DATASHEET - EASY820-DC-RC



Control relay, 24 V DC, 12DI(4AI), 6DO relays, 1AO, display, time, expandable, easyNet $\,$



Part no. EASY820-DC-RC Catalog No. 256271

EL-Nummer (Norway)

0004520965

Delivery program

	easy800 (expandable, easyNet)
	Expandable: Digital/analog inputs/outputs and AS-Interface, PROFIBUS-DP, CANopen®, DeviceNet bus systems Bus system easyNet on board customized laser inscription or delivery with user program possible with EASY-COMBINATION-* product (article No. 2010781)
	12
	4
Number	7
	#
	#
	Expandable Networkable (easyNet)
	24 V DC
	EASY-SOFT-PRO
	Number

Technical data

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^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
LCD display (clearly legible)		°C	0 - 55
Storage	9	°C	In accordance with IEC 60068-2-1, -2, -14 -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)			IP20
Vibrations		Hz	In accordance with IEC 60068-2-6 constant amplitude 0.15 mm: 10 - 57 constant acceleration 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

Electromagnetic compatibility (EMC) III/2 Overvoltage category/pollution degree Electrostatic discharge (ESD) according to IEC EN 61000-4-2 applied standard Air discharge kV 8 kV Contact discharge Electromagnetic fields (RFI) to IEC EN 61000-4-3 0.8 - 1.0 GHz: 10 V/m 1.4 - 2 GHz: 3 2.0 - 2.7 GHz: 1 Radio interference suppression EN 55011 Class B kV according to IEC/EN 61000-4-4 Burst according to IEC/EN 61000-4-5 power pulses (Surge) 1 kV (supply cables, symmetrical) ٧ Immunity to line-conducted interference to (IEC/EN 61000-4-6) 10 **Insulation resistance** Clearance in air and creepage distances EN 50178, UL 508, CSA C22.2, No. 142 Insulation resistance EN 50178 Back-up of real-time clock 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 \pm 5 s/day (\pm 0.5 h/year) are possible Repetition accuracy of timing relays Accuracy of timing relays (of values) % ± 0.02 Resolution Range "S" 5 ms Range "M:S" s Range "H:M" min **Retentive memory** Write cycles of the retentive memory 10¹² (read/write cycles) **Power supply** Ue ٧ 24 DC (-15/+20%) Rated operational voltage Ue 20.4 - 28.8 V DC Permissible range Residual ripple % ≦ 5 Siemens MPI, (optional) yes Input current 140 mA at U_e Voltage dips ≤ In accordance with IEC 61131-2 ms ≤ 20 Fuse ≥ 1A (T) Α Power loss Р W Normally 3.4 **Digital inputs 24 V DC** Number 12 Inputs can be used as analog inputs 4 (17, 18, 111, 112) 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 Ue V DC Rated operational voltage 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 mΑ I1 - I6, I9, I10: 3.3 (at 24 V DC) 17, 18, 111, 112: 2.2 (at 24 V DC) Deceleration time 20 (0 -> 1/1 -> 0, Debounce ON) ms

normally 0.025 (0 -> 1/1 -> 0, Debounce OFF, 11 - 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)
-	1111	(to (unsineraeu)
Frequency counter		4/4 (0.10.14)
Number		4 (11, 12, 13, 14)
Counter frequency	kHz	≦5
Pulse shape		Square
Pulse pause ratio		1:1
Cable length	m	≦ 20 (screened)
Incremental counter		
Number of counter inputs		2 (11 + 12, 13 + 14)
Counter frequency	kHz	≦3
Pulse shape		Square
Signal offset		90°
Pulse pause ratio		1:1
Rapid counter inputs		
Number		4 (11, 12, 13, 14)
Cable length	m	≤ 20 (screened)
Counter frequency	kHz	≦5
Pulse shape		Square
Pulse pause ratio		1:1
Digital inputs 24 V DC		
Status Display		LCD-Display
Analog inputs		
Number		4 (17, 18, 111, 112)
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
Analog outputs		
Number		1
Potential isolation		from power supply: no
		To the digital inputs: no From the digital outputs: yes
		to interface/memory card: yes to easyNet: yes
		to easyNet: yes to easyLink: yes
Output type		DC voltage
Signal range		0-10 V DC
Max. output current	Α	0.01
Load resistance		1 kΩ
Overload and short-circuit protection		Yes
Resolution		0.01 V DC analog
		10 Bit (value 0 - 1023) digital
Recovery time	μs	100
Accuracy		
-25 °C - 55 °C	%	2
25°C	%	1
Conversion time, analog/digital	ms	each CPU cycle

Relay outputs

Number	Relay outputs			
Parallel switching of outgots for increased adquot Procession of an extout relay Permission closures P	Number			6
Protection of an output relay Personnal acidation Personnal acidation Personnal ac	Outputs in groups of			1
Petantial isolation Contractive supply responsibility impacts, year between digital impacts, year activated interpretation and productions of the proof of Mo1797-300 V AC interpretation and productions of Mo1797-300 V AC interpretations of Mo1797-300	Parallel switching of outputs for increased output			Not permissible
Caregory	Protection of an output relay			Miniature circuit-breaker B16 or fuse 8 A (slow)
Control cristal status Control cristal status Control cristal status A B B Recommended for local: 12 VAC/DC MA > 500 500 1 <td< td=""><td>Potential isolation</td><td></td><td></td><td>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</td></td<>	Potential isolation			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
Recommended for load: 12 V ACDCC	Lifespan, mechanical	Operations	x 10 ⁶	10
Recommended for load: 12 V AC/DC A 1 16	Contacts			
Short-circuit-proof cas o e 1, characteristic Bif at 200 A	Conventional thermal current (10 A UL)		Α	8
Short-circuit-proof-cos φ = 0.5 to 0.7, characteristic B10 at 500 A Kut dispulse withstand voltage U _{mp} of contact coil V _c	Recommended for load: 12 V AC/DC		mA	> 500
Rated impulse withstand voltage Umg of contact coil kV 6 Rated operational voltage Ug VAC 250 Placed insolation voltage VAC 250 Safe isolation according to EN 90178 VAC 300 between coil and contacts Making capacity AC-15, 250 V AC, 3, 4 (900 ops./h) Operations 300000 DC 13, L/R ≥ 150 ms, 24 V DC, 1 A (900 S/h) Operations 300000 Breaking capacity 200000 200000 AC-15, 250 V AC, 3 A (900 Ops./h) Operations 200000 DC 13, L/R ≥ 150 ms, 24 V DC, 1 A (500 S/h) Operations 200000 Fluorescent bull load 1600 V at 230/240 V AC Operations 250000 Fluorescent tamp load 0500 V at 115/20 V AC 250000 250000 Fluorescent tamp load 10 x S8 W at 230/240 V AC Operations 250000 250000 Fluorescent tamp load 10 x S8 W at 230/240 V AC, conventional, compensated Operations 250000 250000 Fluorescent tamp load 1 x S8 W at 230/240 V AC, conventional, compensated National proquency 10 250000 Mechanical operations X 10°	Short-circuit-proof cos ϕ = 1, characteristic B16 at 600 A		Α	16
Rated operational voltage	Short-circuit-proof cos ϕ = 0.5 to 0.7, characteristic B16 at 900 A		Α	16
Rated insulation voltage V AC Safe isolation according to EN 50178	Rated impulse withstand voltage U _{imp} of contact coil		kV	6
Rated insulation voltage V AC Safe isolation according to EN 50178	·	U _e	V AC	250
Safe isolation according to EN 50178 V AC 300 between coil and contacts Making capacity AC −15, 250 V AC, 3 A (500 ops./h) Operations 2000000 Breaking capacity 2000000 2000000 Breaking capacity 3000000 2000000 AC −15, 250 V AC, 3 A (500 ops./h) Operations 2000000 D1-12, UR ± 150 ms, 24 V DC, 1 A (500 S/h) Operations 2000000 Fluorescent lamp load 25000 25000 Fluorescent lamp load Phorescent lamp load 10 x 58 W at 230;240 V AC Operations 25000 Phorescent lamp load 1 x 58 W at 230;240 V AC, conventional, compensated Operations 25000 Switching frequency Mechanical operations 25000 Mechanical operations x 10 th 10 Switching frequency Hz 10 Mechanical operations x 10 th 10 Switching frequency Hz 1 Mechanical operations A 10 1 Switching frequency A 2 1 UL/CSA A 3 10 Usinterrupted current at 2			V AC	250
Making capacity AC−15, 259 V AC, 3 A (800 ops./h) Operations 3000000 DC-12, LR is 150 ms, 24 V DC, 1 A (500 S/h) Operations 3000000 Breaking capacity AC-15, 250 V AC, 3 A (600 Ops./h) Operations 3000000 DC-13, LR is 150 ms, 24 V DC, 1 A (500 S/h) Operations 2000000 Fluorescent bulb load Operations 25000 1000 W at 230/240 V AC Operations 25000 Fluorescent lamp load SW 8 230/240 V AC Operations 25000 Fluorescent lamp load 10 x 58 W at 230/240 V AC Operations 25000 With upstroam 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 X 10 ⁸ 10 McCanacid porations x 10 ⁸ 10 Switching frequency X 10 ⁸ 10 McSchool and porations X 10 ⁸ 2 UL/CSA Hz 2 Uninterrupted current at 240 V AC A A <td></td> <td></td> <td></td> <td>300 between coil and contact</td>				300 between coil and contact
AC-15, 290 V AC, 3 A (800 ops./h)	Making capacity			
DC-13 L PK s 150 ms, 24 V DC, 1 A (500 S/h) Operations 2000000		Operations		300000
Breaking capacity AC-15, 250 V AC, 3 A (680 Ops./h) Operations 300000 DC-13, UR ± 150 ms, 24 V DC, 1 A (500 S/h) Operations 200000 Filament bulb load 25000 25000 1000 W at ± 115/120 V AC Operations 25000 Fluorescent lamp load 1 x 58 W at ±230/240 V AC Operations 25000 With upstream electrical device Operations 25000 Pluorescent lamp load 1 x 58 W at ±230/240 V AC, conventional, compensated Operations 25000 Fluorescent lamp load 1 x 58 W at ±230/240 V AC, conventional, compensated Operations 25000 Switching frequency X 10 ⁶ 10 Mechanical operations X 10 ⁶ 10 Switching frequency Hz 10 Mechanical operations X 10 ⁶ 10 Switching frequency Hz 10 McCSA Hz 10 UCISA Hz 10 UCISA Uninterrupted current at ±4 V DC A 10 AC A 10 Max. rated operational voltage V A 3				200000
AC-15, 250 V AC, 3 A (800 Dps./hl Do-13, L/R ≤ 150 ms, 24 V DC, 1 A (590 S/hl) Operations Do-13, L/R ≤ 150 ms, 24 V DC, 1 A (590 S/hl) Operations Do-13 UR ≤ 150 ms, 24 V DC, 1 A (590 S/hl) Operations Do-13 UR ≥ 150 ms, 24 V DC, 1 A (590 S/hl) Operations Do-13 UR ≥ 150 Ms, 24 V DC Operations Do-13 UR ≥ 150 Ms, 24 V DC Operations Do-13 UR ≥ 150 Ms, 24 V DC Operations Do-13 UR ≥ 25000 Operations Do-13 UR ≥ 150 UR ≥ 1				
DC-13, UR ≤ 150 ms, 24 V DC, 1 A (500 S/h) Operations C50000		Operations		300000
Filament builb load 1000 W at 230/240 V AC 500 W at 115/120 V AC Filorescent lamp load Fluorescent lamp load 10 x 58 W at 230/240 V AC Mith upstream electrical device Uncompensated Fluorescent lamp load 1 x 58 W at 230/240 V AC Operations Pluorescent lamp load 1 x 58 W at 230/240 V AC Operations Operations Switching frequency Machanical operations Switching frequency Resistive load/lamp load Inductive load UncosA Uninterrupted current at 240 V AC Uninterrupted current at 240 V AC AC Control Circuit Rating Codes (utilization category) Max. rated operations v ac apacity 1 at B 300 DC Control Circuit Rating Codes (utilization category) Max. rated operational voltage Control Circuit Rating Codes (utilization category) Max. rated operational voltage Control Circuit Rating Codes (utilization category) Max. rated operational voltage Rated Operations Rated Operations Rated Operations Rating Codes (utilization category) Max. rated operational voltage Rated Operations Rated Operations voltage Rated Operational voltage V AC 300 Rated Operational voltage Rated				200000
Fluorescent lamp load Fluorescent lamp load Fluorescent lamp load 1 x 58 W at 230/240 V AC With upstream electrical device Operations		·		
Fluorescent lamp load Fluorescent lamp load 10 x 58 W at 230/240 V AC With upstream electrical device Operations Operatio	1000 W at 230/240 V AC	Operations		25000
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 Pluorescent lamp load 1 x 58 W at 230/240 V AC, conventional, compensated Pluorescent lamp load 1 x 58 W at 230/240 V AC, conventional, compensated Switching frequency Mechanical operations Switching frequency Mechanical operations Switching frequency Resistive load/lamp load Inductive load UL/CSA Uninterrupted current at 240 V AC 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 φ = 1 at B 300 Max. max. make/break cos φ ≠ capacity 1 at B 300 DC Control Circuit Rating Codes (utilization category) Max. rated operational voltage Control Circuit Rating Codes (utilization category) Max. rated operational voltage Control Circuit Rating Codes (utilization category) Max. rated operational voltage Control Circuit Rating Codes (utilization category) Max. rated operational voltage Control Circuit Rating Codes (utilization category) Max. rated operational voltage Control Circuit Rating Codes (utilization category) Max. rated operational voltage V DC Subject Pilot Duty R 300 Light Pilot Duty	500 W at 115/120 V AC			25000
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 Fluorescent lamp load 1 x 58 W at 230/240 V AC, conventional, compensated Switching frequency Mechanical operations x 10 ⁸ 10 Switching frequency Resistive load/lamp load Inductive load UU/CSA Uninterrupted current at 240 V AC Uninterrupted current at 240 V AC Control Circuit Rating Codes (utilization category) Max rated operational voltage max. make/break cos φ ≠ capacity 1 at B 300 DC Control Circuit Rating Codes (utilization category) Max rated operational voltage Max. rated operational voltage N DC Max. rated operational voltage N DC N DC	Fluorescent lamp load	·		
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 UU/CSA Uninterrupted current at 240 V AC Uninterrupted current at 24 V DC AC Control Circuit Rating Codes (utilization category) Max. rated operational voltage DC Control Circuit Rating Codes (utilization category) Max. rated operational voltage Control Circuit Rating Codes (utilization category) Max. rated operational voltage Control Circuit Rating Codes (utilization category) Max. rated operational voltage Control Circuit Rating Codes (utilization category) Max. rated operational voltage Control Circuit Rating Codes (utilization category) Max. rated operational voltage V DC S000 Max. thermal uninterrupted current at R 300 Max. make/break capacity at R 300				
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 φ = 1 at B 300 max. make/break cos φ ≠ capacity 1 at B 300 DC Control Circuit Rating Codes (utilization category) Max. rated operational voltage VAC Control Circuit Rating Codes (utilization category) Max. rated operational voltage VAC Control Circuit Rating Codes (utilization category) Max. rated operational voltage VAC S00 A 5 VA 3600/360 DC Control Circuit Rating Codes (utilization category) Max. rated operational voltage V DC S00 Max. thermal uninterrupted current at R 300 A 1 VAC S00 A 1	With upstream electrical device	Operations		25000
Switching frequency 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 ≠ 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 A 3600/360 DC R 300 Light Pilot Duty Max. rated operational voltage V DC 300 Max. rated operational voltage V DC 300 Max. rated operational voltage V DC 300 Max. thermal uninterrupted current at R 300 A 1 Max. make/break capacity at R 300 A 1 Max. make/break capacity at R 300 A 1		Operations		25000
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 ≠ capacity 1 at B 300 VA 3600/360 DC R 300 Light Pilot Duty Max. rated operational voltage V DC 300 Max. rated operational voltage V DC 300 Max. thermal uninterrupted current at R 300 A 1 Max. thermal uninterrupted current at R 300 A 1 Max. make/break capacity at R 300 VA 28/28	Fluorescent lamp load 1 x 58 W at 230/240 V AC, conventional, compensated	Operations		25000
Switching frequency Resistive load/lamp load Hz 2 Inductive load UI/CSA UI/INTERPRETATE AT 10 UI/CSA UININTERPRETATE AT 240 V AC UININTERPRETATE AT 240 V AC A 10 UININTERPRETATE AT 240 V DC A 8 AC Control Circuit Rating Codes (utilization category) Max. rated operational voltage Max. thermal continuous current cos φ = 1 at B 300 DC Control Circuit Rating Codes (utilization category) A 5 Max. make/break cos φ ≠ capacity 1 at B 300 A 5 Control Circuit Rating Codes (utilization category) A 3600/360 DC Control Circuit Rating Codes (utilization category) A 3600/360 DC Control Circuit Rating Codes (utilization category) A 300 A 1 Max. rated operational voltage A 1 Max. make/break capacity at R 300 A 1 Max. make/break capacity at R 300 VA 28/28	Switching frequency			
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Resistive load/lamp load Inductive load UL/CSA Uninterrupted current at 240 V AC Uninterrupted current at 240 V DC AC Control Circuit Rating Codes (utilization category) Max. rated operational voltage max. thermal continuous current cos φ = 1 at B 300 DC Control Circuit Rating Codes (utilization category) A 5 max. make/break cos φ ≠ capacity 1 at B 300 Control Circuit Rating Codes (utilization category) R 300 Light Pilot Duty R 300 Light Pilot Duty Max. rated operational voltage V DC Sonor R 300 Light Pilot Duty Max. rated operational voltage V DC Max. thermal uninterrupted current at R 300 Max. thermal uninterrupted current at R 300 Max. make/break capacity at R 300 VA 28/28	Switching frequency			10
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 φ = 1 at B 300 max. make/break cos φ ≠ capacity 1 at B 300 Control Circuit Rating Codes (utilization category) A 5 max. make/break cos φ ≠ capacity 1 at B 300 Control Circuit Rating Codes (utilization category) Max. rated operational voltage VAC 300 Control Circuit Rating Codes (utilization category) 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				
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 V AC Max. thermal continuous current cos φ = 1 at B 300 max. thermal continuous current cos φ ≠ capacity 1 at B 300 VA Control Circuit Rating Codes (utilization category) R 300/360 CC Control Circuit Rating Codes (utilization category) Max. rated operational voltage V DC ASON SON Max. rated operational voltage V DC Max. thermal uninterrupted current at R 300 A 1 Max. make/break capacity at R 300 VA 28/28				
Uninterrupted current at 240 V AC Uninterrupted current at 24 V DC AC Control Circuit Rating Codes (utilization category) Max. rated operational voltage WAC Max. make/break cos φ ≠ capacity 1 at B 300 Control Circuit Rating Codes (utilization category) Max. rated operational voltage VAC 300 VA 3600/360 VA 3600/360 Control Circuit Rating Codes (utilization category) 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				
Uninterrupted current at 24 V DC AC Control Circuit Rating Codes (utilization category) Max. rated operational voltage wax. thermal continuous current cos φ = 1 at B 300 max. make/break cos φ ≠ capacity 1 at B 300 Control Circuit Rating Codes (utilization category) Max. rated operational voltage Control Circuit Rating Codes (utilization category) Max. rated operational voltage V DC Max. thermal uninterrupted current at R 300 A 1 Max. make/break capacity at R 300 VA 28/28			A	10
AC Control Circuit Rating Codes (utilization category) Max. rated operational voltage V AC 300 max. thermal continuous current cos φ = 1 at B 300 Max. make/break cos φ ≠ capacity 1 at B 300 Control Circuit Rating Codes (utilization category) Max. rated operational voltage V DC Max. thermal uninterrupted current at R 300 Max. thermal uninterrupted current at R 300 Max. make/break capacity at R 300 VA 28/28				
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 ≠ capacity 1 at B 300 VA 3600/360 DC R 300 Light Pilot Duty 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				
Max. rated operational voltageV AC300max. thermal continuous current cos φ = 1 at B 300A5max. make/break cos φ ≠ capacity 1 at B 300VA3600/360DCControl Circuit Rating Codes (utilization category)R 300 Light Pilot DutyMax. rated operational voltageV DC300Max. thermal uninterrupted current at R 300A1Max. make/break capacity at R 300VA28/28				B 300 Light Pilot Duty
max. thermal continuous current cos φ = 1 at B 300 max. make/break cos φ ≠ capacity 1 at B 300 Control Circuit Rating Codes (utilization category) Max. rated operational voltage Vau Vau Sou Light Pilot Duty Vau Max. thermal uninterrupted current at R 300 A 1 Max. make/break capacity at R 300 VA 28/28			V AC	
max. make/break cos φ ≠ capacity 1 at B 300 DC Control Circuit Rating Codes (utilization category) Max. rated operational voltage V DC Max. thermal uninterrupted current at R 300 Max. make/break capacity at R 300 VA 28/28				
Control Circuit Rating Codes (utilization category) 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				
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				
Max. thermal uninterrupted current at R 300 A 1 Max. make/break capacity at R 300 VA 28/28	Control Circuit Rating Codes (utilization category)			R 300 Light Pilot Duty
Max. make/break capacity at R 300 VA 28/28	Max. rated operational voltage		V DC	300
	Max. thermal uninterrupted current at R 300		Α	1
Supply voltage U _{Aux}			VA	28/28
	Supply voltage U _{Aux}			
Power loss P W 3.4	Power loss	Р	W	3.4

Network easyNet

Total out out of the control of the	
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)	yes
Terminal types	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)

Design verification as per IEC/EN 61439

echnical data for design verification			
Rated operational current for specified heat dissipation	In	Α	0
Heat dissipation per pole, current-dependent	P _{vid}	W	0
Equipment heat dissipation, current-dependent	P _{vid}	W	0
Static heat dissipation, non-current-dependent	P _{vs}	W	3.4
Heat dissipation capacity	P _{diss}	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	55
EC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures			Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat			Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal hea and fire due to internal electric effects	at		Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation			Meets the product standard's requirements.
10.2.5 Lifting			Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact			Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions			Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES			Meets the product standard's requirements.
10.4 Clearances and creepage distances			Meets the product standard's requirements.
10.5 Protection against electric shock			Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components			Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections			Is the panel builder's responsibility.
10.8 Connections for external conductors			Is the panel builder's responsibility.
10.9 Insulation properties			
10.9.2 Power-frequency electric strength			Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage			Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material			Is the panel builder's responsibility.
10.10 Temperature rise			The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating			Is the panel builder's responsibility.
10.12 Electromagnetic compatibility			Is the panel builder's responsibility.
10.13 Mechanical function			The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Technical data ETIM 7.0

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

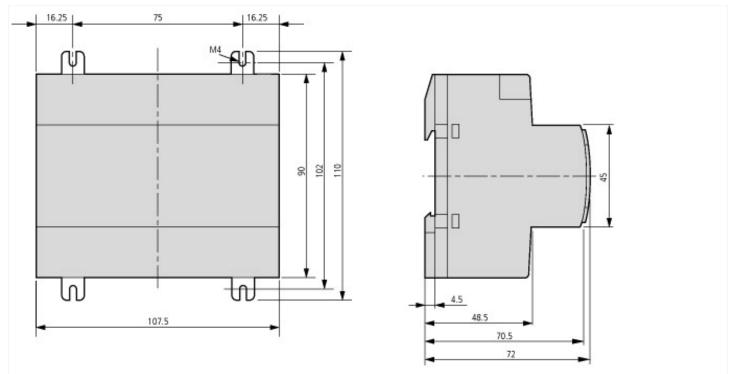
Electric engineering, automation, process control engineering / Control / Programmable logic co	ntrol (SPS)) / Logic module (ecl@ss10.0.1-27-24-22-16 [AKE539014])
Supply voltage AC 50 Hz	V	0 - 0
Supply voltage AC 60 Hz	V	0 - 0
Supply voltage DC	V	20.4 - 28.8
Voltage type of supply voltage		DC
Voltage type of supply voltage		DC
Switching current	Α	8
Number of analogue inputs		4
Number of analogue outputs		1
Number of digital inputs		12
Number of digital outputs		6
With relay output		Yes
Number of HW-interfaces industrial Ethernet		0
Number of 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		3
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 No
Supporting protocol for SUCONET		No No
Supporting protocol for LON		No No
Supporting protocol for PROFINET IO Supporting protocol for PROFINET CBA		No No
Supporting protocol for SERCOS		No No
Supporting protocol for Foundation Fieldbus		No
Supporting protocol for EtherNet/IP		No
Supporting protocol for EtherNeyTP 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		Yes
Radio standard Bluetooth		No
Radio standard WLAN 802.11		No
Radio standard GPRS		No
Radio standard GSM		No
Radio standard UMTS		No
10 link master		No
Redundancy		No
With display		Yes
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
Suitable for safety functions		No
Category according to EN 954-1		None
SIL according to IEC 61508		None
Performance level acc. EN ISO 13849-1		None
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	107.5
Height	mm	90
Depth	mm	72

Approvals

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: -

Dimensions



Additional product information (links)

Instruction leaflet "easy control relays" IL05013	3012Z (AWA2528-1979)
Instruction leaflet "easy control relays" IL05013012Z (AWA2528-1979)	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05013012Z2010_11.pdf
Instruction leaflet "easy control relays" IL05013012Z (AWA2528-1979)	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05013012Z2018_02.pdf

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Manual "easy800 control relays" MN049020012	Z (AWB2528-1423)
Handbuch "Steuerrelais easy800" MN04902001Z (AWB2528-1423) - Deutsch	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04902001Z_DE.pdf
Manual "easy800 control relays" MN04902001Z (AWB2528-1423) - English	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04902001Z_EN.pdf
f1=1454&f2=1179;Labeleditor	http://applications.eaton.eu/sdlc?LX=11&