Analog Displacement Sensors for Off-Road Applications



FEATURES

- Conductive plastic potentiometer technology
- Use in engine compartment
- Wire or connector outputs
- Lever drive with return spring
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

RoHS COMPLIANT

DESIGN SUPPORT TOOLS

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3D Models Available

QUICK REFERENCE DATA	
Sensor type	ROTATIONAL, conductive plastic
Output type	Output by integrated connector or wires
Market appliance	Transportation
Dimensions	39.5 mm x 31.5 mm x 23.37 mm

ELECTRICAL SPECIFICATIONS	
PARAMETER	
Total electrical travel	95° ± 1.5°
Independent linearity	± 1.5 %
Inter-linearity	± 3 %
Total resistance (R_n)	2 x 4 kΩ ± 20 % in //
Output smoothness	< 0.1 % (NFC 93255)
Power rating at +40 °C	0.5 W
Power rating at +125 °C	0.05 W
Wiper current limiting resistance (R_p)	2 x 1.7 kΩ ± 20 %
Recommended wiper current	≤ 100 µA
Maximum wiper current	15 mA for 1 min
Recommended load impedance	≥ 100 R_n

MECHANICAL SPECIFICATIONS	
PARAMETER	
Mechanical rotation	125° ± 5°
Lever return torque at start of travel	≥ 1.5 N cm
Lever return torque at end of travel	≤ 8.5 N cm
Stop strength	60 N cm
Lever return	Anti-clockwise
Protection class	IP 67
Mounting screw tightening torque	2.3 N m maximum

PERFORMANCE	
PARAMETER	
Operating temperature range	-40 °C to +125 °C
Storage temperature range	-55 °C to +135 °C
Vibrations	Severity 10 Hz to 2000 Hz, 10 mm or 50 *g*
Life	5M cycles (TET)
Micro-movements (dither stroke)	> 50M cycles

Note

- Nothing stated herein shall be construed as a guarantee of quality or durability

For technical questions, contact: mcbprecisionpot@vishay.com

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SAP PART NUMBERING GUIDELINES - PMR410 / PMR420

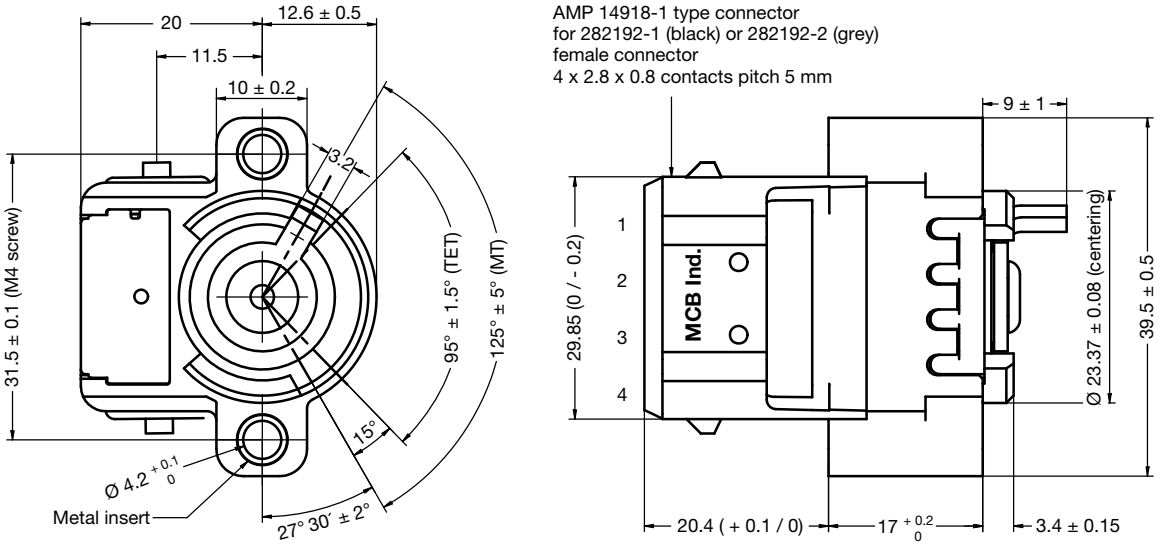
MODEL	TYPE	LEVER TYPE	VALUE	ANGLE	LEADS	PACKAGING
PMR4	10 = redundant with integrated connector output 20 = redundant with wires output	A = lever A C = lever C	202 = 2K0 (2 x 4 kΩ in //)	095	I = integrated connector (for PMR410) W = wire (for PMR420)	C = 20 pcs G = 100 pcs M = 400 pcs

CONNECTIONS

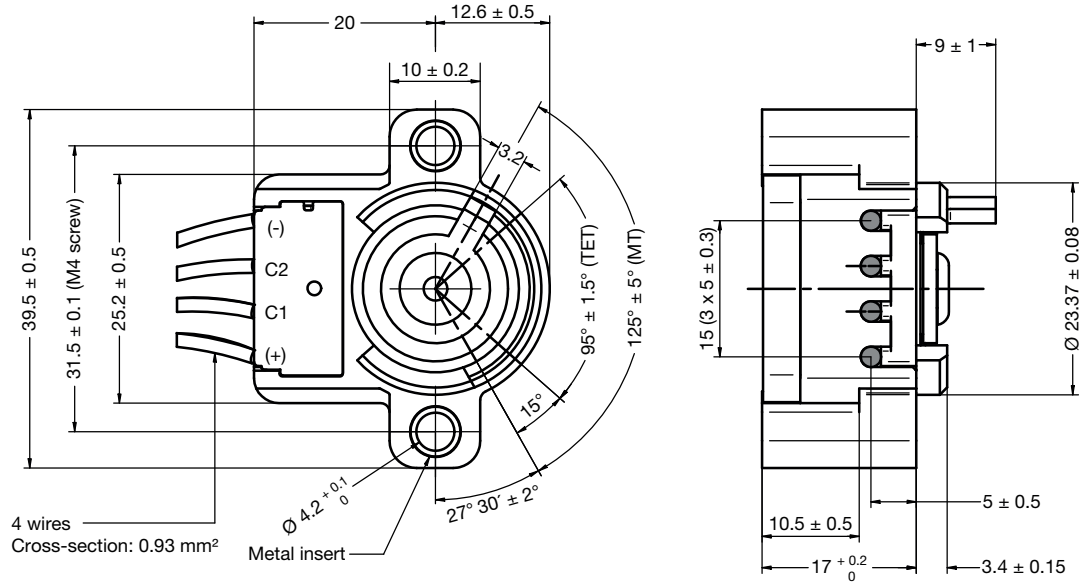
Type PMR410: AMP 142918-1 type integrated connector outputs
Type PMR420: Wire outputs (RoHS compliance to confirm in function of wires)

DIMENSIONS in millimeters

PMR410



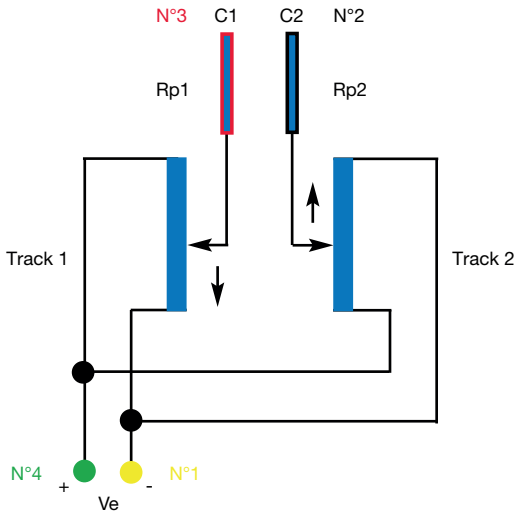
PMR420

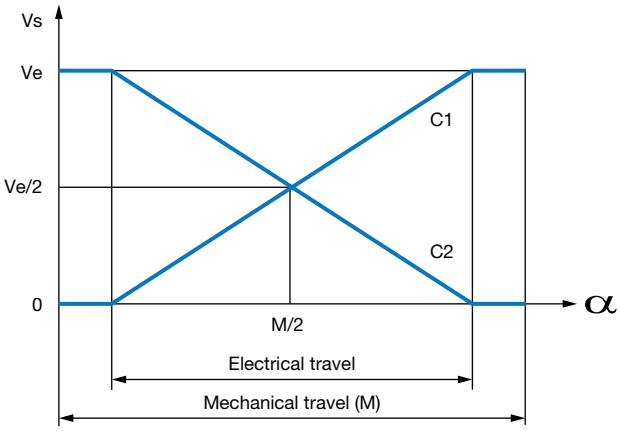


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ELECTRICAL DIAGRAM





OPTIONS (on request)

- Other electrical travel
- Other total resistance
- Other linearity
- No protection resistance (R_p)
- Other lever

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