

Plug-in Signal Conditioners M-UNIT

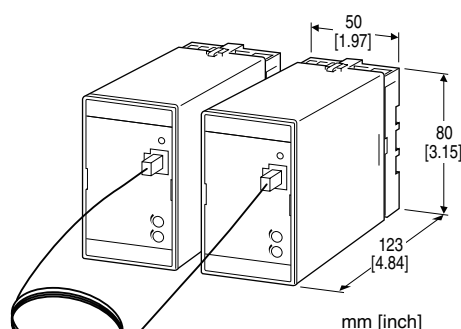
OPTICAL RECEIVER

Functions & Features

- Isolation up to several hundred thousand volts with a fiber optics cable
- High-density mounting

Typical Applications

- Ion implanter
- Electron-beam devices
- Dust chamber
- Protection against inductive noises in power substations



MODEL: OR2-[1]-[2][3]

ORDERING INFORMATION

- Code number: OR2-[1]-[2][3]
- Specify a code from below for each of [1] through [3].
(e.g. OR2-A-B/Q)
- Special output range (For codes Z & 0)
- Specify the specification for option code /Q
(e.g. /C01/S01)

[1] OUTPUT

Current

- A: 4 – 20 mA DC (Load resistance 750 Ω max.)
- B: 2 – 10 mA DC (Load resistance 1500 Ω max.)
- C: 1 – 5 mA DC (Load resistance 3000 Ω max.)
- D: 0 – 20 mA DC (Load resistance 750 Ω max.)
- E: 0 – 16 mA DC (Load resistance 900 Ω max.)
- F: 0 – 10 mA DC (Load resistance 1500 Ω max.)
- G: 0 – 1 mA DC (Load resistance 15 k Ω max.)
- Z: Specify current (See OUTPUT SPECIFICATIONS)

Voltage

- 1: 0 – 10 mV DC (Load resistance 10 k Ω min.)
- 2: 0 – 100 mV DC (Load resistance 100 k Ω min.)
- 3: 0 – 1 V DC (Load resistance 100 Ω min.)

- 4: 0 – 10 V DC (Load resistance 1000 Ω min.)
- 5: 0 – 5 V DC (Load resistance 500 Ω min.)
- 6: 1 – 5 V DC (Load resistance 500 Ω min.)
- 4W: -10 – +10 V DC (Load resistance 2000 Ω min.)
- 0: Specify voltage (See OUTPUT SPECIFICATIONS)

[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

[3] OPTIONS

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

SPECIFICATIONS OF OPTION: Q (multiple selections)

COATING (For the detail, refer to our web site.)

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

TERMINAL SCREW MATERIAL

- /S01: Stainless steel

RELATED PRODUCTS

- Optical transmitter (model: OT2)
- Fiber optics cable:
 - 10 meters (model: AMPCP2-10M)
 - 20 meters (model: AMPCP2-20M)
 - 30 meters (model: AMPCP2-30M)
- Optical cable used for the AMPCP2
Mitsubishi Chemical Super Eska SH 4001
Minimum bend radius: 25 mm
Tension strength: ≤ 70 N
Connector used for the AMPCP2
Broadcom HFBR-4532Z

GENERAL SPECIFICATIONS

Construction: Plug-in

Transmission method: Light pulse (100 – 500 Hz)

Maximum transmission distance: 30 meters (98 ft)

Connection

Output & power input: M3.5 screw terminals

Optical fiber: Connector

Screw terminal: Chromated steel (standard) or stainless steel

Housing material: Flame-resistant resin (black)

Isolation: Output to power

Overrange output: Approx. -10 to +120 % at 1 – 5 V

Zero adjustment: -5 to +5 % (front)

Span adjustment: 95 to 105 % (front)

Power indicator LED: Green LED turns on when the power is supplied.

OUTPUT SPECIFICATIONS

■ **DC Current:** 0 – 20 mA DC

Minimum span: 1 mA

Offset: Max. 1.5 times span

Load resistance: Output drive 15 V max.

■ **DC Voltage:** -10 – +12 V DC

Minimum span: 5 mV

Offset: Max. 1.5 times span

Load resistance: Output drive 10 mA max.; 5 mA for negative voltage output; at ≥ 0.5 V

INSTALLATION

Power input

•**AC:** Operational voltage range: rating ± 10 %, 50/60 ± 2 Hz, approx. 3 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 in percentage of span

Accuracy: ± 0.3 % (Overall performance with the OT2 and OR2 combined)

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

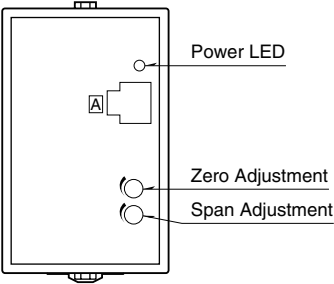
Response time: ≤ 0.6 second (0 – 90 %) (Overall performance with the OT2 and OR2 combined)

Line voltage effect: ± 0.1 % over voltage range

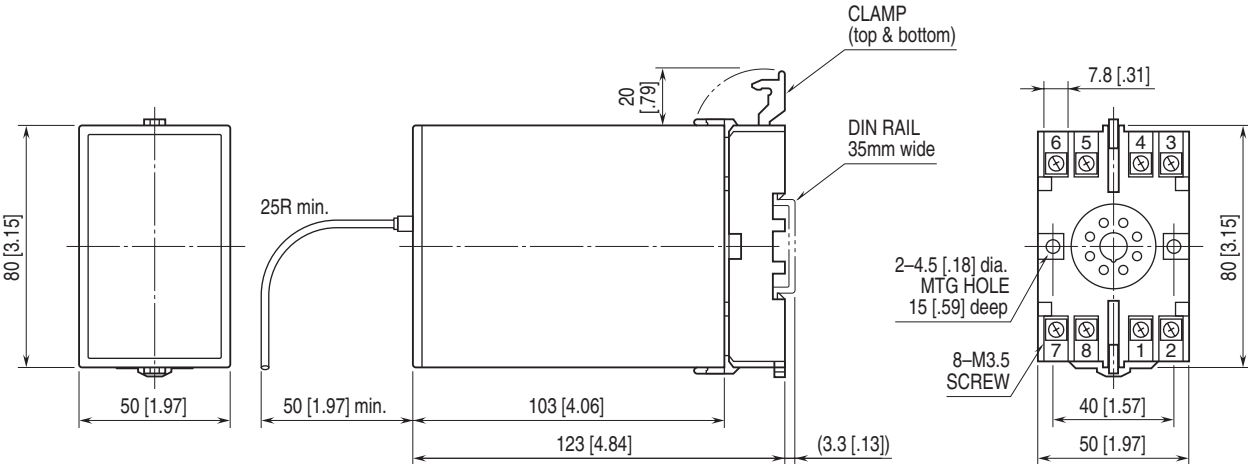
Insulation resistance: ≥ 100 M Ω with 500 V DC

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

EXTERNAL VIEW

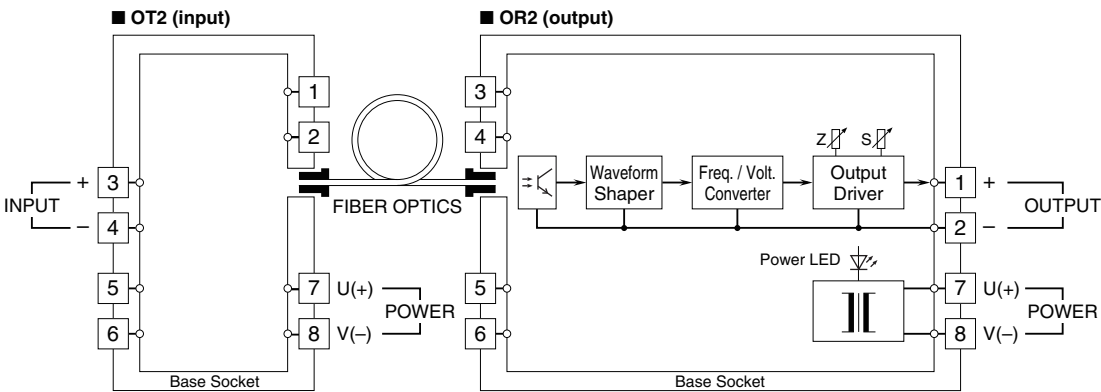


EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



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

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.