PRODUCT DATASHEET

ES-IO-01-M002

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 outputs 16 digital outputs; PNP and dimensions 12 × 100 × 80mm.

Key Specifications

PARAMETER	VALUE	UNIT
Weight	Approx. 70 g	
Digital outputs	16 digital outputs; PNP	
Dimensions	12 × 100 × 80mm	
Module type	Digital output 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	
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	
Expansion-bus current consumption	135 mA at 5 VDC, room temperature	
Hot-swap support	Not supported	

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
ELECTRICAL			
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 LED	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
Isolation	Yes		
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		
Relay on state	MOSFET on		

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
ELECTRICAL		
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	
MECHANICAL		
Weight	Approx. 70 g	
Mounting Orientation	DIN 35 mm rail mounting	
INTERFACES		
Digital outputs	16 digital outputs; PNP	
Programming software	IEC 61131-3 CODESYS programming software	
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

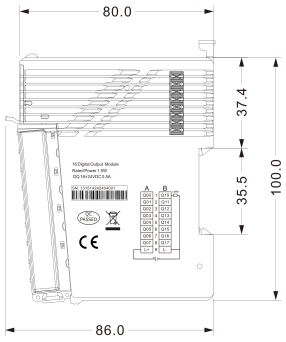
PARAMETER	SPECIFICATION	UNIT	NOTES
ENVIRONMENTAL			
Mechanical vibration and shock - Sinusoidal vibration	Random: 3.5 mm displacement; continuous: 1.75 mm displacement		5 < f < 8.4 Hz
	Random: 1.0 g; continuous: 0.5 g acceleration		8.4 < f < 150 Hz
Mechanical vibration and shock - Shock	Half-sine, 15 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 output module		
Dimensions	12 × 100 × 80mm		
ADDITIONAL SPECIFICATIONS			
Protection rating	IP20		

Dimensional & Integration Overview

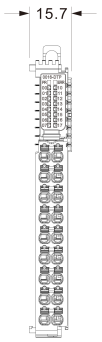
Mechanical Overview

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

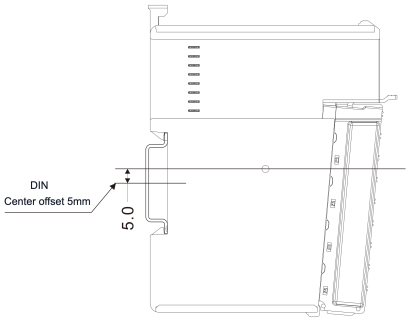
Dimensional Drawings



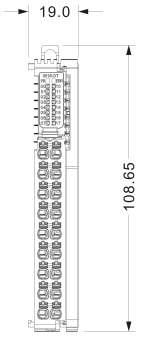
Mechanical View 1



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
	Module Depth	86.0 mm
	Upper Mounting Region Height	37.4 mm
	Middle Region Height	35.5 mm
Mechanical View 3	DIN rail mounting designation	DIN rail mounting
	Product center offset from DIN rail center	5mm offset downward
	Center offset dimension value	5.0mm
	DIN rail mounting slot symbols	Three mounting slot positions
Mechanical View 4	Module width	19.0 mm
	Total module length with cover	108.65 mm
	Mounting hole diameter	Φ3 mm
	Lower mounting hole diameter	Φ4 mm
	Product model designation	0016-DT
	Status indicator label	PR

View Product Online **Request Engineering Data** **Request a Quote**

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.