DATASHEET - EASY-E4-DC-8TE1P



 $\mbox{I/O}$ expansion, For use with easy E4, 24 V DC, Inputs/Outputs expansion (number) digital: 4, Push-In



Part no. EASY-E4-DC-8TE1P 197512

Product name	Eaton Moeller® series EASY I/O expansion
Part no.	EASY-E4-DC-8TE1P
EAN	4015081940905
Product Length/Depth	58 millimetre
Product height	90 millimetre
Product width	36 millimetre
Product weight	0.1 kilogram
Compliances	CE
Certifications	IEC 60068-2-6 UL Listed EN 61010 IEC/EN 61000-6-2 IEC/EN 61000-4-2 DNV GL IEC/EN 61000-6-3 UL File No.: E205091 UL Category Control No.: NRAQ, NRAQ7 IEC 60068-2-30 IEC/EN 61131-2 IEC 60068-2-27 EN 50178 CE UL hazardous location group A (acetylene) UL hazardous location class I UL hazardous location group D (propane) UL hazardous location group D (propane) UL hazardous location group D (propane) UL hazardous location group C (ethylene)
Product Tradename	EASY
Product Type	I/O expansion
Product Sub Type	None
eatures & Functions	
Features	Parallel connection of transistor outputs with resistive load, inductive load with external suppressor circuit, combination within a group - Group 1 Q1 to Q4
Functions	Thermal cutout
eneral information	
Degree of protection	IP20
Insulation resistance	According to EN 50178, EN 61010-2-201, UL61010-2-201, CSA-C22.2 NO. 61010-2-2
Mounting method	Rail mounting possible
Operating frequency	Dependent on the cycle time of the basic device
Overvoltage category	III
Pollution degree	2
Product category	Control relays easyE4
Protocol	MODBUS
Residual current	0.1 mA (on signal "1" per channel)
Residual ripple	5 % (transistor outputs) ≤ 5 %
Software	EASYSOFT-SWLIC/easySoft7
Туре	easyE4 extension
Used with	easyE4
Voltage type	DC
mbient conditions, mechanical	
Drop and topple	50 mm Drop height, Drop to IEC/EN 60068-2-31
Height of fall (IEC/EN 60068-2-32) - max	0.3 m
Mounting position	Horizontal

	Vertical
Shock resistance	15 g, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 11 ms, 1 Impacts
Vibration resistance	57 - 150 Hz, 2 g constant acceleration 10 - 57 Hz, 0.15 mm constant amplitude According to IEC/EN 60068-2-6
Climatic environmental conditions	
Air pressure	795 - 1080 hPa (operation)
Ambient operating temperature - min	-25 °C
Ambient operating temperature - max	55 °C
Ambient storage temperature - min	-40 °C
Ambient storage temperature - max	70 °C
Environmental conditions	Condensation: prevent with appropriate measures Clearance in air and creepage distances according to EN 50178, EN 61010-2-201, UL61010-2-201, CSA-C22.2 NO. 61010-2-201
Relative humidity	5 - 95 % (IEC 60068-2-30, IEC 60068-2-78)
Electro magnetic compatibility	
Air discharge	8 kV
Burst impulse	2 kV, Signal cable 2 kV, Supply cable According to IEC/EN 61000-4-4
Contact discharge	6 kV
Electromagnetic fields	1 V/m at 2 - 2.7 GHz (according to IEC EN 61000-4-3) 10 V/m at 0.08 - 1.0 GHz (according to IEC EN 61000-4-3) 3 V/m at 1.4 - 2 GHz (according to IEC EN 61000-4-3)
Immunity to line-conducted interference	10 V (according to IEC/EN 61000-4-6)
Radio interference class	Class B (EN 61000-6-3)
Surge rating	0.5 kV, Supply cables, symmetrical, EASYDC, power pulses (Surge), EMC 1 kV, Supply cables, asymmetrical, power pulses (Surge), EMC According to IEC/EN 61000-4-5 Level 4
Voltage dips	≤ 10 ms, Bridging voltage dips
Terminal capacities	
Terminal capacity	0.2 - 2.5 mm ² (22 - 12 AWG), flexible with ferrule
Electrical rating	
Conventional thermal current ith of auxiliary contacts (1-pole, open)	0.5 A
Power consumption	1 W
Power loss	1 W
Rated operational current (Ie) Rated operational voltage	Max. 0.5 A at signal "1" DC per channel 20.4 - 28.8 V DC 20.4 - 28.8 V DC (Transistor outputs) 24 V DC (-15 %/+ 20 % - power supply) 24 V DC (transistor outputs) 24 V DC (digital inputs)
Supply voltage at AC, 50 Hz - min	0 V AC
Supply voltage at AC, 50 Hz - max	0 V AC
Supply voltage at DC - min	20.4 V DC
Supply voltage at DC - max	28.8 V DC
Short-circuit rating	
Short-circuit current	6.8 A, Transistor outputs
Short-circuit protection	≥ 1A (T), Fuse, Power supply Yes, electronic (Q1 - Q4), Transistor outputs
Short-circuit tripping current	$0.7 \le le \le 1.7$ per output, For Ra ≤ 10 m Ω , Depending on number of active channels and their load, Transistor outputs
Communication	Durk in to 1.1
Connection type	Push in terminals
Cable Cable length	100 m unggrooped Digital inputs 13 V DC
Cable length	100 m, unscreened, Digital inputs 12 V DC 100 m, unscreened, Digital inputs 24 V AC
Input/Output	
Delay time	20 ms, Digital Inputs 12 V DC, Delay time from 0 to 1, Debounce ON 20 ms, Digital Inputs 12 V DC, Delay time from 1 to 0, Debounce ON 0.1 ms typ., Digital inputs 24 V DC (II - I4), Delay time from 0 to 1, Debounce OFF 0.2 ms typ., Digital inputs 24 V DC (II - I4), Delay time from 1 to 0, Debounce OFF

Explosion safety category for gas None Potential isolation Protection against polarity reversal Yes (Caution: A short circuit will result if 0 V or earth is applied to the outputs in the event that the supply voltage is connected to the wrong poles.) Explosion safety category for dust None		0.015 ms typ., Digital inputs 12 V DC (I1 - I8), Delay time from 1 to 0, Debounce OFF 0.015 ms typ., Digital inputs 12 V DC (I1 - I8), Delay time from 0 to 1, Debounce OFF
Signat Gr. 5 V DC (11 - 14, Digital imputs, 12 V DC) Number of inquist (signat) Number of ortunates (signat) Number of outquest (signat) Outquest continues (signat) Outquest (signat)	Input current	40 mA
Number of imputs (orgitals) Author of outputs (analog) Dutput continued or outputs (analog) Author of outputs (analog) Dutput voltage Current Output voltage Current Aux. 23 Vice states 0 per channel, translator outputs) Voltage Current Aux. 23 Vice states 0 per channel, translator outputs) Voltage Current Aux. 23 Vice states 0 per channel, translator outputs) Voltage Explosion safety category for gas None Protection agenst polarity reversal Explosion safety category for dust None Protection agenst polarity reversal Explosion safety category for dust None Protection agenst polarity reversal Explosion safety category for dust None Design verification Explosion capacity pfass Du W Heat dissipation capacity pfass Du W Heat dissipation capacity pfass Du W Static head dissipation, uner-current-dependent Pvid Du W Static head dissipation, one-current-dependent Pvid Du W Static head dissipation of thermal stability of enclosures Meets the product standard's requirements. 102.32 Verification of resistance of insulating materials to normal heat 102.33 Peasits of insul, must to abnormal heat/fire by internal elect effects Meets the product standard's requirements. 102.4 Recistance to ultra-violet (IUV) radiation Does not apply, since the entire svictic-paer needs to be evaluated. 102.6 Mechanical impact Does not apply, since the entire svictic-paer needs to be evaluated. 102.6 Mechanical impact Does not apply, since the entire svictic-paer needs to be evaluated. 102.6 Neer hand and recepped distances Meets the product standard's requirements. 102.6 Protection against electric shock Does not apply, since the entire svictic-paer needs to be evaluated. 102.7 Inscriptions In the panel builder's responsibility. 103.8 Peanles of protection of sovertinger needs to be evaluated. 104.9 Inscriptions In the panel builder's responsibility. 105.10 Tearnal exerting diverses and components 106.10 Tearnal exerting of encourses made of insulating material 107.10 Tearnal exerting div	Input voltage	
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Design verification	Protection against polarity reversal	Yes (Caution: A short circuit will result if 0 V or earth is applied to the outputs in the event that the supply voltage is connected to the wrong poles.)
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10.6 Incorporation of switching devices and components 10.7 Internal electrical circuits and connections 10.8 Connections for external conductors 10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function Does not apply, since the entire switchgear needs to be evaluated. Is the panel builder's responsibility. Is the panel builder's responsibility. Is the panel builder's responsibility. Is the panel builder is responsibility. Is the panel builder is responsibility. Is the panel builder's responsibility. Is the panel builder's responsibility. Is the panel builder's responsibility. In the panel builder's responsibility.	10.4 Clearances and creepage distances	Meets the product standard's requirements.
10.7 Internal electrical circuits and connections 10.8 Connections for external conductors 10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function Is the panel builder's responsibility. Is the panel builder's responsibility. Is the panel builder is responsibility. Is the panel builder's responsibility.	10.5 Protection against electric shock	Does not apply, since the entire switchgear needs to be evaluated.
10.8 Connections for external conductors 10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function Is the panel builder's responsibility. Is the panel builder's responsibility. The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. Is the panel builder's responsibility. Is the panel builder's responsibility. The device meets the requirements, provided the information in the instruction	10.6 Incorporation of switching devices and components	Does not apply, since the entire switchgear needs to be evaluated.
10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function Is the panel builder's responsibility. The device meets the requirements, provided the information in the instruction	10.7 Internal electrical circuits and connections	Is the panel builder's responsibility.
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10.12 Electromagnetic compatibility 10.13 Mechanical function Is the panel builder's responsibility. The device meets the requirements, provided the information in the instruction	10.10 Temperature rise	
10.13 Mechanical function The device meets the requirements, provided the information in the instruction	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	

Technical data ETIM 9.0

iccimical data ETIM 3.0				
Programmable logic controllers PLC (EG000024) / Logic module (EC001417)				
Electric engineering, automation, process control engineering / Control, Process Control System (PCS) / Programmable logic control (SPS) / Logic module (ecl@ss13-27-24-22-16 [AKE539019])				
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 (supply voltage)		DC		
Switching current	А	0.5		
Power consumption	W	1		

Number of hYM-interfaces estal TIY Number of hYM-interfaces USS Number of hYM-interfaces windes 0 Number of hYM-interfaces windes 0 Number of hYM-interfaces windes 0 Number of hYM-interfaces windes Ne Supporting protocof for EtherCAT Ne Supporting protocof for CAN Supporting protocof for Millies Supporting protocof for Millies Supporting protocof for Millies Supporting protocof for Dista-Highway Ne Supporting protocof for Dista-Highway Ne Supporting protocof for EtherCAT Ne Supporting protocof for EtherCAT	Municipal for a large franch	
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Number of MV-Averbace 18-22		
Number of NW-interfaces RS-425 0 Number of Wi-interfaces US-35 0 Number of Wi-interfaces US-36 No Supporting protect for EMPLAT No Supporting protect for CM-X No Supporting protect for DM-X No Supporting protect for PM-X No Supporting protect for PM-X No		
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Number of HW-interfaces wire lass 0 Number of HW-interfaces withor No Supporting protocol for EtherCAT No Supporting protocol for TDP/IP No Supporting protocol for TDP/IP No Supporting protocol for ETHERUS No Supporting protocol for EMPRIBUS No Supporting protocol for MRTERIUS No Supporting protocol for EMPRIBUS No Supporting protocol for MCMA No Supporting protocol for PROFINET GA No Supp	Number of HW-interfaces USB	0
Number of HW interfaces other 0 With opcial interface No Supporting praceal for EtherEAT No Supporting praceal for FDDPP No Supporting praceal for FDDPBUS No Supporting praceal for CAN No Supporting praceal for Deat-Highway No Supporting praceal for Deat-Highway No Supporting praceal for FDDEAT CERA No Supporting praceal for F	Number of HW-interfaces parallel	0
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Radio standard Bluetooth Radio standard WLAN 802.11 Radio standard GPRS Radio standard GRS Radio standard GRS Radio standard UMTS Rodio standard U	Supporting protocol for SafetyBUS p	No
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Radio standard GPRS Radio standard GSM Radio standard GSM Radio standard UMTS Redundancy With display Degree of protection (IP) Basic device Expansion device With time switch clock Rail mounting possible Wall mounting/direct mounting	Radio standard Bluetooth	No
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IO link master Redundancy With display Degree of protection (IP) Basic device Expandable Expansion device With time switch clock Rail mounting possible Wall mounting/direct mounting	Radio standard GSM	No
Redundancy With display Degree of protection (IP) Basic device Expandable Expansion device With time switch clock Rail mounting possible Wall mounting/direct mounting	Radio standard UMTS	No
With display Degree of protection (IP) Basic device Expandable Expansion device With time switch clock Rail mounting possible Wall mounting/direct mounting	10 link master	No
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Rail mounting possible Yes Wall mounting/direct mounting No	Expansion device	
Wall mounting/direct mounting No	With time switch clock	
	Rail mounting possible	
Front built-in possible No	Wall mounting/direct mounting	
	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
Certified for UL hazardous location class I		Yes
Certified for UL hazardous location class II		No
Certified for UL hazardous location class III		No
Certified for UL hazardous location division 1		No
Certified for UL hazardous location division 2		Yes
Certified for UL hazardous location group A (acetylene)		Yes
Certified for UL hazardous location group B (hydrogen)		No
Certified for UL hazardous location group C (ethylene)		Yes
Certified for UL hazardous location group D (propane)		Yes
Certified for UL hazardous location group E (metal dusts)		No
Certified for UL hazardous location group F (carbonaceous dusts)		No
Certified for UL hazardous location group G (non-conductive dusts)		No
Width	mm	36
Height	mm	90
Depth	mm	58