



Control relay, 12 V DC, 8DI(2AI), 4DO relays, display, time



Powering Business Worldwide™

Part no. EASY512-DA-RC
Article no. 274106
Catalog No.

Delivery programme

Product range
 Basic function
 Description

Control relays easyRelay
 easy500
 Stand alone
 customized laser inscription or delivery
 with user program possible with EASY-COMBINATION-* product (article No. 2010781)

Inputs

Digital input count

digital: 8
 digital: 8; of which can be used as
 analog: 2
 8
 2

Digital
 of which can be used as analog

Outputs
 Type

Quantity of outputs
 Outputs

Number

Relay
 Relays: 4
 4

Additional features

Display
 Supply voltage
 Software

with display, with keypad
 12 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
 E135462
 NRAQ
 012528
 2252-01 + 2258-02
 UL listed, CSA certified
 IEC: IP20, UL/CSA Type: -
 BV
 DNV
 GL
 LR

UL File No.

UL Category Control No.

CSA File No.

CSA Class No.

North America Certification

Degree of Protection

shipping classification



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

71.5 x 90 x 58 (4 PE)

Weight

kg

0.2

Mounting

Top-hat rail IEC/EN 60715, 35 mm or screw fixing using fixing brackets ZB4-101-GF1 (accessories)

Terminal capacities

Solid

mm²

0.2/4 (AWG 22 - 12)

Flexible with ferrule

mm²

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

g

°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 12 V DC

Number

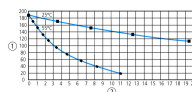
Inputs can be used as analog inputs

Status Display

		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 Supply cables: 2 Signal cables: 2
		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








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

	%	± 1
	ms	10
	s	1
	min	1

		1000000 (10 ⁶)
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U _e	V	12 DC (-15/+30%)
U _e		10.2 - 15.6 V DC
	%	≤ 5
		normally 140 mA at U _e
	ms	≤ In accordance with IEC 61131-2 ≤ 10
	A	≤ 1 A (T)

		8
		2 (I7,I8)
		LCD-Display


Potential isolation			from power supply: no between digital inputs: no from the outputs: yes to interface/memory card: no
Rated operational voltage	U _e	V DC	12
Input voltage		V DC	Signal 0:  4 Signal 1:  8
Input current at signal 1		mA	I1 - I6: 3.3 (at 12 V DC) I7, I8: 1.1 (at 12 V DC)
Deceleration time		ms	20 (0 -> 1/1 -> 0, Debounce ON) normally 0.3 (0 -> 1/1 -> 0, Debounce OFF, I1 - I6) normally 0.35 (0 -> 1, Debounce OFF, I7, I8) normally 0.15 (1 -> 0, Debounce OFF, I7, I8)
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
Digital inputs 24 V DC			
Status Display			LCD-Display
Digital inputs 24 V DC			
Status Display			LCD-Display
Analog inputs			
Number			2 (I7, I8)
Potential isolation			from power supply: no between digital inputs: no from the outputs: yes to interface/memory card: 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			4
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)
 Recommended for load: 12 V AC/DC
 Short-circuit-proof $\cos \varphi = 1$, characteristic B16 at 600 A
 Short-circuit-proof $\cos \varphi = 0.5$ to 0.7, characteristic B16 at 900 A
 Rated impulse withstand voltage U_{imp} of contact coil
 Rated operational voltage

Rated insulation voltage
 Safe isolation according to EN 50178

Making capacity

AC—15, 250 V AC, 3 A (600 ops./h)

DC-13, L/R  150 ms, 24 V DC, 1 A (500 S/h)
Breaking capacity

AC-15, 250 V AC, 3 A (600 Ops./h)

DC-13, L/R  150 ms, 24 V DC, 1 A (500 S/h)
Filament bulb load

1000 W at 230/240 V AC

500 W at 115/120 V AC

Fluorescent lamp load

Fluorescent lamp load 10 x 58 W at 230/240 V AC

With upstream electrical device

Uncompensated

Fluorescent lamp load 1 x 58 W at 230/240 V AC, conventional, compensated

Switching frequency

Mechanical operations

Switching frequency

Resistive load/lamp load

Inductive load

UL/CSA

Uninterrupted current at 240 V AC

Uninterrupted current at 24 V DC

AC

Control Circuit Rating Codes (utilization category)

Max. rated operational voltage

max. thermal continuous current $\cos \varphi = 1$ at B 300

max. make/break $\cos \varphi \neq 1$ at B 300

DC

Control Circuit Rating Codes (utilization category)

Max. rated operational voltage

Max. thermal uninterrupted current at R 300

Max. make/break capacity at R 300

	A	8
	mA	> 500
	A	16
	A	16
U_e	kV	6
	V AC	250
U_i	V AC	250
	V AC	300 between coil and contact 300 between two contacts
Operations		300000
Operations		200000
Operations		300000
Operations		200000
Operations		25000
Operations		25000
Operations		25000
	x 10^6	10
	Hz	10
	Hz	2
	Hz	0.5
	A	10
	A	8
		B 300 Light Pilot Duty
	V AC	300
	A	5
	VA	3600/360
		R 300 Light Pilot Duty
	V DC	300
	A	1
	VA	28/28

Technical data ETIM 5.0

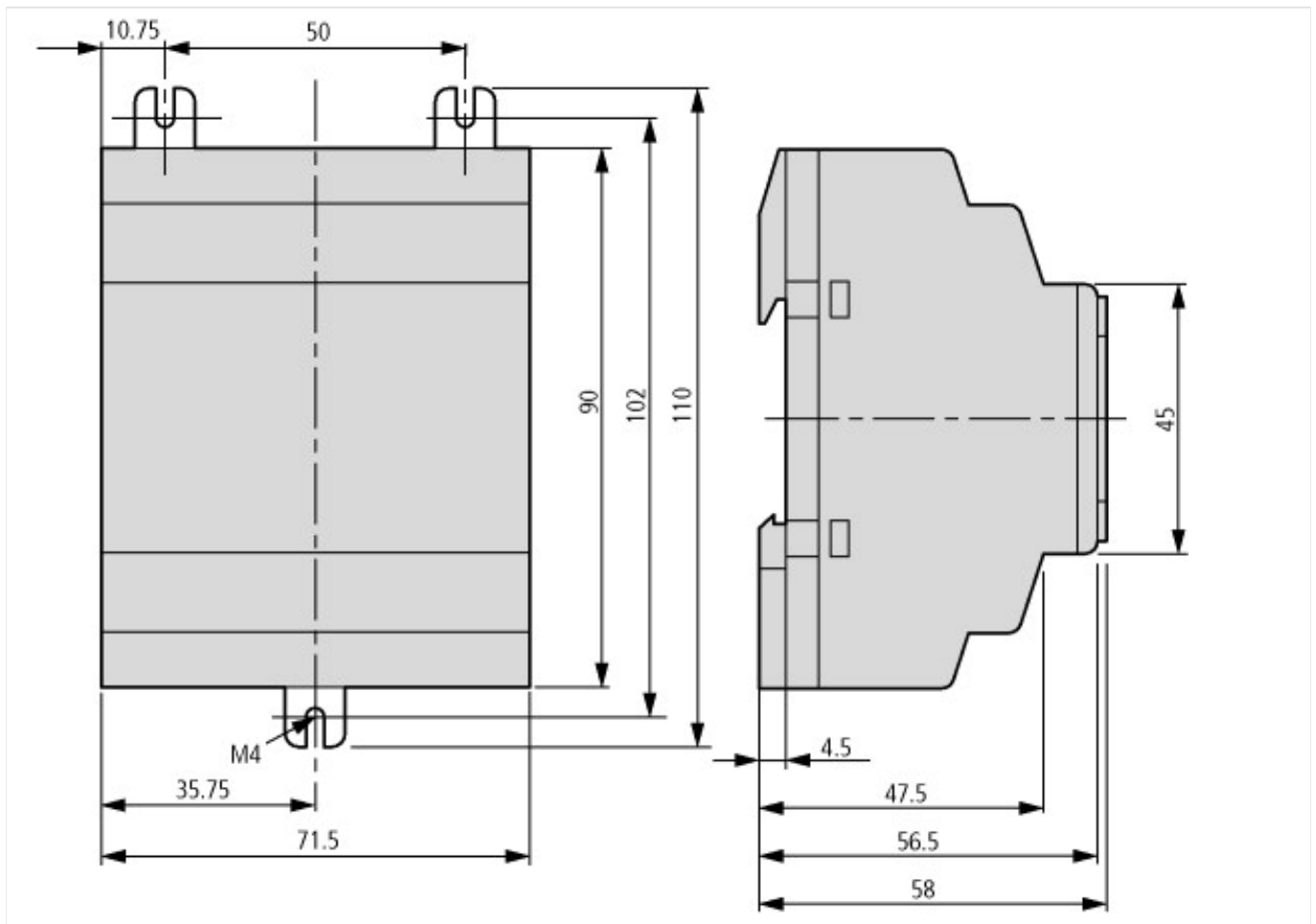
PLC's (EG000024) / Logic module (EC001417)

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	10.2 - 15.6
Voltage type of supply voltage		DC
Switching current	A	8
Number of analogue inputs		2
Number of analogue outputs		0
Number of digital inputs		8
Number of digital outputs		4
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		No
Safety at Work		
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		Yes
Degree of protection (IP)		IP20
Basic device		Yes
Expandable		No
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	72
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-ccf99091cace