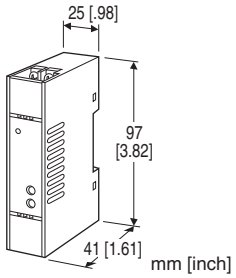
Super-mini Terminal Block Signal Conditioners M5-UNIT

TACHOGENERATOR TRANSMITTER

Functions & Features

• Converts an AC voltage from a tachogenerator (tachometer) into a standard process signal
• Wide input range
• Power LED



CE

MODEL: M5TG-[1][2]-[3][4]

ORDERING INFORMATION

• Code number: M5TG-[1][2]-[3][4]
Specify a code from below for each of [1] through [4].
(e.g. M5TG-AA-M/Q)
• Specify the specification for option code /Q
(e.g. /C01/S01)

[1] INPUT

Voltage
1: 0 – 35 V AC (Input resistance 100 kΩ min.)
2: 0 – 50 mV AC (Input resistance 100 kΩ min.)
3: 0 – 60 mV AC (Input resistance 100 kΩ min.)
4: 0 – 100 mV AC (Input resistance 100 kΩ min.)
5: 0 – 1 V AC (Input resistance 100 kΩ min.)
6: 0 – 10 V AC (Input resistance 100 kΩ min.)
7: 0 – 100 V AC (Input resistance 100 kΩ min.)
(CE not available)
8: 0 – 110 V AC (Input resistance 100 kΩ min.)
(CE not available)
9: 0 – 150 V AC (Input resistance 100 kΩ min.)
(CE not available)
A: 0 – 200 V AC (Input resistance 100 kΩ min.)
(CE not available)
B: 0 – 250 V AC (Input resistance 100 kΩ min.)
(CE not available)
U: Specify voltage (See INPUT SPECIFICATIONS)
(CE not available) (0 % input must be 0 V.)

[2] OUTPUT

Current
A: 4 – 20 mA DC (Load resistance 550 Ω max.)
Z: Specify current (See OUTPUT SPECIFICATIONS)
(CE not available)
Voltage
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 8000 Ω min.)
5W: -5 – +5 V DC (Load resistance 4000 Ω min.)
0: Specify voltage (See OUTPUT SPECIFICATIONS) (CE not available)

[3] POWER INPUT

AC Power
M: 85 – 264 V AC (Operational voltage range 85 – 264 V, 47 – 66 Hz)
(CE not available)
DC Power
R: 24 V DC
(Operational voltage range 24 V ±10 %, ripple 10 %p-p max.)

[4] OPTIONS

blank: none
/Q: Options other than the above (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

GENERAL SPECIFICATIONS

Construction: Terminal block
Connection: M3.5 screw terminals (torque 0.8 N·m)
Screw terminal: Nickel-plated steel (standard) or stainless steel
Housing material: Flame-resistant resin (black)
Isolation: Input to output to power
Overrange output: Approx. 0 to 110 % at 1 – 5 V
Zero adjustment: -2 to +2 % (front)
(±1 % with the output suffix codes 4W and 5W selected)
Span adjustment: 98 to 102 % (front)
(99 to 101 % with the output suffix codes 4W and 5W selected)
Power indicator LED: Green LED turns on when the power is supplied.

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INPUT SPECIFICATIONS

• **AC Voltage**: 0 – 250 V AC
Minimum span: 50 mV
Frequency: 15 Hz min., 1 kHz max. with 100 % input
Input resistance: ≥ 100 kΩ

OUTPUT SPECIFICATIONS

■ **DC Current**: 0 – 20 mA DC
Minimum span: 1 mA
Offset: Max. 1.5 times span
Load resistance: Output drive 11 V max.
■ **DC Voltage**: 0 – 10 V DC
Minimum span: 1 V
Offset: Max. 1.5 times span
Load resistance: Output drive 10 mA max.; at ≥ 1 V

INSTALLATION

Power consumption
•**AC**:
Approx. 1.6 VA at 100 V
Approx. 1.8 VA at 200 V
Approx. 2 VA at 264 V
•**DC**: ≤ 2 W
Operating temperature: -20 to +65°C (-4 to +149°F)
Operating humidity: 30 to 90 %RH (non-condensing)
Mounting: DIN rail
Weight: 90 g (0.2 lb)

PERFORMANCE in percentage of span

Accuracy: ±0.4 % (input 5 – 100 %)
(10 - 100 % when otuput code is 4W or 5W)
Temp. coefficient: ±0.05 %/°C (±0.03 %/°F)
Response time: ≤ 0.7 sec. (0 – 90 %)
Ripple: 0.5 %p-p max. (100/120 Hz)
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
RoHS Directive

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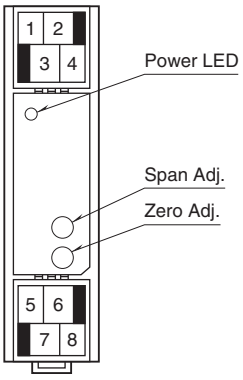
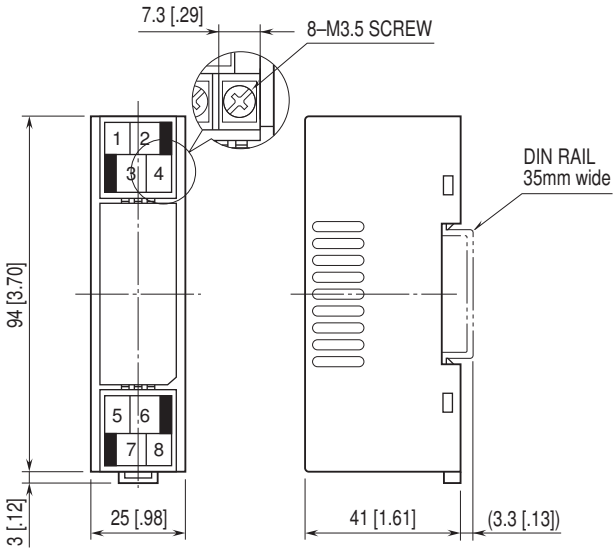
FRONT VIEW

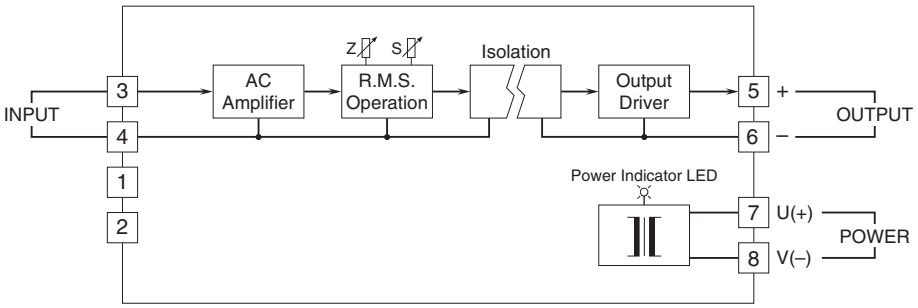


EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



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

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



⚠ Specifications are subject to change without notice.

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