

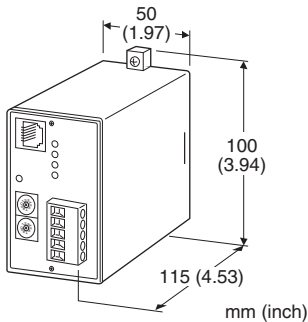
Field Network Modules 61-UNIT Series

ANALOG I/O MODULE

(Fuji Electric T-Link use)

Functions & Features

- Interfacing analog I/O signals from/to Mini-M or Pico-M modules with T-LINK
- Saving power and I/O wiring inside an instrumentation panel



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

ORDERING INFORMATION

- Code number: 61F-[1][2]-[3][4]
- Specify a code from below for each [1] through [4].
(e.g. 61F-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)

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)

GENERAL SPECIFICATIONS

Construction: Plug-in

Connection

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

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

Power input: Via Installation Base (model: MxBS2)

Housing material: Flame-resistant resin (black)

Isolation: I/O or T-Link to power

Power indicator: Green LED turns on with power supplied.

T-Link SPECIFICATIONS

Configuration: Multi-drop

Communication: Half-duplex

Baud rate: 500 kbps

Transmission media/distance:

KPEV-SB 0.75 mm² $\times$ 1 pair, 700 m

T-KPEV-SB, 1.25 mm² $\times$ 1 pair, 1000 m

Station No.: Rotary switch; 00 - 99

(Factory default setting: 00)

L RUN indicator: Red LED ON at normal communication

L ERR. indicator: Red LED ON/blinking at communication abnormality

L I/O indicator: Red LED blinking at normal I/O

L COM indicator: RED LED blinking at T-Link normal communication

■ NUMBER OF CONNECTABLE UNITS WITH T-LINK

Up to a maximum of 32 T-LINK devices can be connected in a single T-LINK system. There is a limit of 100 words in processor memory. Make sure that the configured word area to be occupied does not exceed the 100-word range. (According to the Fuji Electric MICREX-F Users Manual) It is necessary to consider these criteria when connecting to this device.

The below describes the number of words occupied per device by number of modules.

- For input 4 / output 4 modules: 4
- For input 8 / output 8 modules: 8
- For input 16 / output 16 modules: 16

Permissible power failure duration: ≤ 10 msec.

Insulation resistance: ≥ 100 M Ω with 500 V DC

Dielectric strength: 1500 V AC @ 1 minute (I/O or T-Link to power)

INPUT SPECIFICATIONS

■ Analog Input

Input range: 1 – 5 V DC

Input resistance: ≥ 1 M Ω

(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: Signed binary

Signal range 0 – 100 % is converted into hexadecimal 0000 – 2710 (0 – 10000). -15 to 0 % is a negative range represented by 2's complements.

Overall range is represented by hexadecimal FA24 – 2CEC (-1500 – +11500), for -15 – +115 %.

OUTPUT SPECIFICATIONS

■ Analog Output

Output range: 1 – 5 V DC

Load resistance: 20 k Ω 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 input: Signed binary

Signal range 0 – 100 % is converted into hexadecimal 0000 – 2710 (0 – 10000).

-15 to 0 % is a negative range represented by 2's complements.

Overall range is represented by hexadecimal FA24 – 2CEC (-1500 – +11500), for -15 – +115 %.

INSTALLATION

Power consumption

•AC: Approx. 3 VA

•DC: Approx. 4 W (160 mA)

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)

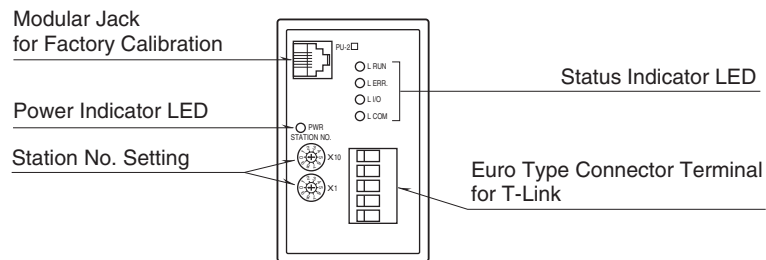
PERFORMANCE in percentage of span

A/D conversion: ± 0.1 %

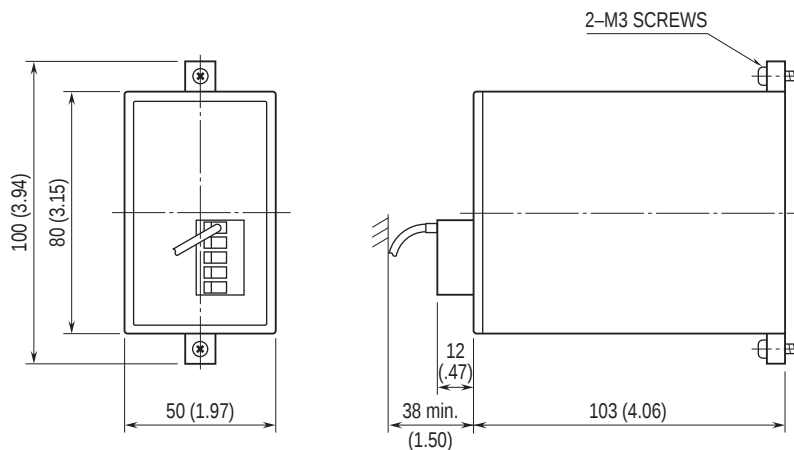
D/A conversion: ± 0.1 %

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

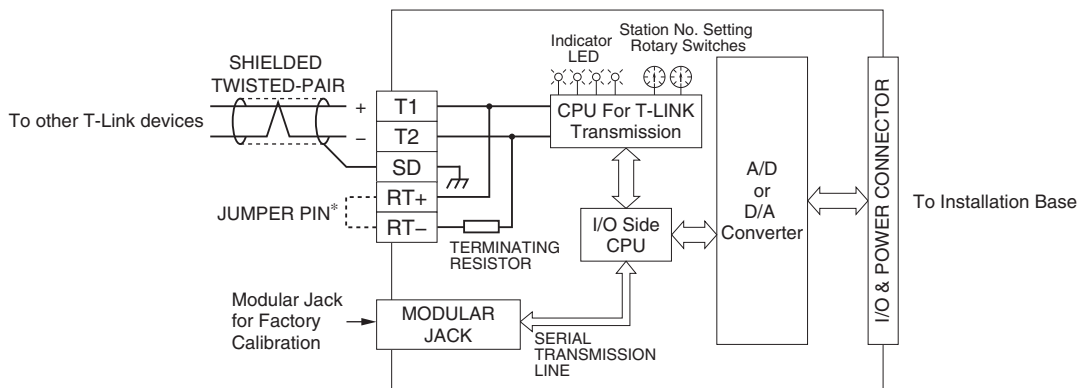
EXTERNAL VIEW



EXTERNAL DIMENSIONS unit: mm (inch)



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



* When the unit is located at the end of transmission line via twisted-pair cable (= no cross-wiring), short across terminals RT+, RT- with the jumper pin (or wire) provided with the unit. Remove the jumper pin for the one not located at the end.
Note: Use T1, T2, SD terminals for cross-wiring.



Specifications are subject to change without notice.