

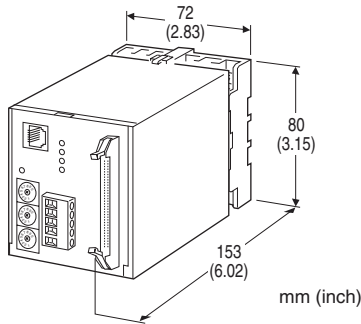
Field Network Modules 60-UNIT Series

ANALOG I/O MODULE

(CC-Link)

Functions & Features

- Interfacing analog I/O signals from/to 10-RACK or 18-RACK modules with CC-Link
- Saving power and I/O wiring inside an instrumentation panel



MODEL: 60C-[1][2]-[3][4]

ORDERING INFORMATION

- Code number: 60C-[1][2]-[3][4]
- Specify a code from below for each [1] through [4].
(e.g. 60C-161-K/Q)
- Specify the specification for option code /Q
(e.g. /C01/S01)

[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 ±10 %, ripple 10 %p-p max.)

[4] OPTIONS

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

SPECIFICATIONS OF OPTION: Q (multiple selections)

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

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

TERMINAL SCREW MATERIAL

- /S01: Stainless steel

RELATED PRODUCTS

- Special cable (model: MCN34)

PACKAGE INCLUDES...

- Terminating resistor (110 Ω, 0.5 W)

GENERAL SPECIFICATIONS

Construction: Plug-in

Connection

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

I/O: 34-pin connector (OMRON XG4A-3434)

Power input: M3.5 screw terminal

Screw terminal: Chromated steel (standard) or stainless steel

Housing material: Flame-resistant resin (black)

Isolation: I/O to CC-Link to power to FG1

Power indicator: Green LED turns on with power supplied.

CC-Link COMMUNICATION

CC-Link: Conforms to Version 1.10

Station type: Remote device station

Station No. setting: Rotary switch; 1 - 64

Number of occupied stations:

- 60C-04 1 station
 - 60C-08 2 stations
 - 60C-16 4 stations
- Remote I/O (RX, RY) is fixed to 32 points.

Baud rate setting: Rotary switch

(156kbps(factory setting), 625kbps, 2.5Mbps, 5Mbps, 10Mbps)

Transmission cable: Approved for CC-Link

L RUN indicator: Red LED turns on in a normal condition.

L ERR. indicator: Red LED turns on or flashes in an abnormality; off with wire breakdown.

SD indicator: Red LED turns on when transmitting.

RD indicator: Red LED turns on when receiving.

INPUT SPECIFICATIONS

■ Analog Input

Input range: 1 - 5 V DC

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

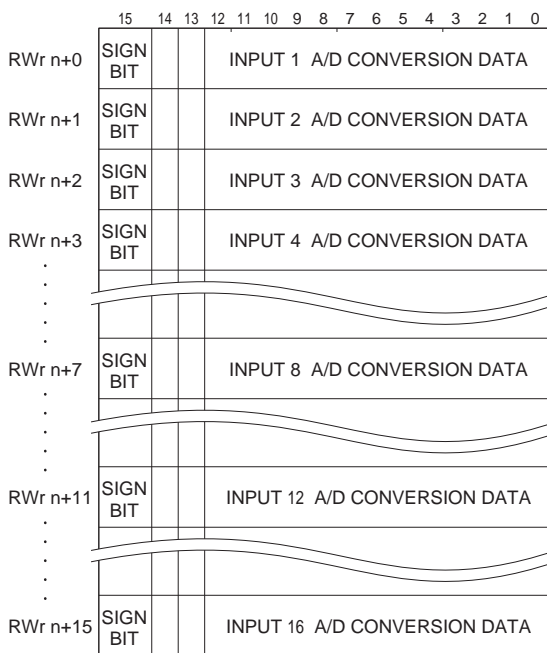
10-RACK and 18-RACK I/O modules must be isolated types. Non-isolated modules such as 10BW and 18BW are not usable.

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 %.

■ A/D CONVERSION DATA



RWr n+0 through RWr n+3 for 4 inputs.
 RWr n+0 through RWr n+7 for 8 inputs.
 RWr n+0 through RWr n+15 for 16 inputs.

• Input Connector Pin Assignment

PIN NO.	ASSIGNMENT	PIN NO.	ASSIGNMENT
1	Input 1	2	COM
3	Input 2	4	COM
5	Input 3	6	COM
7	Input 4	8	COM
9	Input 5	10	COM
11	Input 6	12	COM
13	Input 7	14	COM
15	Input 8	16	COM
17	Input 9	18	COM
19	Input 10	20	COM
21	Input 11	22	COM
23	Input 12	24	COM
25	Input 13	26	COM
27	Input 14	28	COM
29	Input 15	30	COM
31	Input 16	32	COM
33	No connection	34	No connection

Input 1 - 4 for 4 points, 1 - 8 for 8 points.

OUTPUT SPECIFICATIONS

■ Analog Output

Output must be isolated with signal conditioners.

When the transmission line is open, the last value sampled before failure is held.

Output range: 1 - 5 V DC

Load resistance: 20 k Ω minimum

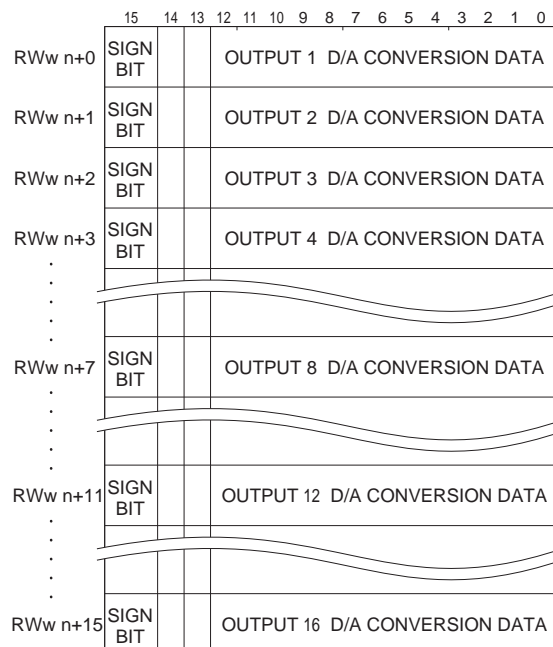
10-RACK and 18-RACK I/O modules must be isolated types. Non-isolated modules such as 10BW and 18BW are not usable.

D/A 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 %.

■ D/A CONVERSION DATA



RWw n+0 through RWw n+3 for 4 outputs.
 RWw n+0 through RWw n+7 for 8 outputs.
 RWw n+0 through RWw n+15 for 16 outputs.

• Output Connector Pin Assignment

PIN NO.	ASSIGNMENT	PIN NO.	ASSIGNMENT
1	Output 1	2	COM
3	Output 2	4	COM
5	Output 3	6	COM
7	Output 4	8	COM
9	Output 5	10	COM
11	Output 6	12	COM
13	Output 7	14	COM
15	Output 8	16	COM
17	Output 9	18	COM
19	Output 10	20	COM
21	Output 11	22	COM
23	Output 12	24	COM
25	Output 13	26	COM
27	Output 14	28	COM
29	Output 15	30	COM
31	Output 16	32	COM
33	No connection	34	No connection

Output 1 – 4 for 4 points, 1 – 8 for 8 points.

INSTALLATION

Power consumption

- AC: Approx. 4 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: Surface or DIN rail

Weight: 450 g (0.99 lb)

PERFORMANCE in percentage of span

A/D conversion: $\pm 0.1\%$

D/A conversion: $\pm 0.1\%$

Temp. coefficient: $\pm 0.015\%/^{\circ}\text{C}$ ($\pm 0.008\%/^{\circ}\text{F}$)

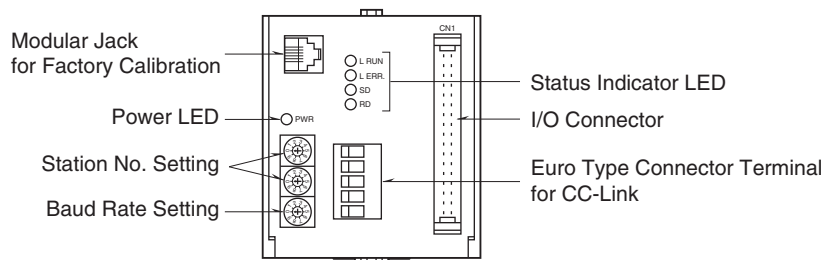
Permissible power failure duration: ≤ 10 msec.

Insulation resistance: $\geq 100\text{ M}\Omega$ with 500 V DC

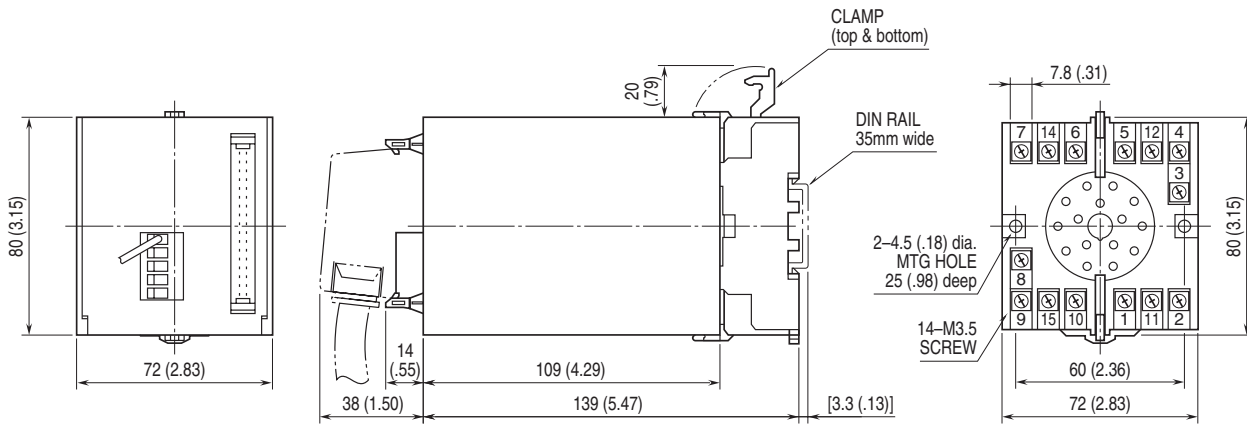
Dielectric strength: 1500 V AC @ 1 minute (input or output to CC-Link to power)

2000 V AC @ 1 minute (input or output or CC-Link or power to FG1)

EXTERNAL VIEW

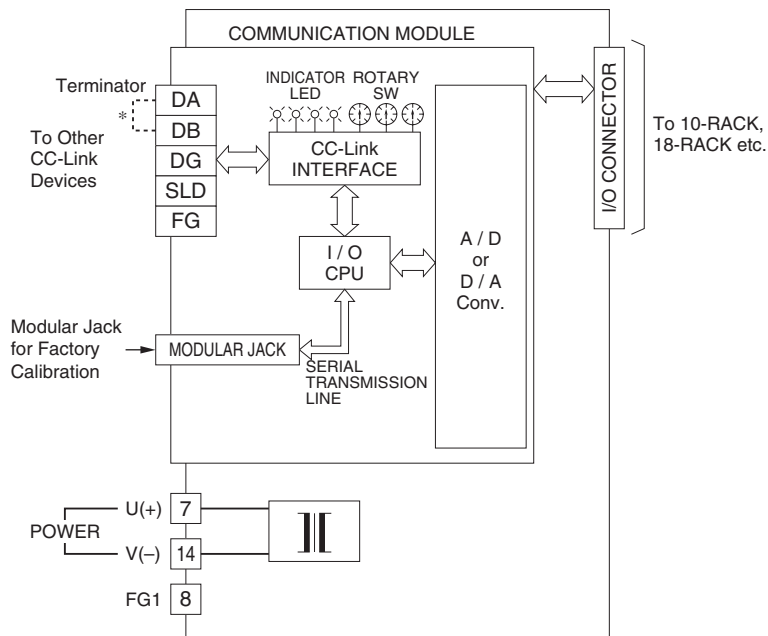


EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



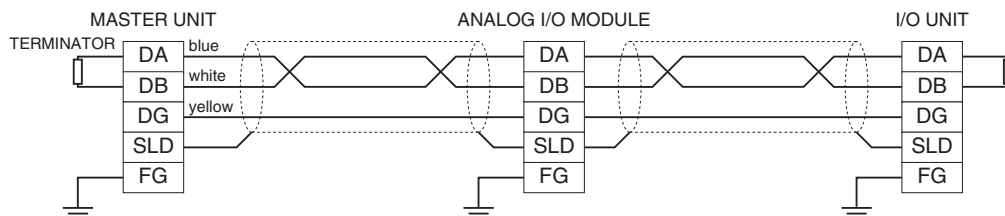
•When mounting, no extra space is needed between units.

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*Attach the terminating resistor when the module is at the termination of a transmission line.

COMMUNICATION CABLE CONNECTIONS



Specifications are subject to change without notice.