

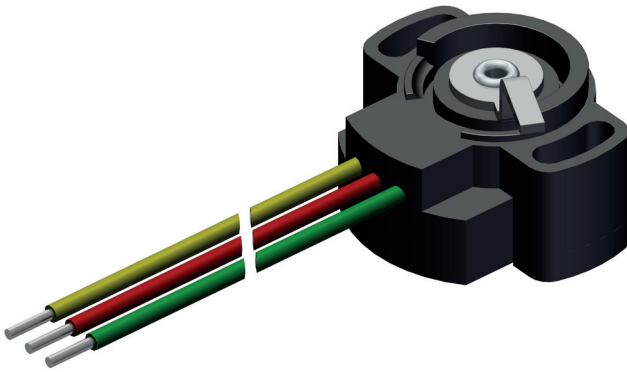
Rotary Transducers

Potentiometer with radial adjusting arm

PMR 411 model

Document no.: PMR 10865 EE

Date: 20.02.2019



- Designed for the measurement and transmission of valve, flap, threadle and pedal positions in vehicles
- Oil, petrol, water and anti-freeze liquid resistant
- Conductive plastic long life resistant element (up to 10 or 50 million cycles)
- Measurement range $95^\circ \pm$
- Operating temperature range -40°C to $+125^\circ \text{C}$
- Protection grade IP 65

Construction

Adjustment by radial arm, with integral spring return - with two mounting holes to allow 20° case adjustment - electrical connection via three lateral leads 300 mm long.

Mechanical data

- Mechanical rotary angle: $125 \pm 5^\circ \pm$
- Stop strength: $\geq 60 \text{ Ncm}$
- Direction of spring return: CCW
- Force of spring return
 - at starting point: $> 5 \text{ Ncm}$
 - at end: $< 10 \text{ Ncm}$

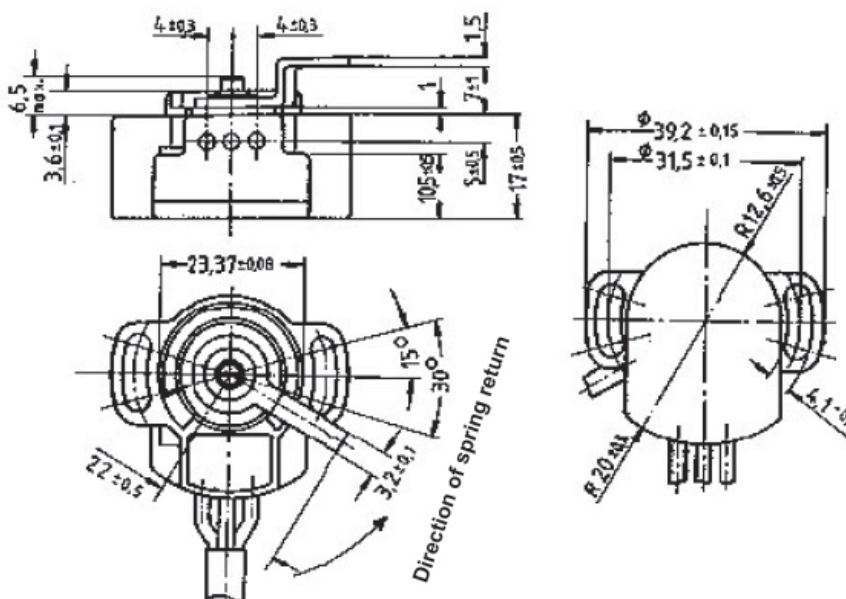
Environmental data

- Operating temperature range: -40°C to $+125^\circ \text{C}$
- Storage temperature range: -55°C to $+135^\circ \text{C}$
- Vibration resistancy: 100 m/s^2 at 10 to 500 Hz

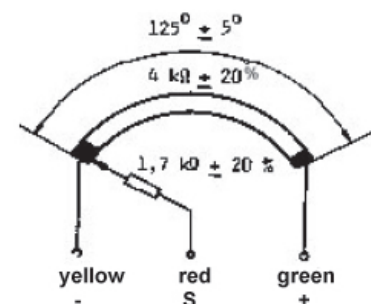
Electrical data

- Resolution of resistant element: infinite
- Useful electrical angle: $95 \pm 3^\circ$
- Life expectancy PMR 411: $\geq 50 \times 10^6$ cycles
- Permissible load:
 - 0.5 W up to $+40^\circ \text{C}$
 - 0.05 W up to $+125^\circ \text{C}$
- Total resistance: $4 \text{ k}\Omega \pm 20 \%$
- Linearity: 1.5 %
- Recommended current through wiper: $\leq 100 \mu\text{A}$
- Permissible current through wiper: $\leq 0.5 \mu\text{A}$ continuously
- Protective resistance at wiper: $1.7 \text{ k}\Omega \pm 20 \%$
- Length of leads: $300 \text{ mm} \pm 20 \text{ mm}$
- Section of leads: 0.93 mm^2
- Mass: 0.035 g

Dimensions



Electrical connection



Wiper at starting point by spring return