

Position Sensors
2-WIRE POSITION TRANSMITTER
 (rotary motion type; 90 degrees)

 MODEL **VOS2T-R**
MODEL & SUFFIX CODE SELECTION

VOS2T-R-□□□□

MODEL _____

LEVER _____

0 : None

1 : Effective radius 15 – 40 mm (0.59" – 1.57")

2 : Effective radius 40 – 130 mm (1.57" – 5.12")

3 : Effective radius 35 – 80 mm (1.38" – 3.15")

LEVER POSITION _____

1 : Upper side

2 : Lower side

RETURN SPRING _____

0 : None

L : Counterclockwise return*

R : Clockwise return*

*Seen from the lever side

WIRING CONDUIT _____

0 : G 1/2

1 : 1/2" NPT fitting

2 : G 1/2 with cable connector

4 : Cables connected (approx. 1 meter or 3.3 ft)

OUTPUT

4 – 20mA DC

SUPPLY VOLTAGE

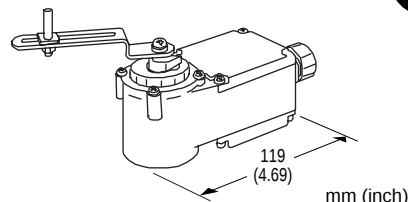
15 – 28V DC

ORDERING INFORMATION

Specify code number. (e.g. VOS2T-R-11L0)

RELATED PRODUCTS

•Link set (model: VOLK)


Functions & Features

- Detecting rotating angle of a valve actuator or moving positions of other rotating machines and transmitting standard 4 to 20mA DC proportional to the position
- Light weight and compact design
- High resolution
- Excellent reliability & durability
- Field selectable direct or reverse action
- Rugged enclosure

GENERAL SPECIFICATIONS
Environmental protection: IP 65**

**Screw torque for cover: 1.2 – 1.6 N·m

Connection: M3.5 screw terminals

Materials
Housing: cast aluminium

Screw terminals: nickel-plated steel

(torque ≤0.8 N·m)

Cable connector: Nylon 66

(applicable cable's external dia. 6.5 – 8.5 mm)

Painting color: silver

Isolation: output to metal housing

Wiring conduit: G 1/2

Zero adjustment: -4.5 – +4.5° of input angle

Span adjustment: 45 – 90° of input angle

The Zero indicates such input angle where the transmitter outputs 12mA, while the Span indicates the absolute difference between such input angle for 4mA and that for 20mA.

INPUT & OUTPUT

INPUT: mechanical rotating angle
Effective rotating angle: approx. $-55^{\circ} - +55^{\circ}$ (110°)
Linearity assured range: $-45^{\circ} - +45^{\circ}$ (90°)
Stopper strength: 1.37 N·m (1.011 ft·lbs)
 with static load

OUTPUT: 4 – 20mA DC
Operational range: 3.5 – 23mA DC
Action: direct or reverse; field selectable by
 change of the jumper pins' positions;
 factory set to direct action

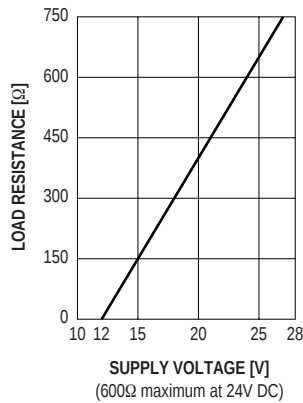
Output characteristics: proportional to the input angle

Load resistance: 0 – 600Ω with 24V DC supply

Load resistance v.s. supply voltage:

$$\text{Load Resistance } (\Omega) = \frac{\text{Supply Voltage (V)} - 12 \text{ (V)}}{0.02 \text{ (A)}}$$

(including leadwire resistance)



INSTALLATION

Supply voltage: 15 – 28V DC
Operating temperature: -5 to $+60^{\circ}\text{C}$ (23 to 140°F)
Operating humidity: 30 to 90% RH
 (non-condensing inside)
Vibration: 2G max.
Environment: Protect from strong magnetic field.
Mounting position: all directions
Dimensions: W53×H68×D119 mm (2.09"×2.68"×4.69")
 without lever or connector
Weight: 550 g (1.21 lbs) without lever and cable

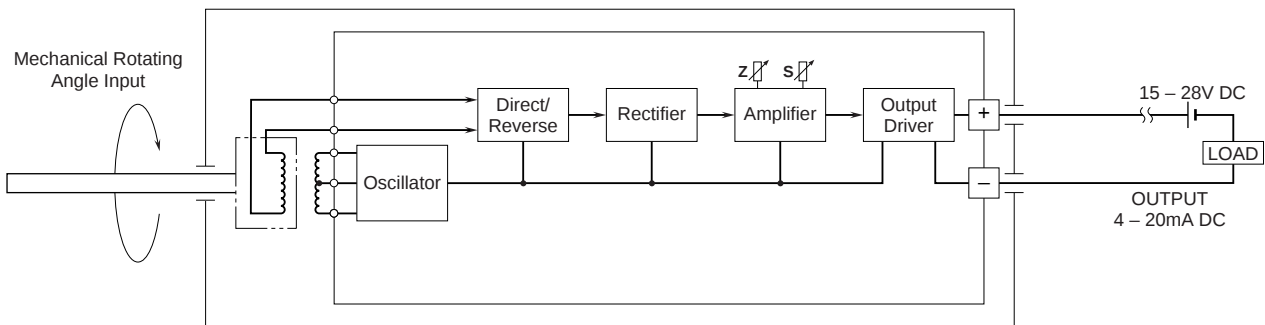
PERFORMANCE in percentage of angle ± 45 degrees

Linearity: 1.0% within the linearity assured range
Temp. coefficient: $\pm 0.03\%/^{\circ}\text{C}$ ($\pm 0.02\%/^{\circ}\text{F}$)
Insulation resistance: $\geq 100\text{M}\Omega$ with 500V DC
Dielectric strength: 500V AC @1 minute
 (output to metal housing)

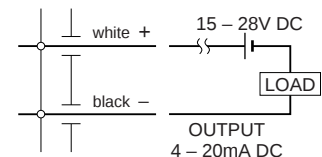
STANDARDS & APPROVALS

CE conformity: EMC Directive (89/336/EEC)
 EMI EN61000-6-4
 EMS EN61000-6-2

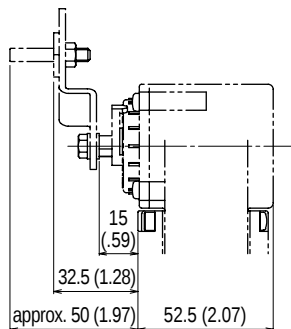
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



■ Cable Connected Type



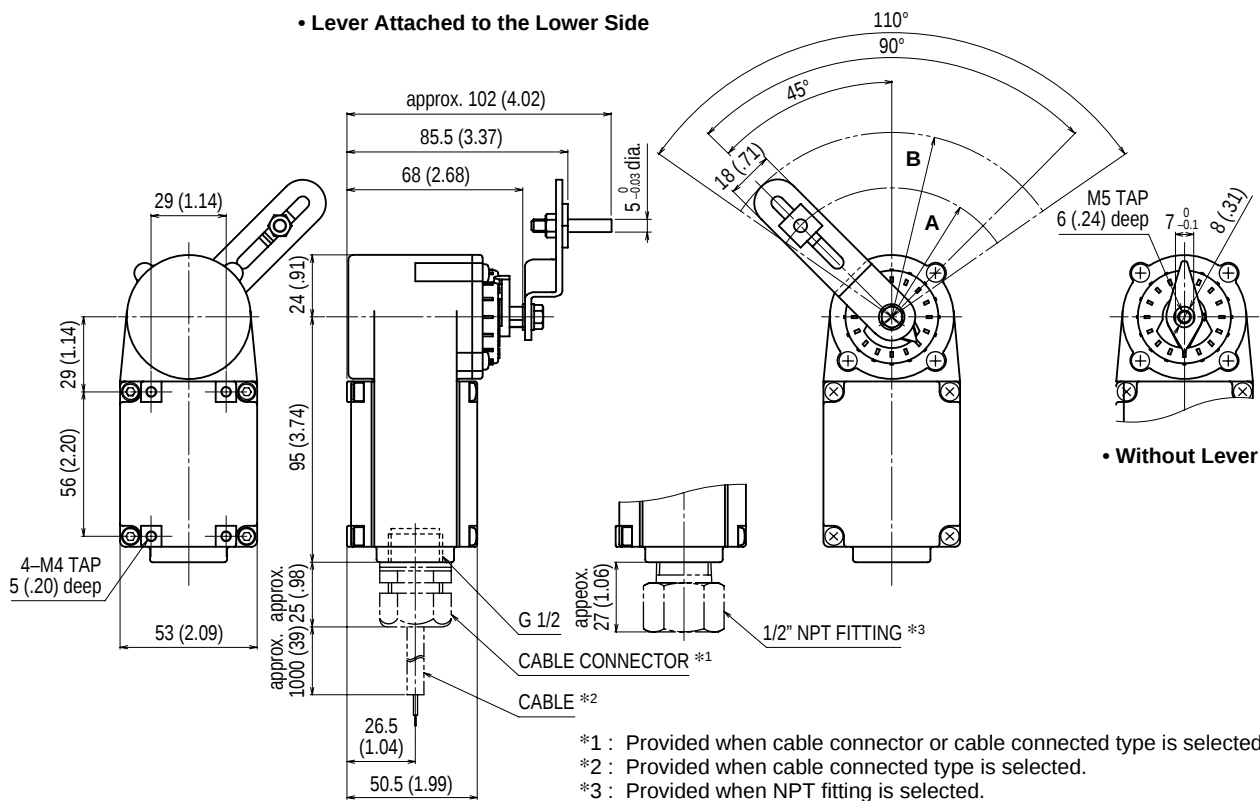
EXTERNAL DIMENSIONS mm (inch)



LEVER SIZE mm (inch)

LEVER TYPE	A	B
Effective Radius 15 – 40 mm (.59" – 1.57")	R12 (.47) – R45 (1.77)	54 (2.13)
Effective Radius 40 – 130 mm (1.57" – 5.12")	R38 (1.50) – R132 (5.20)	141 (5.55)
Effective Radius 35 – 80 mm (1.38" – 3.15")	R30 (1.18) – R82.5 (3.25)	91.5 (3.60)

• Lever Attached to the Lower Side



• Without Lever

• Lever Attached to the Upper Side