DATASHEET - EASY820-DC-RC



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



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

EL-Nummer (Norway)

4520965

Delivery program

Don'tory program		
Basic function		easy800 (expandable, easyNet)
Description		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)
Inputs		
Digital		12
of which can be used as analog		4
Outputs		
Quantity of outputs		Relays: 6 Relays: 6; analog: 1
Outputs	Number	7
Additional features		
Real time clock		#
Display & keypad		#
Expansions		Expandable Networkable (easyNet)
Supply voltage		24 V DC
Software		EASY-SOFT-PRO

Technical data

recimical data			
General			
Standards			EN 55011, EN 55022, IEC/EN 61000-4, IEC 60068-2-6, IEC 60068-2-27
Approvals			CSA UL EAC
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	0.8 x 3.5
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

Free fall, pickaged (IECEN 80088-2-32) Munuting position Electromagnetic compatibility (EMC) Derivoltage estageny/pollution degree Electrostatic discharge (ESD) applied standard Air discharge Contact discharge Electromagnetic fields (RF) to IECEN 51000-4-2 Air discharge Electromagnetic fields (RF) to IECEN 51000-4-3 Air discharge Electromagnetic fields (RF) to IECEN 51000-4-3 Air discharge Electromagnetic fields (RF) to IECEN 51000-4-3 Bust Electromagnetic fields (RF) to IECEN 51000-4-3 Electromagnetic fields (RF) to I	Drop to IEC/EN 60068-2-31	Drop height	mm	50
Manufactor consistation (PMC)	•	2.0p.::0.g.::		
December of contage (coloning retains)				vertical of Horizontal
April 2 1997				111/2
April 2 1997	Electrostatic discharge (ESD)			
Accoracy of real-time clock to impose				according to IEC EN 61000-4-2
Contract shorthurps			kV	
Section magnetic fields (SPI) to IEC R6 1000 4.3 2				
Final Property of the Start polition accurately to the carbon feed from 1900 4.4 according to ECEN 1900 4.5 according to ECEN 1900 4.4 according to ECEN 1900 4.8 acco	-			0.8 - 1.0 GHz: 10 1.4 - 2 GHz: 3
Final Property of the Start polition accurately to the carbon feed from 1900 4.4 according to ECEN 1900 4.5 according to ECEN 1900 4.4 according to ECEN 1900 4.8 acco	Radio interference suppression			EN 55011 Class B
			kV	according to IEC/EN 61000-4-4
Note	power pulses (Surge)			
Insulation resistance EN 50178, U 506, CSA C22_2, No. 142 EN 50178, U 506, CSA C22_2, No. 142 EN 50178	F (g-/			
Clearance in air and creepage distances Clear Cl	Immunity to line-conducted interference to (IEC/EN 61000-4-6)		V	10
Insulation resistance Back-up of real-time clock Back-up of real-time clock to inputs 1	Insulation resistance			
Back-up of real-time clock Back-up of real-time clock to inputs Back-up of timing relays Back-up of	Clearance in air and creepage distances			EN 50178, UL 508, CSA C22.2, No. 142
Back-up of real-time clock (**) Backup time hours with fully charged double layer capacitor (**) Service life (years) Accuracy of real-time clock to inputs ***Experiment of the policy of the p				EN 50178
Accuracy of real-time clock to inputs Accuracy of timing relays Accuracy of tim	Back-up of real-time clock			
Secretary of real-time clock to injusts	Back-up of real-time clock			
Repetition accuracy of timing relays				
Repetition accuracy of timing relays Accuracy of timing relays (of values) Resolution Re	Accuracy of real-time clock to inputs		s/day	typ. ± 2 (± 0.2 h/Year)
Accuracy of timing relays (of values) Resolution Renoge "S"				
Range "S" ms 5 Range "M.S" s 1 Range "H.M" mo 1 Retentive memory Write cycles of the retentive memory Power supply Rated operational voltage Ue V 24 DC (-15/420%) Residual ripple Siemens MPI, (optionall) yes 25 Fuse Moment (apple	Repetition accuracy of timing relays			
Range "S" ms 5 Range "H.M" s 1 Retentive memory s 10² (read/write cycles) Write cycles of the retentive memory Power supply Rated operational voltage Permissible range Ue V 24 DC (-15/-20%) Residual ripple % ≤ 5 Siemens MPI, (optional) % ≤ 5 Input current How The Act Ue Accordance with IEC 81131-2 Voltage dips ✓ In accordance with IEC 81131-2 ✓ 20 Fuse A ≥ 1ALT) Accordance with IEC 81131-2 ✓ 20 Fuse A № Normally 3-4 Accordance with IEC 81131-2 ✓ 20 Fuse A ≥ 1ALT) Accordance with IEC 81131-2 ✓ 20 Accordance with IEC 81131-2 ✓ 20 Fuse A ≥ 1ALT) Accordance with IEC 81131-2 ✓ 20 Accordance with	Accuracy of timing relays (of values)		%	± 0.02
Range "M.S" s 1 Range "H.M" min 1 Retentive memory Write cycles of the retentive memory Write cycles of the retentive memory Write cycles of the retentive memory Write cycles of the retentive memory Write cycles of the retentive memory Write cycles of the retentive memory Write cycles of the retentive memory Write cycles of the retentive memory Write cycles of the retentive memory Write cycles of the retentive memory Write cycles of the retentive memory Write cycles of the retentive memory Write cycles of the retentive memory Power supply Residual richards % 2 4 DC (-15/-20%) Wester Colspan="2">Write and the supply of the power loss of the retentive memory % \$ 1 A (T) Power loss of the suppl of	Resolution			
Range "HM" min 1 Retentive memory Write cycles of the retentive memory Power supply Power supply Rated operational voltage U ₀ V 24 DC (-15/±20%) Permissible range 204 - 28.8 V DC Power supply Residual ripple % ≤ 5 Siemens MPI, (optional) yes Power loss Input current 40 mA at U _e Power loss Power loss P M Normally 3.4 Digital inputs 24 V DC Power loss P Normally 3.4 Digital inputs 24 V DC Power loss as analog inputs P 12 12 Status Display 4(17, 18, 11, 112) Power loss as analog inputs P 12 12 Status Display Form power supply: no between digital inputs: no from the outputs: yes Power supply: no between digital inputs: no from the outputs: yes Rated operational voltage V DC Signal 0: 5 (11 - 16, 19, 110, 5 8 (17, 18, 111, 112) Signal 0: 5 (11 - 16, 19, 110, 5 8 (17, 18, 111, 112) Signal 0: 5 (11 - 16, 19, 110, 5 8 (17, 18, 111, 112) Input cur	Range "S"		ms	5
### Retentive memory Write cycles of the retentive memory 1012 (read/write cycles) Power supply Rated operational voltage Ue	Range "M:S"		s	1
Power supply Rated operational voltage U _e V 24 DC (-15/-20%) Permissible range U _e 20.4 - 28.8 V DC Residual ripple \$ 5 \$ Siemens MPI, (optional) yes Input current 140 mA at U _e Voltage dips \$ 1n accordance with IEC 61131-2 Fuse A ≥ 1A (T) Power loss P W Normally 3.4 Digital inputs 24 V DC 12 4 (17, I8, 111, 112) Input carrent as signal 1 4 (17, I8, 111, 112) Status Display 12 4 (17, I8, 111, 112) Potential isolation from power supply: no between digital inputs: no from the uptus: yes to interface/memory card: no to easyNet: yes Rated operational voltage V DC 24 Input voltage V DC Signal 0: ≤ 5 (1 - I6, I9, 110, ≤ 8 (17, I8, 111, 112) Input current at signal 1 mA 11 - I6, I9, 110: 3.3 (at 24 V DC)	Range "H:M" Retentive memory		min	1
Rated operational voltage Permissible range Residual ripple Residual ripple Siemens MPI, (optional) Voltage dips Voltage	Write cycles of the retentive memory			10 ¹² (read/write cycles)
Permissible range Ue 20.4 - 28.8 V DC Residual ripple 5 5 Siemens MPI, (optional) yes Input current 140 mA at Ue Voltage dips ≤ In accordance with IEC 61331-2 ≤ 20 Fuse A ≥ 1A (T) Power loss P W Normally 3.4 Digital inputs 24 V DC Number 12 4 (17, 18, 111, 112) Inputs can be used as analog inputs 12 4 (17, 18, 111, 112) Status Display 10D (LD) Explay 10D (LD) Explay Potential isolation Trom power supply: no between digital inputs: no from the outputs: yes to interface/memory card: no to easylvit: yes Rated operational voltage V DC 3 Signal 0: ≤ 5 (11 - 16, 19, 110, ≤ 8 (17, 18, 111, 112) Input current at signal 1 mA 11 - 16, 19, 110. ≤ 8 (17, 18, 111, 112)	Power supply			
Residual ripple Siemens MPI, (optional) Input current Voltage dips Fuse Fuse Fuse Power loss P W Normally 3.4 Fuse Inputs 24 V DC Inputs can be used as analog inputs Status Display Potential isolation Read operational voltage Read operational voltage Input current at signal 1 New Power loss Signal 0: \$ 5 (11 - 16, 19, 110, \$ 8 (17, 18, 111, 112) Signal 1: 2 15 (11 - 16, 19, 110, \$ 8 (17, 18, 111, 112) Input current at signal 1	Rated operational voltage	U _e	V	24 DC (-15/+20%)
Siemens MPI, (optional) Input current Voltage dips Fuse Fuse Power loss P W Normally 3.4 Digital inputs 24 V DC Number Inputs can be used as analog inputs Status Display Potential isolation Potential isolation Wes VDC VU Q VDC Signal 0: ≤ 5 (11 - 16, 19, 110, ≥ 8 (17, 18, 111, 112) Signal 1: ≥ 15 (11 - 16, 19, 110, ≥ 8 (17, 18, 111, 112) Signal 1: ≥ 15 (11 - 16, 19, 110, ≥ 8 (17, 18, 111, 112) Input current at signal 1 VDC VDC VDC VDC VDC Signal 0: ≤ 5 (11 - 16, 19, 110, ≥ 8 (17, 18, 111, 112) Signal 1: ≥ 15 (11 - 16, 19, 110, ≥ 8 (17, 18, 111, 112) Signal 1: ≥ 15 (11 - 16, 19, 110, ≥ 8 (17, 18, 111, 112) Input current at signal 1	Permissible range	U _e		20.4 - 28.8 V DC
Siemens MPI, (optional) Input current Voltage dips Fuse Fuse Power loss P W Normally 3.4 Digital inputs 24 V DC Number Inputs can be used as analog inputs Status Display Potential isolation Potential isolation Rated operational voltage Input voltage Input current at signal 1 Input current at signal 1 Voltage dips yes It a (In M at Ue It (In M	Residual ripple		%	≦5
Input current Voltage dips	Siemens MPI, (optional)			yes
Voltage dips Solidage dips				
Power loss Digital inputs 24 V DC Number Inputs can be used as analog inputs Status Display Potential isolation Potential isolation Potential operational voltage Rated operational voltage Input voltage Power loss Power loss Power loss Power loss A (17, 18, 111, 112) A (17, 18, 11, 112) A (17, 18, 111, 112) A (1			ms	≤ In accordance with IEC 61131-2
Power loss Digital inputs 24 V DC Number Inputs can be used as analog inputs Status Display Potential isolation Potential isolation Potential operational voltage Rated operational voltage Input voltage Power loss Power loss Power loss Power loss A (17, 18, 111, 112) A (17, 18, 11, 112) A (17, 18, 111, 112) A (1	Fuse		Α	≧ 1A (T)
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 Rated operational voltage Ue V DC Signal 0: ≤ 5 (11 - 16, 19, 110, ≤ 8 (17, 18, 111, 112) Input voltage wA 11 - 16, 19, 110, ≤ 3 (17, 18, 111, 112) Input current at signal 1 mA 11 - 16, 19, 110, ≤ 3 (at 24 V DC)		Р		
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 easyLink: no to easyLink: no to easyLink: no to grayNet: yes Rated operational voltage 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)				**
Status Display Potential isolation Potential isolation Rated operational voltage Input voltage Input current at signal 1 LCD-Display Incompower supply: no between digital inputs: no from the outputs: yes to interface/memory card: no to easyLink: no to easyNet: yes 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				12
Potential isolation 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 Input voltage V DC Signal 0: ≤ 5 (11 - 16, 19, 110, ≤ 8 (17, 18, 111, 112) Signal 1: ≥ 15 (11 - 16, 19, 110), ≥ 8 (17, 18, 111, 112) Input current at signal 1 Potential isolation From power supply: no between digital inputs: no from the outputs: yes to interface/memory card: no to easyNet: yes V DC Signal 0: ≤ 5 (11 - 16, 19, 110, ≤ 8 (17, 18, 111, 112) Signal 1: ≥ 15 (11 - 16, 19, 110), ≥ 8 (17, 18, 111, 112) Input current at signal 1	Inputs can be used as analog inputs			4 (17, 18, 111, 112)
Potential isolation 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 Input voltage V DC Signal 0: ≤ 5 (11 - 16, 19, 110, ≤ 8 (17, 18, 111, 112) Signal 1: ≥ 15 (11 - 16, 19, 110), ≥ 8 (17, 18, 111, 112) Input current at signal 1 Potential isolation From power supply: no between digital inputs: no from the outputs: yes to interface/memory card: no to easyNet: yes V DC Signal 0: ≤ 5 (11 - 16, 19, 110, ≤ 8 (17, 18, 111, 112) Signal 1: ≥ 15 (11 - 16, 19, 110), ≥ 8 (17, 18, 111, 112) Input current at signal 1	Status Display			LCD-Display
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)				from power supply: no between digital inputs: no from the outputs: yes to interface/memory card: no to easyLink: no
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)	Rated operational voltage	U _e	V DC	24
	Input voltage		V DC	
	Input current at signal 1		mA	

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 (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	≥ 20 (screened) ≤ 5
Pulse shape	NIIZ	Square
Pulse pause ratio Digital inputs 24 V AC		1:1
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
TICSOLUTION TO THE PROPERTY OF		0.01 V digital 10 Bit (value 0 - 1023)
Input impedance	kΩ	11.2
Accuracy of actual value		
two devices from series	%	± 3
Within a single device	%	± 2, (17, 18, 111, 112) ± 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 easyLink: yes
Output type		to interface/memory card: yes to easyNet: yes
Output type Signal range		to interface/memory card: yes to easyNet: yes to easyLink: yes
	A	to interface/memory card: yes to easyNet: yes to easyLink: yes DC voltage
Signal range	A	to interface/memory card: yes to easyNet: yes to easyLink: yes DC voltage 0-10 V DC
Signal range Max. output current	A	to interface/memory card: yes to easyNet: yes to easyLink: yes DC voltage 0-10 V DC 0.01
Signal range Max. output current Load resistance	А	to interface/memory card: yes to easyNet: yes to easyLink: yes DC voltage 0-10 V DC 0.01 1 kΩ
Signal range Max. output current Load resistance Overload and short-circuit protection	A	to interface/memory card: yes to easyNet: yes to easyLink: yes DC voltage 0-10 V DC 0.01 1 k\Omega Yes 0.01 V DC analog
Signal range Max. output current Load resistance Overload and short-circuit protection Resolution		to interface/memory card: yes to easyNet: yes to easyLink: yes DC voltage 0-10 V DC 0.01 1 k\Omega Yes 0.01 V DC analog 10 Bit (value 0 - 1023) digital

25°C		%	1
Conversion time, analog/digital		ms	each CPU cycle
Relay outputs		11110	
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 ⁶	10
Contacts			
Conventional thermal current (10 A UL)		Α	8
Recommended for load: 12 V AC/DC		mA	> 500
Short-circuit-proof $\cos \varphi = 1$, characteristic B16 at 600 A		Α	16
Short-circuit-proof $\cos \varphi = 0.5$ to 0.7, characteristic B16 at 900 A		Α	16
Rated impulse withstand voltage U _{imp} of contact coil		kV	6
Rated operational voltage	П	V AC	250
	U _e		
Rated insulation voltage	Ui	V AC	250
Safe isolation according to EN 50178		V AC	300 between coil and contact 300 between two contacts
Making capacity			
AC15, 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	Operations		23000
Fluorescent lamp load 10 x 58 W at 230/240 V AC			
	Onerations		25000
With upstream electrical device	Operations		25000
Uncompensated	Operations		25000
Fluorescent lamp load 1 x 58 W at 230/240 V AC, conventional, compensated Switching frequency	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		Α	10
Uninterrupted current at 24 V DC		Α	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		Α	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 DC	300
Max. thermal uninterrupted current at R 300		Α	1
Max. make/break capacity at R 300		VA	28/28

Supply voltage \mathbf{U}_{Aux}

Power loss	P	W	3.4
Network 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, 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

besign verification as per 120/214 01405			
Technical 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 heat and fire due to internal electric effects $ \frac{1}{2} \left(\frac{1}{2} \right) = \frac{1}{2} \left(\frac{1}{2} \right) \left($			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

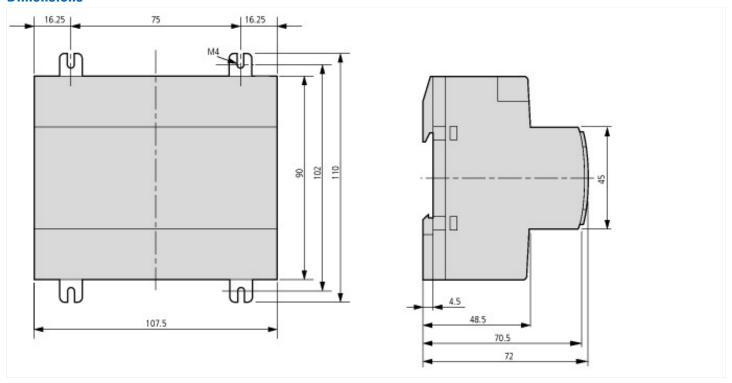
DLC!- /FC000004) / Lania mandala /FC001417)					
PLC's (EG000024) / Logic module (EC001417)					
Electric engineering, automation, process control engineering / Control / Programmable logic control (SPS) / Logic module (ecl@ss10.0.1-27-24-22-16 [AKE539014])					
Supply voltage AC 50 Hz	V	0 - 0			
Supply voltage AC 60 Hz	V	0 - 0			
Supply voltage DC	V	20.4 - 28.8			
Voltage type of supply voltage		DC			
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			
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			
		No			
Supporting protocol for Foundation Fieldbus Supporting protocol for EtherNet/IP		No			
		No			
Supporting protocol for AS-Interface Safety at Work					
Supporting protocol for DeviceNet Safety		No No			
Supporting protocol for INTERBUS-Safety		No No			
Supporting protocol for PROFIsafe		No			
Supporting protocol for SafetyBUS p		No			
Supporting protocol for other bus systems		Yes			
Radio standard Bluetooth		No No			
Radio standard WLAN 802.11		No No			
Radio standard GPRS		No			
Radio standard GSM		No No			
Radio standard UMTS		No			
IO 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

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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 Category Control No.	NRAQ
CSA File No.	012528
CSA Class No.	2252-01 + 2258-02
North America Certification	UL listed, CSA certified
Degree of Protection	IEC: IP20, UL/CSA Type: -

Dimensions



Assets (links)

Declaration of CE Conformity

00003063

Instruction Leaflets

IL05013012Z2018_02

Manuals

MN04902001Z_EN (English)

Additional product information (links)

Instruction leaflet "easy control relays" IL05013012Z (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					
Manual "easy800 control relays" MN04902001Z	Manual "easy800 control relays" MN04902001Z (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=1174&f3=1718;Download Software easySoft V6	http://applications.eaton.eu/sdlc?LX=11&					
f1=1454&f2=1179;Labeleditor	http://applications.eaton.eu/sdlc?LX=11&					