

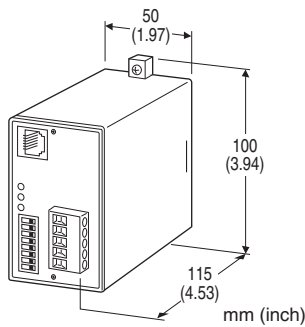
Field Network Modules 61-UNIT Series

ANALOG I/O MODULE

(DeviceNet)

Functions & Features

- Interfacing analog I/O signals from/to Mini-M, Pico-M and other signal conditioner modules with DeviceNet
- Saving power and I/O wiring inside an instrumentation panel



MODEL: 61D-[1][2]-[3][4]

ORDERING INFORMATION

- Code number: 61D-[1][2]-[3][4]
- Specify a code from below for each of [1] through [4].
(e.g. 61D-161-K/Q)
- Specify the specification for option code /Q
(e.g. /C01)

[1] NO. OF CHANNELS

- 04: 4 points
- 08: 8 points
- 16: 16 points

[2] I/O TYPE

- 1: Input
- 2: Output

[3] POWER INPUT

AC Power

K: 85 – 132 V AC
(Operational voltage range 85 – 132 V, 47 – 66 Hz)
(CE not available)

DC Power

R: 24 V DC
(Operational voltage range 24 V \pm 10 %, ripple 10 %p-p max.)
(Specify power suffix code R (24 V DC) when the UNIT is to be combined with the M8BS2.)

[4] OPTIONS

blank: none
/Q: With options (specify the specification)

SPECIFICATIONS OF OPTION: Q

COATING (For the detail, refer to M-System's web site.)

- /C01: Silicone coating
- /C02: Polyurethane coating
- /C03: Rubber coating

RELATED PRODUCTS

- Installation Base (model: M2BS2)
- Installation Base (model: M8BS2)
- Programming Unit (model: PU-2x)

GENERAL SPECIFICATIONS

Construction: Plug-in

Connection

DeviceNet: Euro type connector terminal (applicable wire size: 0.2 to 2.5 mm², stripped length 7 mm)

I/O: Via the Installation Base (model: MxBS2)

Power input: Via the Installation Base (model: MxBS2)

Housing material: Flame-resistant resin (black)

Isolation: I/O to DeviceNet to power

Power indicator: Green LED turns on with power supplied.

DeviceNet COMMUNICATION

Transmission cable: Approved for DeviceNet

Node address setting: DIP switch; 00 – 63

Baud rate setting: DIP switch

MS (Module Status) indicator: Bi-color (green/red) LED indicates device status.

NS (Network Status) indicator: Bi-color (green/red) LED indicates status of the communication link.

INPUT SPECIFICATIONS

■ Analog Input

Input range: 1 – 5 V DC

Input resistance: $\geq 1 \text{ M}\Omega$

(Each input must be isolated by signal conditioners. Non-isolated modules such as M2BW and M8BW are not usable.)

A/D conversion

Moving averaging: 4 samples

Sampling rate: 160 ms

A/D conversion output: 16-bit binary

Signal range 0 – 100 % is converted into hexadecimal 0000 – 1770 (0 – 6000). -15 to 0 % is represented by 2's complements.

Overall range is represented by hexadecimal FC7C – 1AF4 (-900 – +6900), for -15 – +115 %.

Note: In the firmware version 3.00 or later, analog input range 0 – 100% can be converted into hexadecimal 0000 – 2710 (0 – 10000).

In addition, negative values of analog input range -15 to 0% can be converted into signed absolute values.

Refer to the instruction manual for details.

STANDARDS & APPROVALS

EU conformity:

EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

RoHS Directive

OUTPUT SPECIFICATIONS

■ Analog Output

Output range: 1 – 5 V DC

Load resistance: 20 kΩ minimum

(Output must be isolated with signal conditioners.

When the transmission line is open, the last value sampled before failure is held. Non-isolated modules such as M2BW and M8BW are not usable.)

D/A conversion output: 16-bit binary

Signal range 0 – 100 % is converted into hexadecimal 0000 – 1770 (0 – 6000). -15 to 0 % is represented by 2's complements.

Overall range is represented by hexadecimal FC7C – 1AF4 (-900 – +6900), for -15 – +115 %.

Note: In the firmware version 3.00 or later, analog output range 0 – 100% can be converted into hexadecimal 0000 – 2710 (0 – 10000).

In addition, negative values of analog output range -15 to 0% can be converted into signed absolute values.

Refer to the instruction manual for details.

INSTALLATION

Power consumption

•AC: Approx. 4 VA

•DC: Approx. 4 W (160 mA)

Supply voltage to network: 11 – 25 V DC supplied through the network terminal block

Supply current to network: 60 mA max. @ 24 V

Operating temperature: -5 to +55°C (23 to 131°F)

Operating humidity: 30 to 90 %RH (non-condensing)

Atmosphere: No corrosive gas or heavy dust

Mounting: Installation Base (model: MxBS2)

Weight: 250 g (0.55 lb)

PERFORMANCE in percentage of span

A/D conversion: ±0.1 %

D/A conversion: ±0.1 %

Temp. coefficient: ±0.015 %/°C (±0.008 %/°F)

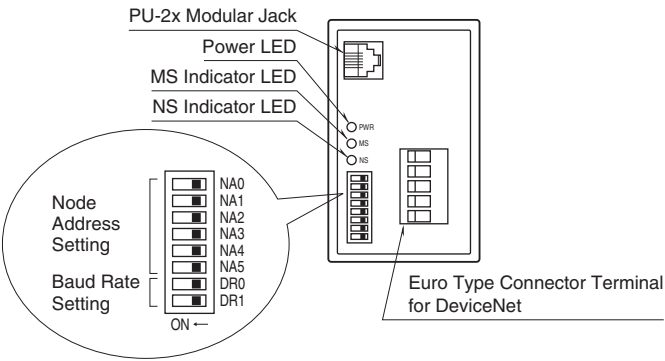
Permissible power failure duration: ≤ 10 msec.

Insulation resistance: ≥ 100 MΩ with 500 V DC

Dielectric strength: 1500 V AC @ 1 minute

(I/O to DeviceNet to power)

EXTERNAL VIEW



EXTERNAL DIMENSIONS unit: mm [inch]

