



> Electrical specifications

Items	Technical specifications			
<b>Dielectric withstand voltage</b>	AC1000V for 1 min, between power terminal and I/O terminal, between external terminal and shell			
<b>Noise resistance</b>	1500Vp-p or more, Noise width 1μs, 50ns (based on noise simulator), comply with (IEC61000-4-2/3/4/6)			
<b>Vibration resistance</b>	<b>Installation</b>	<b>Frequency (Hz)</b>	<b>Acceleration (m/s<sup>2</sup>)</b>	<b>Single amplitude (mm)</b>
	DIN rail mounting	10-57	-	0.035
		57-150	4.9	-
	10 times of testing in each direction (X-, Y-, and Z-axis directions) (Total: 80 min, each)			
<b>Insulation resistance</b>	50 MΩ or more using 500 V DC insulation resistance meter (Between all terminals and ground terminal)			
<b>IP protection level</b>	IP20			
<b>Working atmosphere</b>	Max. 50°C, free from excessive dust and corrosive gas			
<b>Working altitude</b>	2000m (80kPa)			
<b>Degree of pollution</b>	2, Normally there is only non-conductive pollution, but temporary conductivity caused by condensation should also be expected			

> Environment specifications

Classifications	Items	Working environment	Transport environment	Storage environment
<b>Environment parameter (IEC60721-3)</b>	<b>Temperature</b>	0~50°C (No freezing)	-40~75°C	-25~75°C
	<b>Humidity</b>	5-95%RH (No condensation)		
	<b>Impact (collision)</b>	Acceleration 150m2, action time 11ms, twice in each direction (X-, Y-, and Z-axis directions)		
	<b>Altitude/Atmosphere</b>	Max.2000m	Max.3000m (>70kPa)	

> High-speed input specifications

Items	Specifications
<b>Signal name</b>	High-speed input (DI0-DI15)
<b>Rated input voltage</b>	DC 24V (+20%~-15%, pulse ripple within 10%)
<b>Input type</b>	NPN, PNP
<b>Rated input current</b>	3.65mA
<b>ON current</b>	>4.14mA
<b>OFF current</b>	<3.88mA
<b>Input impedance</b>	1.5KΩ
<b>Max. input frequency</b>	100kHz (Version 2.XX.XX) 200kHz (Version 3.XX.XX or more)
<b>2-phase input worst duty ratio</b>	(40%:60%) ~ (60%:40%)
<b>Common method</b>	Every 8 points share a common terminal.

> High-speed output specifications

Items	Specification
<b>Signal name</b>	Output (DO0-DO15)
<b>Output polarity</b>	NPN
<b>Control circuit voltage</b>	DC 5~24V
<b>Rated load current</b>	250mA
<b>Max. voltage drop at power-ON</b>	0.05V
<b>Leakage current at power-OFF</b>	<0.1mA
<b>Output frequency</b>	100KHz (Version 2.XX.XX) 200KHz (Version 3.XX.XX or more)
<b>Common method</b>	Every 8 points share a common terminal.

> Power specifications

Items	Power voltage	Voltage fluctuation range	Input power	Undervoltage level	Output voltage	Voltage fluctuation	Output power
<b>Specifications</b>	DC 24V	-15%~20%	36W	19V	12V	±5%	16W

> Performance specifications

Items	Specifications			
<b>Programming</b>	<b>Program capacity</b>	16MBytes		
	<b>I-area (%I)</b>	128KBytes		
	<b>Q-area (%Q)</b>	128KBytes		
	<b>M-area (%M)</b>	512KBytes		
	<b>Power-failure retention area</b>	800KBytes		
	<b>Other variables</b>	Not defined		
<b>Configuration</b>	<b>Number of extension modules</b>	<b>Digital module</b>	Calculated based on current consumption	
		<b>Analog module</b>		
		<b>External power supply</b>		12V/16W
<b>EtherCAT</b>	<b>Communication standard</b>	IEC 61158 Type12		
	<b>Physical layer</b>	100BASE-TX		
	<b>Transmission speed</b>	100Mbps (100Base-TX)		
	<b>Duplex mode</b>	Full duplex		
	<b>Topology</b>	Linear, bus and star-type		
	<b>Transmission medium</b>	Cat.5E twisted pair cables		
	<b>Maximum transmission distance between nodes</b>	100m		
	<b>Max. process data</b>	Input: 5,736 bytes Output: 5,736 bytes (but the max. number of frames of process data is 4)		
	<b>Communication cycle</b>	Mini.1ms		
	<b>CANOpen master</b>	<b>Link layer</b>	CAN2.0A	
<b>Terminal resistor</b>		Built-in 120Ω. Do not support disconnection		
<b>Support baud rate bps</b>		20K,50K,100K,125K,250K,500K,800K和1M		
<b>Transmission medium</b>		Cat.5E twisted pair cables		
<b>Max. communication distance</b>		2500 m (20Kbit/s)		
<b>Maximum number of the slaves</b>		32		
	<b>Communication cycle</b>	Mini.1ms		
<b>Serial ports</b>	<b>Physical layer</b>	<b>COM1, COM2</b>	RS485	
		<b>COM3</b>	RS232	
	<b>Terminal resistor</b>	<b>COM1, COM2</b>	Built-in 120Ω, support DIP switch	
	<b>Baud rate bps</b>	4800~115200		
	<b>Max. communication distance</b>	<b>COM1, COM2</b>	500m	
		<b>COM3</b>	15m	
<b>Maximum number of the slaves</b>	<b>COM1, COM2</b>	32		
	<b>COM3</b>	1		
<b>Transmission medium</b>	Cat.5E twisted pair cables			