Plug-in Signal Conditioners M-UNIT

CONTACT ISOLATOR

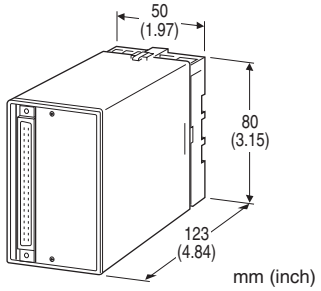
(18 channels)

Functions & Features

• Galvanically isolating the output pulse from the input signal
• 18 channels housed in one module
• Isolation between input, output and power (non-isolated between each channel)
• High-density mounting

Typical Applications

• Isolating and sending 4-digit BCD signals from a digital panel meter to a PLC
• Multi-point isolation for low-speed pulse or digital (status) signals



MODEL: MNS–11[1]–[2][3]

ORDERING INFORMATION

• Code number: MNS-11[1]-[2][3]
Specify a code from below for each of [1] through [3].
(e.g. MNS-111-B/Q)
• Specify the specification for option code /Q
(e.g. /C01/S01)

INPUT

1: Dry contact

OUTPUT

1: Open collector

[1] OUTPUT LOGIC

1: Positive logic
2: Negative logic

[2] POWER INPUT

AC Power
B: 100 V AC
C: 110 V AC
D: 115 V AC
F: 120 V AC
G: 200 V AC
H: 220 V AC
J: 240 V AC
DC Power
S: 12 V DC
R: 24 V DC
V: 48 V DC

[3] 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

• Connector terminal block (model: CNT)
• Special cable with 40-pin connector (model: FCN)

GENERAL SPECIFICATIONS

Construction: Plug-in
Connection
Power input: M3.5 screw terminals
I/O: 40-pin connector (Fujitsu FCN-365P040-AU)
Screw terminal: Chromated steel (standard) or stainless steel
Housing material: Flame-resistant resin (black)
Isolation: Input to output to power
Frequency range: Input and output are the same.

INPUT SPECIFICATIONS

■ Dry contact
Maximum frequency: 100 Hz
Pulse width time requirement: 5 msec. min. for ON and OFF
Sensing: Approx. 12 V DC @ 1.5 mA
ON/OFF level: ≤200 Ω/0.3 V for ON, ≥100k Ω/11.1 V for OFF

OUTPUT SPECIFICATIONS

■ Open Collector

Maximum frequency: 100 Hz

Rating: 30 V DC @ 10 mA per channel

Saturation voltage: 0.3 V DC

INSTALLATION

Power input

• **AC**: Operational voltage range: rating ±10 %,
50/60 ±2 Hz, approx. 2 VA

•**DC**: Operational voltage range: rating ±10 %,
ripple 10 %p-p max., approx. 2 W (80 mA at 24 V)

Operating temperature: -5 to +60°C (23 to 140°F)

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

Mounting: Surface or DIN rail

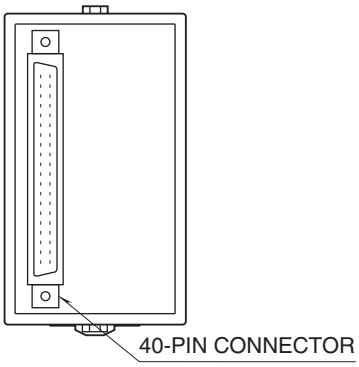
Weight: 400 g (0.88 lb)

PERFORMANCE

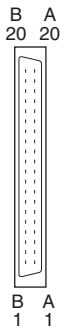
Insulation resistance: ≥ 100 MΩ with 500 V DC

Dielectric strength: 1000 V AC @ 1 minute
(input to output to power)
2000 V AC @ 1 minute
(input or output or power to ground)

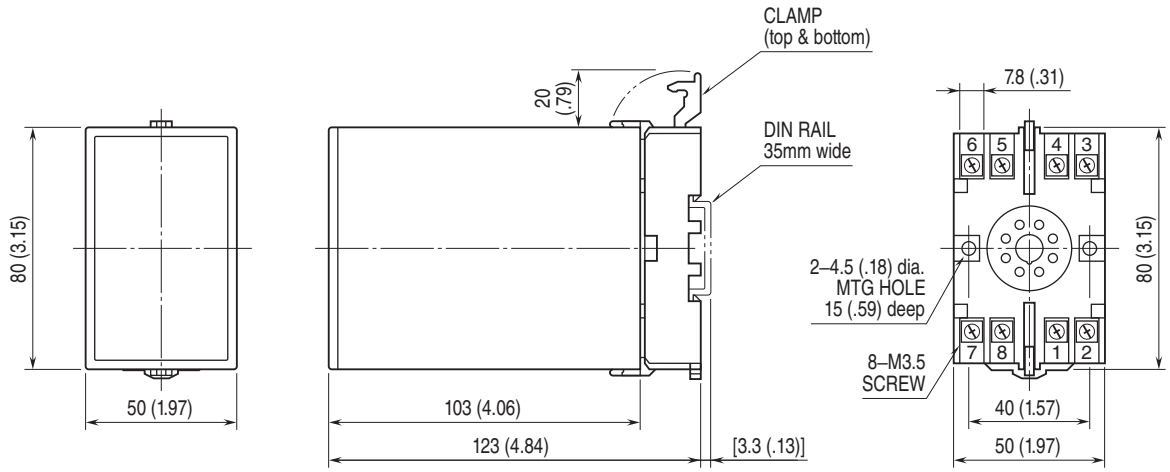
EXTERNAL VIEW



• Connector Pin Assignment

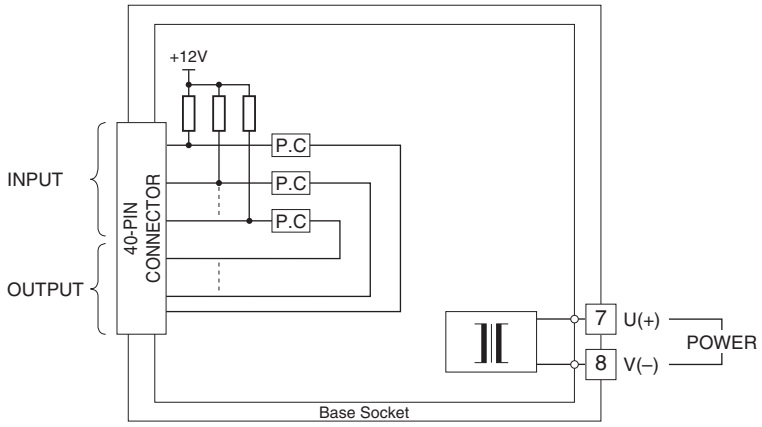


EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



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

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



P.C : Photo Coupler

I/O CONNECTOR PIN ASSIGNMENT

PIN NO.	INPUT NO.	PIN NO.	OUTPUT NO.	PIN NO.	INPUT NO.	PIN NO.	OUTPUT NO.
A 1	ch. 1	A11	N.C.	B 1	ch.10	B11	COM2
A 2	ch. 2	A12	ch. 1	B 2	ch.11	B12	ch.10
A 3	ch. 3	A13	ch. 2	B 3	ch.12	B13	ch.11
A 4	ch. 4	A14	ch. 3	B 4	ch.13	B14	ch.12
A 5	ch. 5	A15	ch. 4	B 5	ch.14	B15	ch.13
A 6	ch. 6	A16	ch. 5	B 6	ch.15	B16	ch.14
A 7	ch. 7	A17	ch. 6	B 7	ch.16	B17	ch.15
A 8	ch. 8	A18	ch. 7	B 8	ch.17	B18	ch.16
A 9	ch. 9	A19	ch. 8	B 9	ch.18	B19	ch.17
A10	COM1	A20	ch. 9	B10	N.C.	B20	ch.18

⚠ Specifications are subject to change without notice.