

DeviceNet Remote I/O Standard Terminal Block Type



ARD-D Series CATALOG

For your safety, read and follow the considerations written in the instruction manual, other manuals and Autonics website.

The specifications, dimensions, etc. are subject to change without notice for product improvement. Some models may be discontinued without notice.

Features

- Automatic communication speed recognition
: Enables to recognize communication speed automatically when connecting with master
- Network voltage monitoring
: If PV is lower than SV, enables to receive error flag for network power monitoring as Explicit message.
- Connect up to 3 expansion units (expandable I/O points up to max. 64 points)
- Reading the number of expansion units
: Reads the number of connected expansion units
- Reading the unit specifications
: Reads the specifications of connected units

Ordering Information

This is only for reference, the actual product does not support all combinations. For selecting the specified model, follow the Autonics website.

ARD - D ① ② ③ ④

① I/O	② I/O points	③ I/O specifications	④ Unit
I: input	08: 8-point	N: NPN open collector	No mark: basic unit
O: output	16: 16-point	P: PNP open collector	E: expansion unit
X: I/O mixed		A: AC voltage	
		S: SSR	
		R: Relay	

Product Components

Model	ARD-D□□□□	ARD-D□□□E
Product components	Product, instruction manual	
Network connector	× 1	-
Terminating resistance	× 2	-

Specifications

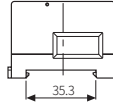
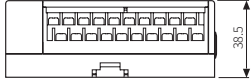
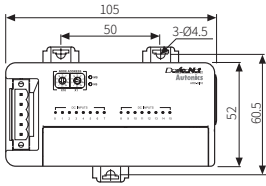
Model	ARD-DI16□□	ARD-DO16□□	ARD-DX16□□
I/O points	NPN or PNP input 16-point	NPN or PNP output 16-point	NPN or PNP I/O each 8-point (total 16-point)
Control I/O	Voltage	10-28 VDC≒	10-28 VDC≒ (voltage drop: ≒ 0.5 VDC≒)
	Current	10 mA/point	0.5 A/point (leakage current: ≒ 0.5 mA)
	COMMON method	8-point, common	
Protection circuit	Surge, short-circuit and overheat protection, reverse power protection circuit, overcurrent protection circuit (NPN type: operate at ≒ 1.9 A, PNP type: operate at ≒ 0.7 A)		
Approval	CE ENEC DeviceNet		
Unit weight	≒ 140 g		

Model	ARD-DI08A□	ARD-DO08S□	ARD-DO08R□
I/O points	AC input 8-point	SSR output 8-point	Relay output 8-point
Control I/O	Voltage	75-250 VAC~	30-250 VAC~
	Current	13 mA/point	1 A/point
	COMMON method	8-point, common	
Protection circuit	Surge, reverse power protection circuit		
Approval	EAC DeviceNet		
Unit weight	≒ 150 g	≒ 170 g	≒ 160 g

Power supply	Rated voltage: 24 VDC≒, voltage range: 12-28 VDC≒
Power consumption	≒ 3 W
Number of connected expansion unit	8-point type: ≒ 7 units, 16-point type: ≒ 3 units
I/O points	≒ 64-point
Communication spec.	I/O Slave messaging (group 2 only slave) : supporting Poll command, Bit_strobe command, Cyclic command, COS command
Communication speed (comm. distance)	125 kbps (≒ 500 m), 250 kbps (≒ 250 m), 500 kbps (≒ 100 m)
Protocol	DeviceNet
Approval	ODVA Conformance tested
Insulation method	I/O and internal circuit: photocoupler insulation, DeviceNet and internal circuit: non-insulation, DeviceNet power: non-insulation
Insulation resistance	≒ 200 MΩ (500 VDC≒ megger)
Noise immunity	±240 VDC≒ the square wave noise (pulse width: 1 μs) by the noise simulator
Dielectric strength	1,000 VAC~ at 50/60 Hz for 1 min
Vibration	1.5 mm amplitude at frequency 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 2 hours
Shock	500 m/s ² (≒ 50 G) in each X, Y, Z direction for 3 times
Ambient temperature	-10 to 55 °C, storage: -25 to 75 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)
Protection rating	IP20 (IEC standard)
Indicator	Network status (NS) and unit status (MS) indicator (green, red LED), I/O status indicator (input: green LED, output: red LED)
Material	Front and body case: PC, rubber cap: NBR
Mounting method	DIN rail or panel mounting

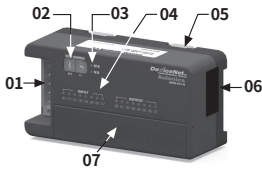
Dimensions

- Unit: mm, For the detailed drawings, follow the Autonics website.
- Same dimensions are applied to both basic and expansion unit.



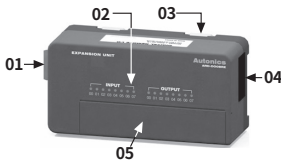
Unit Descriptions

Basic unit



- 01. Network connector**
- 02. Rotary switch**
For setting NODE ADDRESS
- 03. Status indicator**
For unit status (MS) and network status (NS)
- 04. I/O Status indicator**
For I/O status
- 05. Rail lock**
For the DIN rail and panel mount
- 06. Connector output part**
For connecting the expansion unit
- 07. I/O terminal block**
For I/O with the external device

Expansion unit



- 01. Connector input part**
For connecting the basic and expansion units
- 02. I/O status indicator**
For I/O status
- 03. Rail lock**
For the DIN rail and panel mount
- 04. Connector output part**
For connecting the expansion unit
- 05. I/O terminal block**
For I/O with the external device

Network connector

No.	Color	Function	Pinout
5	Red	24 VDC ≐ (+)	
4	White	CAN_H	
3	None	SHIELD	
2	Blue	CAN_L	
1	Black	24 VDC ≐ (-)	

I/O status indicator

Input	Green LED, ON
Output	Red LED, ON

Status indicator

	Red LED	Green LED	Description
Unit status (MS) indicator	ON	OFF	Unrecoverable error
	Flashing	OFF	Recoverable error & expansion unit communication error
	OFF	ON	Normal operation
	OFF	OFF	Power is not supplied.
Network status (NS) indicator	OFF	Flashing	Normal operation standby
	OFF	ON	Network On-Line
	ON	OFF	Dupl, MAC ID / Bus-Off
	Flashing	OFF	Time out
	OFF	OFF	Network Off-Line