Hz V 2 - 420 Supply voltage AC 50 Hz W 4 - 240 Voltage measuring range V 2 - 240 Fige of current AC/DC AC/DC Current measuring range A 3 - 15 Response value amperage 1 A 3 - 15 Response value amperage 2 A 3 - 15 Single-phase under current possible B Yes Three-phase under current possible B Yes Three-phase evercurrent possible B Yes Three-phase hysteresis possible Yes Yes Contains function DC-voltage under current Yes Yes Mix. permitted off-daley time Yes Yes Mix. permitted off-daley time Yes Yes <td>With detachable clamps</td> <td></td> <td>No</td>	With detachable clamps		No
Supply voltage AC 90 Hz V 4-240 Valoage measuring range V 4-240 Victore of current V 4-200 Current measuring range A 3-15 Response value amperage A A 3-15 Response value amperage A A 3-15 Single-phase under current possible B Yes Three-phase overcurrent possible B Yes Three-phase overcurrent possible B Yes Three-phase povercurrent possible B Yes Min. adjustable deliveren energization time B Yes Min. adjustable deliveren energization time B Yes Yes	External power supply required		No
Supply voltage OC 4 24-240 Voltage measuring range 4 24-240 Current measuring range 6 24-240 Current measuring range 6 3-15 Response value amperage 1 6 A 3-15 Response value amperage 2 8 3-15 Single-phase under current possible 9 4-24 Three-phase under current possible 9 4-24 Single-phase overcurrent possible 9 4-24 Three-phase hysteresis possible 9 4-24 Three-phase hysteresis possible 9 4-24 Contains function DC-voltage under current 9 4-24 Contains function DC-voltage under current 9 4-24 Contains function DC-voltage under current 9 9 Contains function DC-voltage under current 9 9 Mn. adjustable off-delay time	Voltage type (supply voltage)		AC/DC
Supply voltage DC V 2 - 240 Voltage measuring range V 2 - 240 Type of current ADD ADD Current measuring range AD AD Response value amperage 1 AD AD Response value amperage 2 AD AD Single-phase under current possible BD NO Three-phase overcurrent possible NO NO Three-phase overcurrent possible NO NO Single-phase hysteresis possible NO NO Three-phase overcurrent possible NO NO Contains function DC-voltage under current NO NO Contains function DC-voltage under current NO NO Function DC-current hysteresis NO NO Function DC-current hysteresis NO NO Min. adjustable delay-on energization time NO NO Mix. permitted delay-on energization time NO NO Mix. permitted delay-on energization time NO NO Mix. permitted delay-on energization time NO	Supply voltage AC 50 Hz	V	24 - 240
Votage measuring range V 4-24 Type of current AC/DC Current measuring range A 3-15 Response value amperage 1 A 3-15 Response value amperage 2 A 3-15 Single-phase under current possible B N Three-phase under current possible N N Single-phase overcurrent possible N N Single-phase bysteresis possible N N Three-phase overcurrent possible N N Three-phase hysteresis possible N N Contains function Dc-voltage under current N N Min. adjustable delay-on energization time S N Min. adjustable delay-on energization time S N Min. adjustable off-delay time N N Max. permitted delay-on energization time N N	Supply voltage AC 60 Hz	V	24 - 240
Type of current AC/0C Current measuring range A 03-15 Response value amperage 1 A 03-15 Response value amperage 2 A 3-15 Single-phase under current possible B N Three-phase overcurrent possible B N Single-phase overcurrent possible B N Three-phase overcurrent possible B N Single-phase hysterasis possible B N Contains function DC-voltage under current B N Contains function DC-voltage under current B Y Function DC-voltage overcurrent B N Function DC-voltage under current B N Function DC-voltage overcurrent B N Function DC-voltage under current B N Min. adjustable delay-on energization time B N Max. permitted delay-on energization time B N Number of contacts as normally cosed contact B N Number of contacts as normally cosed contact B N <td>Supply voltage DC</td> <td>V</td> <td>24 - 240</td>	Supply voltage DC	V	24 - 240
Current measuring range A 315 Response value amperage 2 4 315 Single-phase under current possible 4 7-8 315 Single-phase under current possible 4 8-9 1-8 Single-phase ownecurrent possible 4 9-8 1-8 Three-phase overcurrent possible 5 1-8 1-8 Single-phase objects in spice of phase overcurrent possible 6 1-8 1-8 Single-phase overcurrent possible 6 1-8 1-8 Single-phase overcurrent possible 7-8 1-8 1-8 Contains function DC-voltage under current 8-8 1-8 1-8 Contains function DC-voltage overcurrent 8-8 1-8 1-8 Min. adjustable delay-on energization time 8 0 1-8 Max. permitted delay-on energization time 8 0 1-8 Max. permitted off-delay time 9 0 1-8 Mumber of contacts as normally obsed contact 9 0 1-8 Number of contacts as normally open contact </td <td>Voltage measuring range</td> <td>V</td> <td>24 - 240</td>	Voltage measuring range	V	24 - 240
Response value amperage 1 A 3 - 15 Response value amperage 2 Yes 1 - 10 Single-phase under current possible Yes 1 - 10 Three-phase overcurrent possible Yes 1 - 10 Single-phase under current possible Yes 1 - 10 Single-phase vercurrent possible Yes 1 - 10 Single-phase hysteresis possible Yes 1 - 10 Contains function DC-voltage under current Yes 1 - 10 Contains function DC-voltage overcurrent Yes 1 - 10 Innicion DC-current hysteresis Yes 1 - 10 Min. adjustable delay-on energization time Yes 2 - 10 Max. permitted delay-on energization time Yes 3 - 10 Max. permitted delay-on energization time Yes 1 - 10 Max. permitted delay-on energization time Yes 1 - 10 Max. permitted delay-on energization time Yes 1 - 10 Max. permitted delay-on energization time Yes 1 - 10 Mumber of contacts as normally closed contact Yes 1 - 10 Number of c	Type of current		AC/DC
Response value amperage 2 Single-phase under current possible Three-phase under current possible Single-phase vorcurrent possible Single-phase vorcurrent possible Three-phase vorcurrent possible Single-phase vorcurrent Single Single-phase vorcurrent Single Single-phase vorcurent Single Single-	Current measuring range	Α	0.3 - 15
Single-phase under current possible Yes Three-phase overcurrent possible Yes Single-phase overcurrent possible Yes Three-phase overcurrent possible Yes Single-phase hysteresis possible No Single-phase hysteresis possible No Contains function DC-voltage under current Yes Contains function DC-voltage overcurrent Yes Function DC-current hysterasis Yes Min. adjustable delay-on energization time \$ 0.1 Max. permitted delay-on energization time \$ 0.2 Max. permitted off-delay time \$ 0.2 External current transforme Yes Number of contacts as normally closed contact Yes Number of contacts as normally closed contact Yes Number of contacts as change-over contact Yes Voltage type (operating voltage) Yes Operating voltage AC 50 Hz Yes Ope	Response value amperage 1	Α	0.3 - 1.5
Three-phase under current possible Kes Single-phase overcurrent possible Kes Three-phase vercurrent possible No Single-phase hysteresis possible No Three-phase hysteresis possible No Contains function DC-voltage under current Yes Contains function DC-voltage overcurrent Yes Min. adjustable delay-on energization time No Min. adjustable off-delay time S Max. permitted delay-on energization time S Min. adjustable off-delay time S Max. permitted off-delay time S Mumber of contacts as normally closed contact Yes Number of contacts as normally closed contact Yes Number of contacts as normally closed contact Yes Voltage type (operating voltage) Yes Operating voltage AC 60 Hz Yes Operating voltage AC	Response value amperage 2	Α	3 - 15
Single-phase overcurrent possible Three-phase overcurrent possible Single-phase hysteresis possible Three-phase hysteresis possible Three-phase hysteresis possible Contains function DC-voltage under current Contains function DC-voltage overcurrent Contains function DC-current hysteresis Min. adjustable delay-on energization time Min. adjustable off-delay time External current transformer Number of contacts as normally closed contact Number of contacts as normally open contact Number of contacts as normally open contact Number of contacts as normally open contact Voltage type (operating voltage AC 50 Hz Operating voltage AC 50 Hz Operating voltage AC 50 Hz Operating voltage AC 60 Hz Opera	Single-phase under current possible		Yes
Three-phase overcurrent possible No Single-phase hysteresis possible No Three-phase hysteresis possible No Contains function DC-voltage under current Yes Contains function DC-voltage overcurrent Yes Function DC-current hysteresis No Min. adjustable delay-on energization time \$ 0.1 Max. permitted delay-on energization time \$ 0 Max. permitted off-delay time \$ 0 Mex. permitted off-delay time \$ 0 External current transformer No No Number of contacts as normally closed contact 0 0 Number of contacts as normally open contact 2 0 Voltage type (operating voltage) 4 AC/DC Operating voltage AC 50 Hz V 24-240 Operating voltage AC 60 Hz V 24-240 Operating voltage DC Y 24-240 Rated switch current Mm 25. Height mm 25.	Three-phase under current possible		No
Single-phase hysteresis possible Three-phase hysteresis possible Contains function DC-voltage under current Contains function DC-voltage overcurrent Function DC-current hysteresis Function DC-current hysteresis Min. adjustable delay-on energization time Max. permitted delay-on energization time Min. adjustable off-delay time Solution Min. adjustable off-delay time No Operating voltage AC 50 Hz Vy 24-240 Min. adjustable off-delay time Min. adjustable off-delay time No Operating voltage AC 50 Hz Vy 24-240 Min. adjustable off-delay time No Min. adjustable off-delay time No Operating voltage AC 50 Hz Vy 24-240 Min. adjustable off-delay time No Operating voltage AC 50 Hz Vy 24-240 Min. adjustable off-delay time No No Operating voltage AC 50 Hz No No No Operating voltag	Single-phase overcurrent possible		Yes
Three-phase hysteresis possible No Contains function DC-voltage under current Yes Contains function DC-voltage overcurrent Yes Function DC-current hysteresis No Min. adjustable delay-on energization time \$ 0.1 Max. permitted delay-on energization time \$ 30 Min. adjustable off-delay time \$ 0 Max. permitted off-delay time \$ 0 External current transformer No No Number of contacts as normally closed contact \$ 0 Number of contacts as normally open contact \$ 0 Voltage type (operating voltage) AC/DC Operating voltage AC 50 Hz V 2 + 240 Operating voltage AC 60 Hz V 2 + 240 Operating voltage DC V 2 + 240 Rated switch current A 4 Wridth mm 25.5 Height mm 25.6	Three-phase overcurrent possible		No
Contains function DC-voltage under current Contains function DC-voltage overcurrent Function DC-current hysteresis Min. adjustable delay-on energization time Max. permitted delay-on energization time Max. permitted off-delay time Ss 30 Min. adjustable off-delay time Ss 30 Max. permitted off-delay time Ss 0 Max. permitted off-delay time Stermal current transformer Number of contacts as normally closed contact Number of contacts as normally open contact Number of contacts as normally open contact Number of contacts as change-over contact Voltage type (operating voltage) Voltage type (operating voltage) Voltage AC 50 Hz Operating voltage AC 60 Hz Operating voltage AC 60 Hz Operating voltage DC Rated switch current Midth Height Midth Midt	Single-phase hysteresis possible		No
Contains function DC-voltage overcurrent Yes Function DC-current hysteresis No Min. adjustable delay-on energization time \$ 0.1 Max. permitted delay-on energization time \$ 30 Min. adjustable off-delay time \$ 0 Max. permitted off-delay time \$ 0 Max. permitted off-delay time \$ 0 External current transformer No Number of contacts as normally closed contact \$ 0 Number of contacts as normally open contact \$ 2 Number of contacts as change-over contact \$ 2 Voltage type (operating voltage) \$ AC/DC Operating voltage AC 50 Hz V 24 - 240 Operating voltage AC 60 Hz V 24 - 240 Operating voltage DC V 24 - 240 Rated switch current A 4 Writte Mm 22.5 Height mm 25.6	Three-phase hysteresis possible		No
Function DC-current hysteresis Min. adjustable delay-on energization time S D.1 Max. permitted delay-on energization time S D.1 Min. adjustable off-delay time S D.1 Max. permitted off-delay time S D.1 Max. permitt	Contains function DC-voltage under current		Yes
Min. adjustable delay-on energization time Max. permitted delay-on energization time S 30 Min. adjustable off-delay time S 0 Max. permitted off-delay time S 0 Max. permitted off-delay time External current transformer Number of contacts as normally closed contact Number of contacts as normally open contact Number of contacts as change-over contact Voltage type (operating voltage) Operating voltage AC 50 Hz Operating voltage AC 60 Hz Operating voltage DC Rated switch current Width Height Na O 0 AC/DC 24 - 240 AC/DC AC/D	Contains function DC-voltage overcurrent		Yes
Max. permitted delay-on energization time s 30 Min. adjustable off-delay time s 0 Max. permitted off-delay time s 0 External current transformer Number of contacts as normally closed contact Number of contacts as normally open contact Number of contacts as change-over contact Voltage type (operating voltage) Operating voltage AC 50 Hz Operating voltage AC 60 Hz Operating voltage DC Rated switch current A 4 Width Height Min. adjustable off-delay time s 0 O AC/DC 24 - 240 Que and	Function DC-current hysteresis		No
Min. adjustable off-delay time Max. permitted off-delay time External current transformer Number of contacts as normally closed contact Number of contacts as normally open contact Number of contacts as change-over contact Voltage type (operating voltage) Operating voltage AC 50 Hz Operating voltage AC 60 Hz Operating voltage DC Rated switch current Width Height Min. adjustable off-delay time s 0 O AC/DC AC/DC AC/DC 24 - 240 Querating voltage DC AC - 24 - 240 AC - 240 A	Min. adjustable delay-on energization time	s	0.1
Max. permitted off-delay time External current transformer No Number of contacts as normally closed contact Number of contacts as normally open contact Number of contacts as change-over contact Voltage type (operating voltage) Voltage AC 50 Hz Operating voltage AC 60 Hz Operating voltage DC Rated switch current Number of contacts as change-over contact V 24-240 Rated switch current Midth Mi	Max. permitted delay-on energization time	s	30
External current transformer No Number of contacts as normally closed contact Number of contacts as normally open contact Number of contacts as change-over contact Voltage type (operating voltage) Operating voltage AC 50 Hz Vy 24 - 240 Operating voltage AC 60 Hz Operating voltage DC Rated switch current Width Height No No No AC/DC 2 4C/DC AC/DC AC/DC 4 - 240 4 - 240 5 - 24 - 240 Coperating voltage AC 60 Hz No A 4 Width mm 22.5 Height	Min. adjustable off-delay time	s	0
Number of contacts as normally closed contact Number of contacts as normally open contact Number of contacts as change-over contact Voltage type (operating voltage) Operating voltage AC 50 Hz Operating voltage AC 60 Hz Operating voltage DC Rated switch current Width Midth mm 22.5 Height O O O O O O O O O O O O O	Max. permitted off-delay time	s	0
Number of contacts as normally open contact Number of contacts as change-over contact Voltage type (operating voltage) Operating voltage AC 50 Hz Operating voltage AC 60 Hz Operating voltage DC Rated switch current Width Height O O O O O O O O O O O O O	External current transformer		No
Number of contacts as change-over contact Voltage type (operating voltage) Operating voltage AC 50 Hz Operating voltage AC 60 Hz Operating voltage DC Rated switch current Width mm 22.5 Height AC/DC AC/DC AC/DC AC/DC V 24 - 240 V 24 - 240 V 24 - 240 V 24 - 240 A 4 Width mm 85.6	Number of contacts as normally closed contact		0
Voltage type (operating voltage) Operating voltage AC 50 Hz Operating voltage AC 60 Hz Operating voltage DC Rated switch current Width mm 22.5 Height AC/DC AC/CO AC/C	Number of contacts as normally open contact		0
Operating voltage AC 50 Hz V 24 - 240 Operating voltage AC 60 Hz V 24 - 240 Operating voltage DC Rated switch current Width mm 22.5 Height V 24 - 240 A 4	Number of contacts as change-over contact		2
Operating voltage AC 60 Hz Operating voltage DC Rated switch current A Width mm 22.5 Height M 85.6	Voltage type (operating voltage)		AC/DC
Operating voltage DC V 24 - 240 Rated switch current A 4 Width mm 22.5 Height mm 85.6	Operating voltage AC 50 Hz	V	24 - 240
Rated switch current A 4 Width mm 22.5 Height 85.6	Operating voltage AC 60 Hz	V	24 - 240
Width mm 22.5 Height mm 85.6	Operating voltage DC	V	24 - 240
Height mm 85.6	Rated switch current	Α	4
	Width	mm	22.5
Depth mm 103.7	Height	mm	85.6
	Depth	mm	103.7