Tension-Clamp Ultra-Slim Signal Conditioners M6S Series

ISOLATOR

Functions & Features
- Maintenance-free tension clamp connection
- 5.9-mm wide ultra-slim design
- Low profile allows the M6S module mounted in a 120-mm deep panel
- Galvanically isolates process instrumentation signals
- High-density mounting
- Power indicator LED

MODEL: M6SYV-[1][2]-[3][4]

ORDERING INFORMATION
- Code number: M6SYV-[1][2]-[3][4]
  Specify a code from below for each [1] through [4].
  (e.g. M6SYV-4W4W-R/K/UL/Q)
- Specify the specification for option code /Q
  (e.g. /C01)

AA: 4 - 20 mA DC (Input resistance 50 Ω)
  / 4 - 20 mA DC (Load resistance 550 Ω max.)
A6: 4 - 20 mA DC (Input resistance 50 Ω)
  / 1 - 5 V DC (Load resistance 5000 Ω min.)
6A: 1 - 5 V DC (Input resistance 1 MΩ min.)
  / 4 - 20 mA DC (Load resistance 550 Ω max.)
66: 1 - 5 V DC (Input resistance 1 MΩ min.)
  / 1 - 5 V DC (Load resistance 5000 Ω min.)
4W4W: -10 - +10 V DC (Input resistance 1 MΩ min.)
  /-10 - +10 V DC (Load resistance 20 kΩ min.)

[3] POWER INPUT
AC Power
M2: 100 – 240 V AC (Operational voltage range 90 – 264 V,
  47 – 66 Hz)
(UL not available)
DC Power
R: 24 V DC
(Operational voltage range 24 V ±10 %, ripple 10 %p-p max.)

[4] OPTIONS (multiple selections)
Response Time (0 - 90 %)
  blank: Standard (≤ 0.5 sec.)
  /K: Fast Response (Approx. 3.5 msec. voltage output;
      Approx. 25 msec. current output)
Standards & Approvals
  blank: CE marking
  /UL: UL approval, CE marking
Other Options
  blank: none
  /Q: Option other than the above (specify the specification)

SPECIFICATIONS OF OPTION: Q
COATING (For the detail, refer to M-System’s web site.)
/C01: Silicone coating
/C02: Polyurethane coating

GENERAL SPECIFICATIONS
Connection
Input and output: Tension clamp
Power input: Via the Installation Base (model: M6SBS)
  (not available for AC power input)
or Tension clamp
Applicable wire size: 0.2 to 2.5 mm², stripped length 8 mm
Housing material: Flame-resistant resin (black)
Isolation: Input to output to power
Zero adjustment: -2 to +2 % (front)
  (Output code 4W: Adjustable at 0 V.)
Span adjustment: 98 to 102 % (front)
Power LED: Green light turns on when the power is supplied.

INPUT SPECIFICATIONS
■ DC Current: Input resistor incorporated

INSTALLATION
Power Consumption
  • AC: Max. 2 VA
  • DC: Approx. 0.45 W
Operating temperature: -20 to +55°C (-4 to +131°F)
Operating humidity: 30 to 90 %RH (non-condensing)
Mounting: Installation Base (model: M6SBS) or DIN rail
Weight: 60 g (2.1 oz)
PERFORMANCE in percentage of span
Accuracy: ±0.1 %
Temp. coefficient: ±0.01 %/°C (±0.006 %/°F)
Line voltage effect: ±0.1 % over voltage range
Insulation resistance: ≥ 100 MΩ with 500 V DC
Dielectric strength: 2000 V AC @1 minute (input to output to power to ground)

STANDARDS & APPROVALS
EU conformity:
EMC Directive
EMI EN 61000-6-4
EMS EN 61000-6-2
Low Voltage Directive
EN 61010-1
Installation Category II
Pollution Degree 2
Input or output to power: Reinforced insulation (300 V)
Input to output: Basic insulation (300 V)
RoHS Directive
EN 50581
Approval:
UL/C-UL nonincendive Class I, Division 2,
Groups A, B, C, and D
(ANSI/ISA-12.12.01, CAN/CSA-C22.2 No.213)
UL/C-UL general safety requirements
(UL 61010-1, CAN/CSA-C22.2 No.61010-1)

EXTERNAL VIEW
(With the cover open)
EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS

unit: mm (inch)

- DIN RAIL 35mm wide
- DIN RAIL HOOK
- Screwdriver: tip width 3.8 mm max., tip thickness 0.5 to 0.6 mm
- Wire insertion angle: approx. 35°
- Test probe: max. 2.0 (0.08) dia.

When mounting, no extra space is needed between units.

* Use a minus screwdriver: tip width 3.8 mm max., tip thickness 0.5 to 0.6 mm

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

- Low Drift Amplifier
- Isolation
- Output Driver
- POWER LED
- POWER

* Input shunt resistor incorporated for current input.
** Available only for DC power input type

Specifications are subject to change without notice.