



## Control relay,24 V DC,relay output



Powering Business Worldwide™

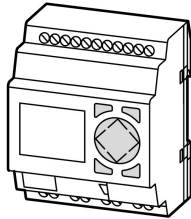
Part no.

EASY819-DC-RC

Article no.

256269

### Delivery programme

			
Product range			Control relays easyRelay
Basic function			easy800 (expandable, easyNet)
Description			erweiterbar: Digital-Ein-/Ausgänge, Bussysteme AS-Interface, PROFIBUS-DP, CANopen®, DeviceNet Bus system easyNet on board Customized laser inscription or delivery with user program possible with EASY-COMBINATION-* product (article No. 257823)
Inputs			
Digital input count			digital: 12 digital: 12; of which can be used as analog: 4
Digital			12
of which can be used as analog			4
Outputs			
Type			Relay
Quantity of outputs			Relays: 6
Outputs		Number	6
Additional features			
Display			with display, with keypad
Expansions			Expandable Networkable (easyNet)
Supply voltage			24 V DC
Software			EASY-SOFT-PRO

### Approbationen

UL approval	Yes
CSA approval	Yes
Product Standards	IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking
UL File No.	E135462
UL CCN	NRAQ
CSA File No.	012528
CSA Class No.	2252-01 + 2258-02
NA Certification	UL listed, CSA certified
Degree of Protection	IEC: IP20, UL/CSA Type: -

### General

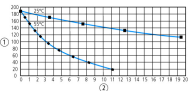

Standards			EN 55011, EN 55022, IEC/EN 61000-4, IEC 60068-2-6, IEC 60068-2-27
Dimensions (W x H x D)		mm	107.5 x 90 x 72 (6 PE)
Weight		kg	0.3
Mounting			Top-hat rail IEC/EN 60715, 35 mm or screw fixing using fixing brackets ZB4-101-GF1 (accessories)

### Terminal capacities

Solid		mm <sup>2</sup>	0.2/4 (AWG 22 - 12)
Flexible with ferrule		mm <sup>2</sup>	0.2/2.5 (AWG 22 - 12)
Standard screwdriver		mm	3.5 x 0.8
Max. tightening torque		Nm	0.6









### Climatic environmental conditions

Operating ambient temperature		°C	In accordance with IEC 60068-2-1, -25 - +55
Condensation			Take appropriate measures to prevent condensation
LCD display (clearly legible)		°C	0 - 55


Storage		°C	In accordance with IEC 60068-2-1, -2, -14 -40 - +70
relative humidity		%	nach IEC 60068-2-30, IEC 600068-2-78 5 - 95
Air pressure (operation)		hPa	795 - 1080
<b>Ambient conditions, mechanical</b>			
Protection type (IEC/EN 60529, EN50178, VBG 4)			IP20
Vibrations		Hz	nach IEC 60068-2-6 konstante Amplitude 0.15 mm: 10 - 57 konstante Beschleunigung 2 g: 57 - 150
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms		Impacts	18
Drop to IEC/EN 60068-2-31	Drop height	mm	50
Free fall, packaged (IEC/EN 60068-2-32)		m	1
Mounting position			Vertical or horizontal
<b>Electromagnetic compatibility (EMC)</b>			
Overvoltage category/pollution degree			III/2
Electrostatic discharge (ESD)			
applied standard			according to IEC EN 61000-4-2
Air discharge		kV	8
Contact discharge		kV	6
Electromagnetic fields (RFI), to IEC EN 61000-4-3		V/m	0.8 - 1.0 GHz: 10 1.4 - 2 GHz: 3 2.0 - 2.7 GHz: 1
Radio interference suppression			EN 55011 Class B
Burst			according to IEC/EN 61000-4-4
power pulses (Surge)			according to IEC/EN 61000-4-5 1 kV (supply cables, symmetrical)
Immunity to line-conducted interference to (IEC/EN 61000-4-6)		V	10
<b>Insulation resistance</b>			
Clearance in air and creepage distances			EN 50178, UL 508, CSA C22.2, No. 142
Insulation resistance			EN 50178
<b>Back-up of real-time clock</b>			
Back-up of real-time clock			
			① Backup time (hours) with fully charged double layer capacitor ② Service life (years)
Accuracy of real-time clock to inputs		s/ day	typ. ± 2 (± 0.2 h/Year)  depending on ambient air temperature fluctuations of up to ± 5 s/day (± 0.5 h/year) are possible
<b>Repetition accuracy of timing relays</b>			
Accuracy of timing relays (of values)		%	± 0.02
Resolution			
Range "S"		ms	5
Range "M:S"		s	1
Range "H:M"		min	1
<b>Retentive memory</b>			
Write cycles of the retentive memory			10 <sup>12</sup> (read/write cycles)
<b>Power supply</b>			
Rated operational voltage	U <sub>e</sub>	V	24 DC (-15/+20%)
Permissible range			20.4 - 28.8 V DC
Residual ripple		%	 5
Siemens MPI, (optional)			yes
Input current			140 mA at U <sub>e</sub>
Einschaltstrom- und dauer		A	12.5 für 6 ms
Voltage dips		ms	≤ In accordance with IEC 61131-2 ≤ 20

Fuse		A	 1A (T)
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

## Digital inputs 24 V DC

Number			12
Inputs can be used as analog inputs			4 (I7, I8, I11, I12)
Status Display			LCD-Display
Potential isolation			from power supply: no between digital inputs: no from the outputs: yes to interface/memory card: no to easyLink: no to easyNet: yes
Rated operational voltage	U <sub>e</sub>	V DC	24
Input voltage		V DC	Signal 0:  5 (I1 - I6, I9, I10),  8 (I7, I8, I11, I12) Signal 1:  15 (I1 - I6, I9, I10),  8 (I7, I8, I11, I12)
Input current at signal 1		mA	I1 - I6, I9, I10: 3.3 (at 24 V DC) I7, I8, I11, I12: 2.2 (at 24 V DC)
Deceleration time		ms	20 (0 -> 1/1 -> 0, Debounce ON) normally 0.025 (0 -> 1/1 -> 0, Debounce OFF, I1 - I4) normally 0.25 (0 -> 1/1 -> 0, Debounce OFF, I5, I6, I9, I10) normally 0.15 (0 -> 1/1 -> 0, Debounce OFF, I7, I8, I11, I12)
Cable length		m	100 (unshielded)
Frequency counter			
Number			4 (I1, I2, I3, I4)
Counter frequency		kHz	 5
Pulse shape			Square
Pulse pause ratio			1:1
Cable length		m	 20 (screened)
Incremental counter			
Number of counter inputs			2 (I1 + I2, I3 + I4)
Counter frequency		kHz	 3
Pulse shape			Square
Signal offset			90°
Pulse pause ratio			1:1
Rapid counter inputs			
Number			4 (I1, I2, I3, I4)
Cable length		m	 20 (screened)
Counter frequency		kHz	< 5
Pulse shape			Square
Pulse pause ratio			1:1

## Analog inputs

Number			4 (I7, I8, I11, I12)
Potential isolation			from power supply: no between digital inputs: no from the outputs: yes to interface/memory card: no to easyLink: no to easyNet: yes
Input type			DC voltage
Signal range			0-10 V DC
Resolution			0.01 V analog 0.01 V digital 10 Bit (value 0 - 1023)
Input impedance		kΩ	11.2
Accuracy of actual value			
Two EASY devices		%	± 3
Within a single device		%	± 2, (I7, I8, I11, I12) ± 0.12 V
Conversion time, analog/digital		ms	each CPU cycle
Input current		mA	< 1
Cable length		m	 30, screened

## Relay outputs

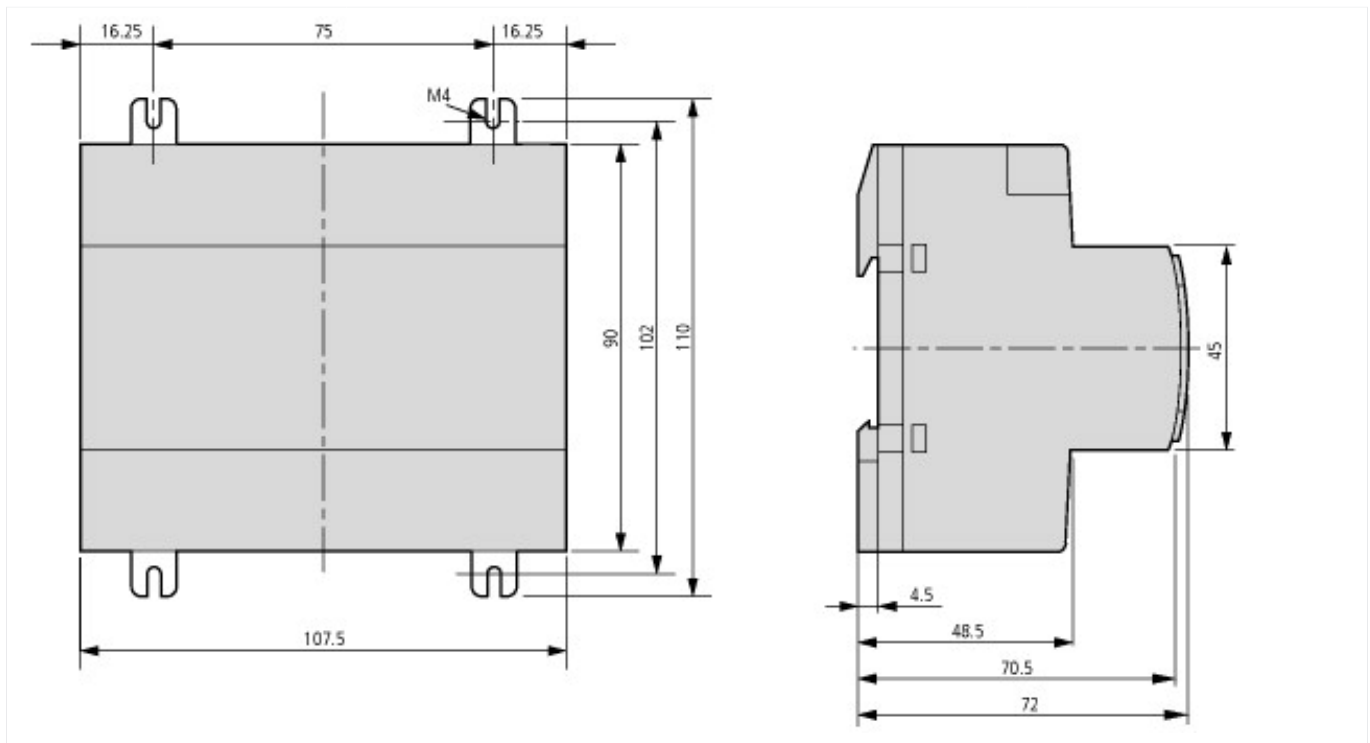
Number			6
Outputs in groups of			1
Parallel switching of outputs for increased output			Not permissible
Protection of an output relay			Miniature circuit-breaker B16 or fuse 8 A (slow)
Potential isolation			from power supply: yes From the inputs: yes between digital inputs: yes to the interface: yes to easyLink: yes to easyNet: yes Safe isolation according to EN 50178: 300 V AC Basic isolation: 600 V AC
Lifespan, mechanical	Operations	x 10 <sup>6</sup>	10
Contacts			
Conventional thermal current (10 A UL)		A	8
Recommended for load: 12 V AC/DC		mA	> 500
Short-circuit-proof $\cos \varphi = 1$ , characteristic B16 at 600 A		A	16
Short-circuit-proof $\cos \varphi = 0.5$ to 0.7, characteristic B16 at 900 A		A	16
Rated impulse withstand voltage $U_{imp}$ of contact coil		kV	6
Rated operational voltage	$U_e$	V AC	250
Rated insulation voltage	$U_i$	V AC	250
Safe isolation according to EN 50178		V AC	300 between coil and contact 300 between two contacts
Making capacity			
AC—15, 250 V AC, 3 A (600 ops./h)	Operations		300000
DC-13, L/R  150 ms, 24 V DC, 1 A (500 S/h)	Operations		200000
Breaking capacity			
AC-15, 250 V AC, 3 A (600 Ops./h)	Operations		300000
DC-13, L/R  150 ms, 24 V DC, 1 A (500 S/h)	Operations		200000
Filament bulb load			
1000 W at 230/240 V AC	Operations		25000
500 W at 115/120 V AC	Operations		25000
Fluorescent lamp load			
Fluorescent lamp load 10 x 58 W at 230/240 V AC			
With upstream electrical device	Operations		25000
Uncompensated	Operations		25000
Fluorescent lamp load 1 x 58 W at 230/240 V AC, conventional, compensated	Operations		25000
Switching frequency			
Mechanical operations		x 10 <sup>6</sup>	10
Switching frequency		Hz	10
Resistive load/lamp load		Hz	2
Inductive load		Hz	0.5
UL/CSA			
Uninterrupted current at 240 V AC		A	10
Uninterrupted current at 24 V DC		A	8
AC			
Control Circuit Rating Codes (utilization category)			B 300 Light Pilot Duty
Max. rated operational voltage		V AC	300
max. thermal continuous current $\cos \varphi = 1$ at B 300		A	5
max. make/break $\cos \varphi \neq$ capacity 1 at B 300		VA	3600/360
DC			
Control Circuit Rating Codes (utilization category)			R 300 Light Pilot Duty

Max. rated operational voltage	V DC	300
Max. thermal uninterrupted current at R 300	A	1
Max. make/break capacity at R 300	VA	28/28

## Netzwerk easyNet

Data transfer rate/distance		1000 KBit/s, 6 m 500 KBit/s, 25 m 250 Kbit/s, 40 m 125 Kbit/s, 300 m 50 KBit/s, 300 m 20 KBit/s, 700 m 10 KBit/s, 1000 m Lengths from 40 m can be obtained only with cables with reinforced cross-section and terminal adapter.
Potential isolation		from power supply POW: yes From the inputs: yes from the outputs: yes to easyLink: yes to the interface: yes
Bus termination (first and last station)		ja
Anschluss technik		RJ45, 8-polig
Terminal capacity		up to 1000 m, < 16 mΩ/m: 1.5 (AWG: 16) up to 600 m, < 26 mΩ/m: 0.75 - 0.8 (AWG: 18) up to 600 m, < 26 mΩ/m: 0.5 - 0.6 (AWG: 20, 19) up to 400 m, < 40 mΩ/m: 0.34 - 0.5 (AWG: 22, 21, 20) up to 250 m, < 60 mΩ/m: 0.25 - 0.34 (AWG: 23, 22) up to 175 m, < 70 mΩ/m: 0.13 (AWG: 26) up to 40 m, < 140 mΩ/m: 1.5 (AWG: 16)

## Dimensions



## Additional product information (links)

<b>IL05013012Z (AWA2528-1979) Control relay easy</b>	
IL05013012Z (AWA2528-1979) Control relay easy	<a href="ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05013012Z2010_11.pdf">ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05013012Z2010_11.pdf</a>
<b>MN04902001Z-EN (AWB2528-1423) easy800 Control Relay</b>	
MN04902001Z-DE (AWB2528-1423) Steuerrelais easy800 - Deutsch	<a href="ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04902001Z_DE.pdf">ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04902001Z_DE.pdf</a>
MN04902001Z-EN (AWB2528-1423) easy800 Control Relay - English	<a href="ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04902001Z_EN.pdf">ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04902001Z_EN.pdf</a>
Labeleditor	<a href="ftp://ftp.moeller.net/MFD/EASY-SOFT-PRO/labeleditor_206.exe">ftp://ftp.moeller.net/MFD/EASY-SOFT-PRO/labeleditor_206.exe</a>