PRODUCT DATASHEET

ES-IO-01-M003

Industrial Motion Controller

EtherCAT Remote I/O | EtherCAT Remote I/O Series - ES-IO-01

Product Overview

Industrial Motion Controller with weight Approx. 70 g, digital inputs 8 digital inputs; PNP and digital outputs 8 digital outputs; PNP.

Key Specifications

PARAMETER	VALUE	UNIT
Weight	Approx. 70 g	
Digital inputs	8 digital inputs; PNP	
Digital outputs	8 digital outputs; PNP	
Dimensions	12 × 100 × 80mm	
Module type	Digital mixed I/O module	
CE compliance	CE conformity recorded; tested to EN IEC 61000-6-2:2019 and EN IEC 61000-6-4:2019	
Cooling Method	Natural convection cooling	
DC Supply Voltage	24	V DC
Electromagnetic compatibility	EMC immunity: Zone B, IEC 63313-2; ESD: 8 kV air and 4 kV contact discharge, performance criterion A; surge: DC supply 0.5 kV CM and 0.5 kV DM, I/O and communication ports 1 kV CM, criterion A; EFT/burst: supply coupling 2 kV at 5 kHz and I/O/communication coupling 1 kV at 5 kHz, criterion A	

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
ELECTRICAL			
Input Impedance	6.8 k	Ω	
Maximum switching frequency	100 Hz with resistive load		
On resistance	Typical: 0.15 Ω; maximum: 0.3 Ω		
Switch-on delay	< 50 µs		
Status indicators - PR	Flashes after power-up and stays on when communication is connected		
Status indicators - ERR	Operating fault		
Status indicators - GREEN CHANNEL LEDS	Input or output active		
Output load - Resistive load	12 A/point		Per module: 48 W/module
Output load - Inductive load	6 W/point		Per module: 24 W/module
Output load - Lamp load	5 W/point		Per module: 20 W/module
Software filter time	Configurable		
Isolation	Yes		
DC Supply Voltage	24	V DC	
Output leakage current	10 µA maximum		
Protection Functions	Short-circuit and overcurrent protection		
Rated output voltage	24 VDC; allowable range 20.4-28.8 VDC		

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
ELECTRICAL		
Relay on state	MOSFET on	
Expansion-bus current consumption	135 mA at 5 VDC, room temperature	
Relay off state	MOSFET off	
Switch-off delay	< 50 µs	
Hot-swap support	Not supported	
Logic-high input threshold	15 V, 2 mA	
Logic-low input threshold	5 V, 0.8 mA	
MECHANICAL		
Weight	Approx. 70 g	
Mounting Orientation	DIN 35 mm rail mounting	
INTERFACES		
Digital outputs	8 digital outputs; PNP	
Digital inputs	8 digital inputs; PNP	
Programming software	IEC 61131-3 CODESYS programming software	
Input current	3.5 mA at 24 VDC	
ENVIRONMENTAL		
Cooling Method	Natural convection cooling	
Packaged drop test	Packaged free-fall: 5 drops from 1 m onto a concrete floor	
CE compliance	CE conformity recorded; tested to EN IEC 61000-6-2:2019 and EN IEC 61000-6-4:2019	

Technical Specifications

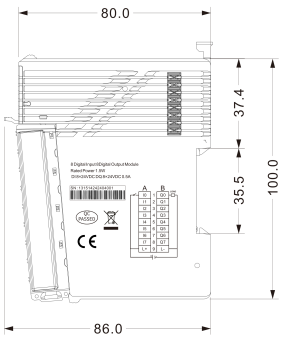
PARAMETER	SPECIFICATION	UNIT	NOTES
ENVIRONMENTAL			
Mechanical vibration and shock - Sinusoidal vibration	Random: 3.5 mm displacement; continuous: 1.75 mm displacement		5 < f < 8.4 Hz
	Random: 1.0 g; continuous: 0.5 g acceleration		8.4 < f < 150 Hz
Mechanical vibration and shock - Shock	Half-sine, 15 g, 11 ms, 6 times per axis		
Electromagnetic compatibility	EMC immunity: Zone B, IEC 63313-2; ESD: 8 kV air and 4 kV contact discharge, performance criterion A; surge: DC supply 0.5 kV CM and 0.5 kV DM, I/O and communication ports 1 kV CM, criterion A; EFT/burst: supply coupling 2 kV at 5 kHz and I/O/communication coupling 1 kV at 5 kHz, criterion A		
Operating climate conditions - Ambient temperature	-20 to +55	°C	An open, naturally ventilated installation
Operating climate conditions - Relative humidity	10-95%		Non-condensing
Operating climate conditions - Altitude	≤2,000 m		
Operating climate conditions - Pollution degree	2		
Storage climate conditions - Ambient temperature	-40 to +70	°C	
Storage climate conditions - Relative humidity	10-95%		Non-condensing
Storage climate conditions - Altitude	0-3,000 m		
SAFETY			
Ingress Protection Rating	IP20		
CONFIGURATION			
Module type	Digital mixed I/O module		
Dimensions	12 × 100 × 80mm		
ADDITIONAL SPECIFICATIONS			
Protection rating	IP20		

Dimensional & Integration Overview

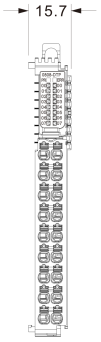
Mechanical Overview

PARAMETER	VALUE	UNIT
Weight	Approx. 70 g	
Mounting Orientation	DIN 35 mm rail mounting	
Dimensions	12 × 100 × 80mm	

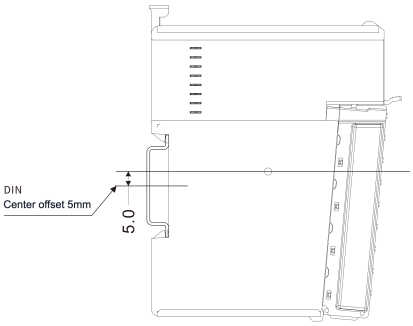
Dimensional Drawings



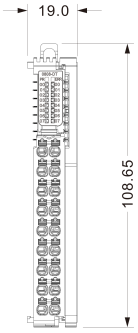
Mechanical View 1



Mechanical View 2



Mechanical View 3



Mechanical View 4

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Module Width	80.0 mm
	Module Height	100.0 mm
	Bottom Width	86.0 mm
	Upper Mounting Area Height	37.4 mm
	Lower Mounting Area Height	35.5 mm
Mechanical View 2	Module width	15.7 mm
	Module model number	0808-DTP
Mechanical View 3	DIN rail mounting identifier	DIN rail mounting position
	Center offset distance from DIN rail	5 mm downward offset from product center
	Offset dimension value	5.0 mm
Mechanical View 4	PR Indicator Label	PR
	ERR Indicator Label	ERR
	Module Overall Length	108.65 mm

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01 Specifications are subject to change without notice. Verify the current product configuration before final design release.

02 2D drawings, CAD files and integration documentation are controlled documents and are supplied separately on request.