

MCR-DX16-N

Datasheet

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1 Product Overview

1.1 Product introduction

The MCR7 series expansion module is an IO module, integrating advanced industry technologies and components, suitable for MCR7 series PLCs.

1.2 Product Appearance



2 Main Information

Range of Product	MCR-DX16-N
Product Or Component Type	Digital I/O mixed expansion module
Discrete Input Number	8
Discrete Input Type	Source/Sink (NPN/PNP)
Discrete Output Number	8
Discrete Output Type	Sink (NPN)

3 Detail Specification

3.1 Module Specification – Digital Input

Input Characteristic		Parameter
Rated Voltage		24V DC
Input Range		0~28.8V DC
Rated Current		7mA
Peak	Voltage	30V
	Current	9mA
State	Voltage in state 1	>15V
	Voltage in state 0	<5V
	Current in state 1	>2.5mA
	Current in state 0	<1.0mA
Isolation	-	Optocoupler
Input impedance		3.3k Ω
Compatibility		Compatible with 2/3 wire sensors
Input type		Source/Sink
Cable length and type		Max 100m shielded cable, 50m unshielded cable
Protection (overvoltage)		Maximum 30V, limited to 1 hour per day frequency
Wiring terminal		Removable terminal block

3.2 Module Specification – Digital Output

Output Characteristic	Parameter
Output type	NPN
Rated voltage	24V DC
Voltage range	19.2~28.8V DC
Rated current	2A
Current/group	4A* Output point of each group
Voltage drop	Maximum 1V DC
Leakage current when turned off	<5 μ A
Maximum power of incandescent lamp	2.4W
Derating	None
Start time	Maximum 34 μ s
Turn-off time	Maximum 250 μ s
Maximum output frequency	1kHz
Short circuit protection	Yes
Peak short-circuit output current	1.3A
Self-recovery after short circuit or overload	Per 10ms
Clamping voltage	Maximum 39V $\pm$ 1V DC
Isolation	500V AC between output and internal logic
Type of Cable	Unshielded
Cable length	Unshielded 50m
Wiring terminal	Removable terminal block

3.3 Environmental Characteristics

Category	Characteristic
Operating ambient temperature	-10℃~60℃
Storage temperature	-20℃~70℃
Relative humidity	55%~95%, without condensation
Class of pollution	2 (IEC60664)
Class of protection	IP20
Coating	Coated protection, dry film thickness $\geq 20\mu\text{m}$; reinforced dry film thickness $\geq 40\mu\text{m}$
Altitude	Operation: 0m~3,000m Transportation: $\leq 6,000\text{m}$
Seismic performance	5~13.2Hz Amplitude 7mm, 13Hz~100Hz Acceleration 2G, 20 times each in X, Y and Z axes
Impact performance	Semi-positive sine wave, acceleration 15G, duration 11ms, 6 times in each of the X, Y and Z directions

3.4 Electromagnetic Susceptibility

Standard	Method	Item
EN IEC 61000-6-4:2019	CISPR 16-2-1	Conducted Emissions at AC Mains Power Port(150kHz-30MHz)
	CISPR 32	Conducted Emissions at Wired Network Port(150kHz-30MHz)
	CISPR 16-2-3	Radiated Emissions(30MHz-1GHz)
	CISPR 16-2-3	Radiated Emissions(Above 1GHz)
EN IEC 61000-6-2:2019	EN 61000-4-6:2014	Conducted Immunity at AC Mains Power Port(150kHz-80MHz)
	EN 61000-4-6:2014	Conducted Immunity at Signal Port(150kHz-80MHz)
	EN 61000-4-4:2012	Electrical Fast Transients Burst at AC Mains Power Port
	EN 61000-4-4:2012	Electrical Fast Transients Burst at Signal Port
	EN 61000-4-2:2009	Electro static Discharge
	EN 61000-4-8:2010	Power Frequency Magnetic Field
	EN IEC 61000-4-3:2020	Radiated Immunity(80MHz-6GHz)
	EN 61000-4-5:2014+A1:2017	Surge at AC Mains Power Port
	EN 61000-4-5:2014+A1:2017	Surge at Signal Port
	EN IEC 61000-4-11:2020	Voltage Dips and Interruptions

4.1 Product dimension

Dimension (Unit mm)

