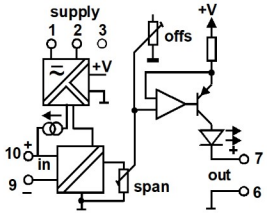
# Tap Position Transducer v4 TPT194


The TPT194 is a signal isolator designed to interface to Tap Position Resistors and Tap changers which are used for the purpose of maintaining a constant voltage on a power system. The TPT194 provides excitation to the tap resistors. The resultant voltage developed is measured and isolated to provide a DC output proportional output. The DC output can set to a common process signal using internal links. Final calibration is trimmed using the front accessible 'offs' and 'span' 15-turn trim adjustments.

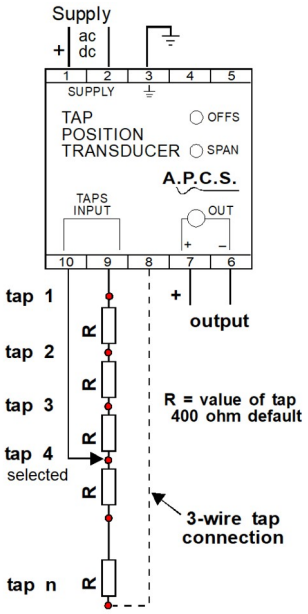
## General Specifications

| | |
|---|---|
| Size: | 52 W x 70 H x 110 D (mm). |
| Housing material: | ABS. |
| Mounting: | DIN-Rail, gear plate. |
| Termination: | Screw terminals on front<br>Terminal covers standard. |
| Protection class: | IP40. |
| Weight: | 0.370 kg. |
| Accuracy: | 0.15% of span. |
| Front 'OFFS' adjust: | ±20% typical. |
| Front 'SPAN' adjust: | ±20% typical. |
| Linearity: | 0.15% of span above 0.2mA. |
| Repeatability: | 0.1% of span. |
| Response time: | 0.5 sec for $T_{90}$ standard. |
| Temperature effect: | 0.025% per °C. |
| Operating temp. range: | -10...-60°C. |
| Storage temp. range: | -20...+70°C. |
| Output loop drive: | 10mA into 0 – 1.8kΩ, 20mA into 0 - 900Ω. |
| Output load change effect: | less than 0.2% up to maximum load stated. |
| Isolation: | 3.5kVrms, 5kV impulse. |
| Power requirements: | 3W. |
| Electromagnetic compatibility: | AS/NZS 4251.1 (EN 50081.1) |

## Block Diagram




## Connection




Earth on terminal 3 is optional.

*You must specify "Tap Resistance" and "Number of Taps"*

## Coder Code: TPT194 - X 00 A X X X

**Power Supply:**

1 = 90-280Vac 50/60Hz (65-280Vdc). 6 = 8 - 60Vdc.

*) 3 = 16-48Vac 50/60Hz (10-60Vdc)

**Output:**

A = Link Selectable. Please required output, the factory default is 4-20mA.

**Action:**

1 = Direct *) 2 = Reverse.

**Option:**

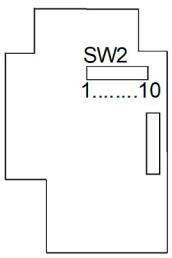
0 = None.

*) A = SPL0992 50Hz, noise filter. Filter a superimposed 50Hz noise (5Vac max) on top of the input signal, used with 3-wire connections only).

**Tap Connection**

0 = 2-wire (CC 20V max). A constant current is set for the specified tap resistance and number of taps. Maximum of 20mA and 20V.

1 = 3-wire (20Vdc). A constant voltage set at a maximum of 20V calculated for the specified tap resistance and number of taps. The voltage setting is reduced if above 20mA.




*) 2 = 3-wire (25 to 50Vdc / 20mA max). A constant voltage set at a maximum of 50V calculated for the specified tap resistance and number of taps. The voltage setting is reduced if above 20mA.

*) 3 = 3-wire 3.8Vdc.

*) 4 = 3-wire constant current low resistance taps (CC 2.5V max)

**Output Link Selection - SW2**

| Output | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| 4-20mA | X | X | | | | | | | | |
| 0-20mA | | | | | X | | | | | |
| 0-10mA | | | X | | | | | | | |
| 0-1mA | | | | X | | | | | | |
| 0-1V | | | | | X | | | | X | |
| 0-2V | | | | | X | | | | | X |
| 0-5V | | | | | X | | | X | | |
| 1-5V | X | X | | | | | | X | | |
| 0-10V | | | | | X | | X | | | |