



Control relay, 24 V DC, 12DI(4AI), 6DO relays, time, expandable



Powering Business Worldwide™

Part no. EASY719-DC-RCX
Article no. 274120
Catalog No.

Delivery programme

Product range
 Basic function
 Description

Control relays easyRelay easy700 (expandable)
 Expandable: Digital inputs/outputs, bus systems AS-Interface, PROFIBUS-DP, CANopen®, DeviceNet
 customized laser inscription or delivery with user program possible with EASY-COMBINATION-* product (article No. 2010781)

Inputs
 Digital input count

digital: 12
 digital: 12; of which can be used as analog: 4
 12
 4

Digital of which can be used as analog

Outputs
 Type
 Quantity of outputs
 Outputs

Number

Relay
 Relays: 6
 6

Additional features
 Display
 Expansions
 Supply voltage
 Software

without display, without keypad
 Expandable
 24 V DC
 EASY-SOFT-BASIC/-PRO

Approvals

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.
 UL Category Control No.
 CSA File No.
 CSA Class No.
 North America Certification
 Degree of Protection
 shipping classification

E135462
 NRAQ
 012528
 2252-01 + 2258-02
 UL listed, CSA certified
 IEC: IP20, UL/CSA Type: -
 BV
 DNV
 GL
 LR



Germanischer Lloyd



General

Standards

		EN 55011, EN 55022, IEC/EN 61000-4, IEC 60068-2-6, IEC 60068-2-27
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 ²	0.2/4 (AWG 22 - 12)
Flexible with ferrule	mm ²	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
Storage	°C	-40 - +70
relative humidity	%	in accordance with IEC 60068-2-30, IEC 60068-2-78 5 - 95
Air pressure (operation)	hPa	795 - 1080

Ambient conditions, mechanical

Protection type (IEC/EN 60529, EN50178, VBG 4)

Vibrations

Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms
Drop to IEC/EN 60068-2-31

Free fall, packaged (IEC/EN 60068-2-32)

Mounting position

Electromagnetic compatibility (EMC)

Overvoltage category/pollution degree

Electrostatic discharge (ESD)

applied standard

Air discharge

Contact discharge

Electromagnetic fields (RFI) to IEC EN 61000-4-3

Radio interference suppression

Burst

power pulses (Surge)

Immunity to line-conducted interference to (IEC/EN 61000-4-6)

Insulation resistance

Clearance in air and creepage distances

Insulation resistance

Back-up of real-time clock

Back-up of real-time clock

Accuracy of real-time clock to inputs

Repetition accuracy of timing relays

Accuracy of timing relays (of values)

Resolution

Range "S"

Range "M:S"

Range "H:M"

Retentive memory

Write cycles of the retentive memory

Power supply

Rated operational voltage

Permissible range

Residual ripple

Input current

Voltage dips

Fuse

Digital inputs 24 V DC

Number

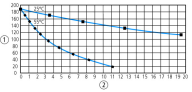
Inputs can be used as analog inputs

Potential isolation

		IP20
	Hz	In accordance with IEC 60068-2-6 constant amplitude 0.15 mm: 10 - 57 constant acceleration 2 g: 57 - 150
	Impacts	18
Drop height	mm	50
	m	1
		Vertical or horizontal

		III/2
		according to IEC EN 61000-4-2
	kV	8
	kV	6
	V/m	10
		EN 55011 Class B, EN 55022 Class B
	kV	according to IEC/EN 61000-4-4
		according to IEC/EN 61000-4-5 1 kV (supply cables, symmetrical)
	V	10

		EN 50178, UL 508, CSA C22.2, No. 142
		EN 50178








		 <p>① Backup time (hours) with fully charged double layer capacitor ② Service life (years)</p>
	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

	%	± 0.02
	ms	10
	s	1
	min	1

		1000000 (10 ⁶)
--	--	----------------------------

U _e	V	24 DC (-15/+20%)
U _e		20.4 - 28.8 V DC
	%	≲ 5
		normally 140 mA at U _e
	ms	≤ In accordance with IEC 61131-2 ≤ 10
	A	≲ 1A (T)

		12
		4 (I7, I8, I11, I12)
		from power supply: no between digital inputs: no from the outputs: yes to interface/memory card: no to easyLink: no

Rated operational voltage	U _e	V DC	24
Input voltage		V DC	Signal 0:  5 (I1 - I12, R1 - R12) 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 0.25 (0 -> 1, Debounce OFF, I1 - I12)
Cable length		m	100 (unshielded)
Frequency counter			
Number			2 (I3, I4)
Counter frequency		kHz	 1
Pulse shape			Square
Pulse pause ratio			1:1
Cable length		m	 20 (screened)
Rapid counter inputs			
Number			2 (I1, I2)
Cable length		m	 20 (screened)
Counter frequency		kHz	< 1
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
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	Input delay ON: 20; Input delay OFF: each cycle time
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 Safe isolation according to EN 50178: 300 V AC Basic isolation: 600 V AC
Lifespan, mechanical	Operations	x 10 ⁶	10
Contacts			
Conventional thermal current (10 A UL)		A	8
Recommended for load: 12 V AC/DC		mA	> 500
Short-circuit-proof cos φ = 1, characteristic B16 at 600 A		A	16
Short-circuit-proof cos φ = 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

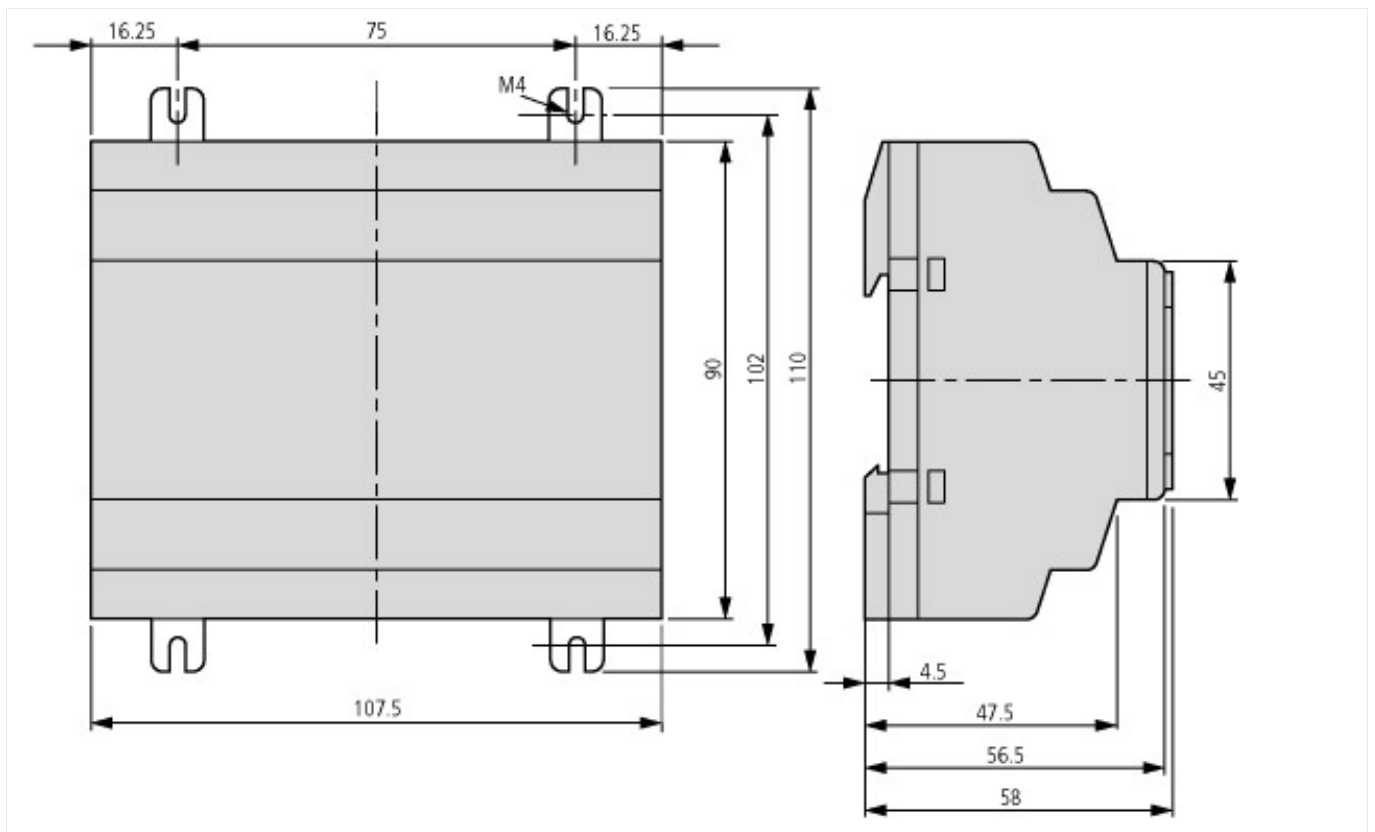
Rated insulation voltage	U _i	V AC	250
Safe isolation according to EN 50178		V AC	300 between coil and contact 300 between two contacts
Making capacity			
AC--15, 250 V AC, 3 A (600 ops./h)	Operations		300000
DC-13, L/R $\frac{\text{ms}}{\text{A}}$ 150 ms, 24 V DC, 1 A (500 S/h)	Operations		200000
Breaking capacity			
AC-15, 250 V AC, 3 A (600 Ops./h)	Operations		300000
DC-13, L/R $\frac{\text{ms}}{\text{A}}$ 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 ⁶	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 φ = 1 at B 300		A	5
max. make/break cos φ \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

Technical data ETIM 5.0

PLC's (EG000024) / Logic module (EC001417)		
Electric engineering, automation, process control engineering / Control / Programmable logic control (SPS) / Logic module (ecl@ss8-27-24-22-16 [AKE539010])		
Supply voltage AC 50 Hz	V	0 - 0
Supply voltage AC 60 Hz	V	0 - 0
Supply voltage DC	V	20.4 - 28.8
Voltage type of supply voltage		DC
Switching current	A	8
Number of analogue inputs		4
Number of analogue outputs		0
Number of digital inputs		12
Number of digital outputs		6
With relay output		Yes
Number of HW-interfaces industrial Ethernet		0
Number of HW-interfaces PROFINET		0
Number of HW-interfaces RS-232		0
Number of HW-interfaces RS-422		0
Number of HW-interfaces RS-485		0
Number of HW-interfaces serial TTY		0
Number of HW-interfaces USB		0
Number of HW-interfaces parallel		0
Number of HW-interfaces Wireless		0
Number of HW-interfaces other		1
With optical interface		No
Supporting protocol for TCP/IP		No
Supporting protocol for PROFIBUS		No
Supporting protocol for CAN		No
Supporting protocol for INTERBUS		No

Supporting protocol for ASI	No	
Supporting protocol for KNX	No	
Supporting protocol for MODBUS	No	
Supporting protocol for Data-Highway	No	
Supporting protocol for DeviceNet	No	
Supporting protocol for SUCONET	No	
Supporting protocol for LON	No	
Supporting protocol for PROFINET IO	No	
Supporting protocol for PROFINET CBA	No	
Supporting protocol for SERCOS	No	
Supporting protocol for Foundation Fieldbus	No	
Supporting protocol for EtherNet/IP	No	
Supporting protocol for AS-Interface Safety at Work	No	
Supporting protocol for DeviceNet Safety	No	
Supporting protocol for INTERBUS-Safety	No	
Supporting protocol for PROFIsafe	No	
Supporting protocol for SafetyBUS p	No	
Supporting protocol for other bus systems	No	
Radiostandard Bluetooth	No	
Radiostandard WLAN 802.11	No	
Radiostandard GPRS	No	
Radiostandard GSM	No	
Radiostandard UMTS	No	
IO link master	No	
Redundancy	No	
With display	No	
Degree of protection (IP)	IP20	
Basic device	Yes	
Expandable	Yes	
Expansion device	No	
With timer	Yes	
Rail mounting possible	Yes	
Wall mounting/direct mounting	Yes	
Front build in possible	No	
Rack-assembly possible	No	
Suited for safety functions	No	
Category according to EN 954-1	-	
SIL according to IEC 61508	0	
Performance level acc. to EN ISO 13849-1	-	
Appendant operation agent (Ex ia)	No	
Appendant operation agent (Ex ib)	No	
Explosion safety category for gas	None	
Explosion safety category for dust	None	
Width	mm	108
Height	mm	90
Depth	mm	60

Dimensions



Additional product information (links)

IL05013015Z (AWA2528-2105) Control relay easy	
IL05013015Z (AWA2528-2105) Control relay easy	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05013015Z2010_11.pdf
MN05013003Z-EN (AWB2528-1508) control relay easy500, easy700	
MN05013003Z-DE (AWB2528-1508) Steuerrelais easy500, easy700 - Deutsch	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN05013003Z_DE.pdf
MN05013003Z-EN (AWB2528-1508) control relay easy500, easy700 - English	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN05013003Z_EN.pdf
Labeleditor	http://downloadcenter.moeller.net/de/software.f6023a63-5acb-42c7-a51c-cf99091cace