

I/O expansion, 24 V DC, 12DI, 6DO relays, easyLink



Powering Business Worldwide™

Part no.	EASY618-DC-RE
Catalog No.	232112
EL-Nummer (Norway)	4520993

Delivery program

Product range		Control relay easyRelay Multi-function-display MFD-Titan
Product range		Remote I/O systems Compact PLCs
Subrange		I/O expansions digital
Basic function		Expansions
Description		Can be used through easyLink
Function		Expansions EASY...
Accessories		I/O expansions, digital
Inputs		
Inputs expansion (number)		digital: 12
Supply voltage		24 V DC
For use with		easy700 easy800 EC4P MFD-CP8..

Technical data

General

Weight	kg	0.3
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Climatic environmental conditions

Operating ambient temperature	°C	-25 to +55 cold as per IEC 60068-2-1 heat as per IEC 60068-2-2
Condensation		Take appropriate measures to prevent condensation
Storage	°C	-40 - +70
relative humidity	%	5 - 95
Air pressure (operation)	hPa	795 - 1080

Ambient conditions, mechanical

Protection type (IEC/EN 60529, EN50178, VBG 4)		IP20
Vibrations (IEC/EN 60068-2-6)	Hz	
Constant amplitude 0.15 mm	Hz	10 - 57
Constant acceleration 2 g	Hz	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
Free fall, packaged (IEC/EN 60068-2-32)		m
Mounting position		Vertical or horizontal

Electromagnetic compatibility (EMC)

Overvoltage category/pollution degree		II/2
Electrostatic discharge (ESD)		
applied standard		IEC/EN 61000-4-2, Level 3
Air discharge	kV	8
Contact discharge	kV	6
Burst	kV	according to IEC/EN 61000-4-4 Supply cables: 2 Signal cables: 2
power pulses (Surge)		2 kV (supply cables, symmetrical, EASY...AC) 0.5 kV (supply cables, symmetrical, easy-DC) according to IEC/EN 61000-4-5
Immunity to line-conducted interference to (IEC/EN 61000-4-6)	V	10

Insulation resistance

Insulation resistance		EN 50178
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Power supply

Rated operational voltage	U _e	V	24 DC (-15/+20%)
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Permissible range	U _e		20.4 - 28.8 V DC
Residual ripple		%	≤ 5
Input current			140 mA at U _e
Voltage dips		ms	≤ 10
Heat dissipation	P		3.4 W

Digital inputs 24 V DC

Number			12
Status Display			LCD-Display
Potential isolation			from the outputs: yes
Rated operational voltage	U _e	V DC	24
Input voltage		V DC	< 5 (I1 - I12, R1 - R12) at signal "0"
Input current on 1 signal			
Input current at signal 1		mA	3.3 (R1 to R6 (R12))
Deceleration time		ms	20 (from "0" to "1", debounce ON) Normally 0.25 (R1 - R12) (from "0" to "1", debounce OFF) 20 (from "1" to "0", debounce ON)
Cable length		m	100 (unshielded)

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)
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
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	Operations		25000
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 $\cos \varphi = 1$ 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

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	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
IEC/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			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 8.0

Programmable logic controllers PLC (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	A	8
Number of analogue inputs		0

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 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
Radio standard Bluetooth	No
Radio standard Wi-Fi 802.11	No
Radio standard GPRS	No
Radio standard GSM	No
Radio standard UMTS	No
IO link master	No
Redundancy	No
With display	No
Degree of protection (IP)	IP20
Basic device	No
Expandable	No
Expansion device	Yes
With time switch clock	No
Rail mounting possible	Yes
Wall mounting/direct mounting	Yes
Front built-in possible	No
Rack-assembly possible	No
Suitable for safety functions	No

SIL according to IEC 61508		None
Performance level according to 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	108
Height	mm	90
Depth	mm	58