Fully Sealed Potentiometers Cermet (PRV6)
Conductive Plastic (PARV6)



FEATURES

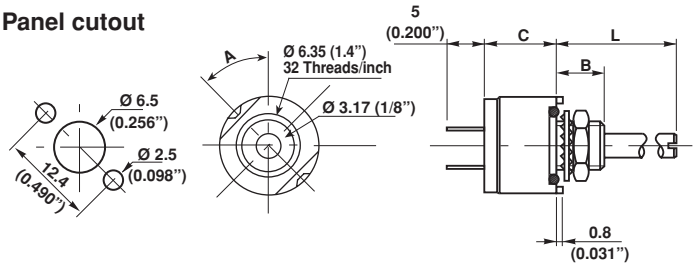
- PRV6 1.5 Watt at 70°C
- PARV6 0.75 Watt at 70°C
- CECC 41300
- Military performances
- Low cost
- Fully sealed and panel sealed
- Compatible RV6 (MIL R 94)
- High power rating (cermet)
- High stability
- Mechanical life 50,000 cycles

DIMENSIONS in millimeters [inches]

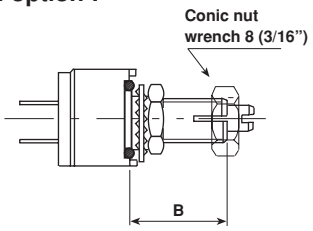
PRV cermet PRV6
PARV conductive plastic PARV6

Shafts and bushings : 6 - 61 - 62
6LC - 61LC - 62LC

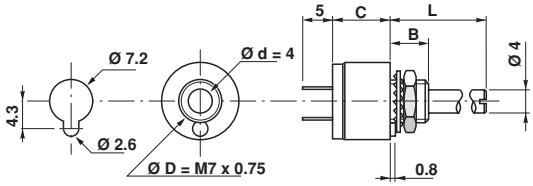
Panel cutout



Locking shaft H option :
61H - 62H
61LCH - 62LCH



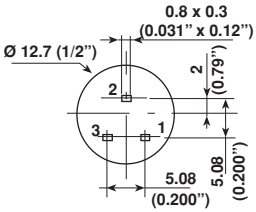
Shaft Dia 4 mm : 6Q - 61Q - 61QH
6QLC - 61QLC - 61QLCH



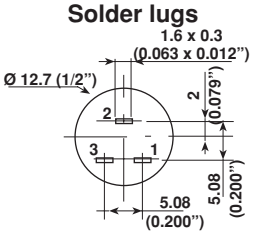
See ordering information for quotation

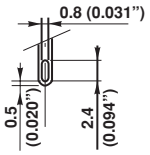
Terminal options available on all types

PCB pins
W option

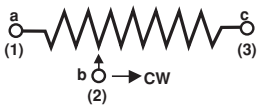


Solder lugs

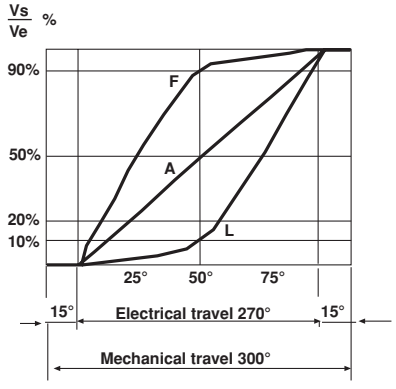




CIRCUIT DIAGRAM



VARIATION LAWS



TAPERS

Tapers A - L - F - are measured between the wiper (2) and the ccw terminal (1).

ELECTRICAL SPECIFICATIONS

		PRV6	PARV6
Resistive Element		cermet	conductive plastic
Electrical Travel		270° ±15°	270° ± 15°
Resistance Range			
Linear Law (A)		20Ω to 10MΩ	1 kΩ to 1MΩ
Non Linear Laws (F-L)		470Ω to 1MΩ	470Ω to 500 kΩ (± 20%)
Tolerance	**Standard**	± 20% ± 10%	± 20 %
	On Request	± 5 %	± 10 % (1 kΩ to100 kΩ)
Power Rating at + 70°C	**Linear**	1.5 W	0.75W
	Others Tapers	0.75 W	0.4W
Temperature Coefficient		± 100ppm/°C	± 1000ppm/°C
Limiting Element Voltage		350 V	350 V
Contact Resist. Variation CRV		2% or 3Ω	
End Resistance (Typical)		1Ω	
Dielectric Strength		1750 VRMS (2000 VRMS on request)	
Insulation Resistance (500VDC)		10^6MΩ	

MECHANICAL SPECIFICATIONS

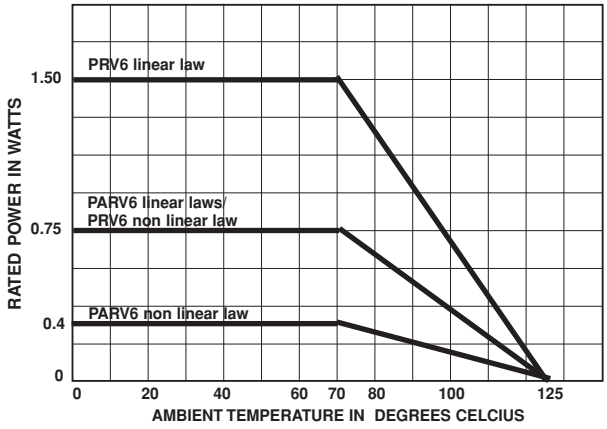
Mechanical Travel 300° ± 5°

Operating Torque 0.5 to 2 Ncm
or 0.7 to 3 oz.in.

End Stop Torque max 35 Ncm
or 3 lb.in.

Tightening Torque max 150 Ncm
or 13 lb.in

POWER RATING CHART



ENVIRONMENTAL SPECIFICATIONS

	PRV6	PARV6
Temperature Range	– 55°C + 125°C	– 40°C + 125°C
Climatic Category	55/125/56	40/125/56
Sealing	fully sealed container IP67 and panel sealed	

PERFORMANCE (PRV6)

		CECC 41 300 and/or MIL R 94		TYPICAL VALUES AND DRIFTS	
TESTS	**CONDITIONS**	$\frac{\Delta RT}{RT}$(%) **REQUIREMENTS**	$\frac{\Delta R_{1-2}}{R_{1-2}}$(%)	$\frac{\Delta RT}{RT}$(%)	$\frac{\Delta R_{1-2}}{R_{1-2}}$(%)
Load Life	1000 h at rated power 90'/30' - temperature 70°C	± 10% CRV < 7% Rn		± 1% CRV < 3% Rn	
Climatic Sequence	Phase A dry heat 100°C Phase B damp heat Phase C cold –55°C Phase D damp heat 5 cycles	± 10%	± 10%	± 0.5%	± 1%
Long Term Damp Heat	56 days	± 10% Insulation resist. > 100MΩ	± 10%	± 0.5% Insulation resist. > 10^4MΩ	± 1%
Rapid Temperature Change	5 cycles – 55°C at + 125°C	± 3%		± 0.5%	
Vibration	10g 55 to 2000 Hz 2 h each direction	± 2% no CUT > 0.1 ms	± 5%	± 0.1%	± 0.2 %
Shock	100 g 6 ms 20 shocks	± 2%	± 5%	± 0.1%	± 0.2 %
Rotational Life	50.000 cycles	± 10% CRV < 7 % Rn		± 3% CRV < 2% Rn	

STANDARD RESISTANCE ELEMENT DATA

STANDARD RESISTANCE VALUES	PRV6 LINEAR LAW			PRV6 NON LINEAR LAWS			T.C. – 55°C + 125°C
	MAX. POWER AT 70°C	MAX. WORKING VOLTAGE	MAX. CUR. THROUGH ELEMENT	MAX. POWER AT 70°C	MAX. WORKING VOLTAGE	MAX. CUR. THROUGH ELEMENT	
Ω	W	V	mA	W	V	mA	ppm/°C
20	1.5	5.48	274				0
50		8.66	173				+ 200
100		12.2	122				
200		17.3	87				
500		27.4	55				
1k		38.7	38.7	0.75	27.3	27.4	
2k		54.8	27.4		38.2	19.3	
5k		86.6	17.3		61.2	12.2	
10k		122.5	12.2		87	8.7	PRV6
20k		173	8.26		122	6.1	± 100
50k	1.5	274	5.65		194	3.9	
100k	1.22	350	3.5	0.75	273	2.74	
200K	0.61	350	1.75	0.61	350	1.75	
500K	0.25	350	0.7	0.25	350	0.7	
1M	0.12	350	0.35				
2M	0.06	350	0.17				
5M	0.025	350	0.07				
10M	0.012	350	0.035				

PACKAGING

Carton box of 50, code: BO50

PANEL SEALING

Except for dia. 4 mm shaft, an O.ring is supplied with the potentiometer. This O.ring should be placed into the groove of the body and ensures the panel sealing.
For dia. 4mm shaft please see note “P” in ordering information.

SHAFTS

Shaft lengths are measured from the mounting face to the free end of the shaft. Special shafts are available if the customer supplies a drawing. The shaft slot is aligned to the wiper within ± 10°.

HARDWARE

Nuts, washer and O.ring are **separately supplied** (not mounted on the potentiometer), in a small bag placed in the packaging.

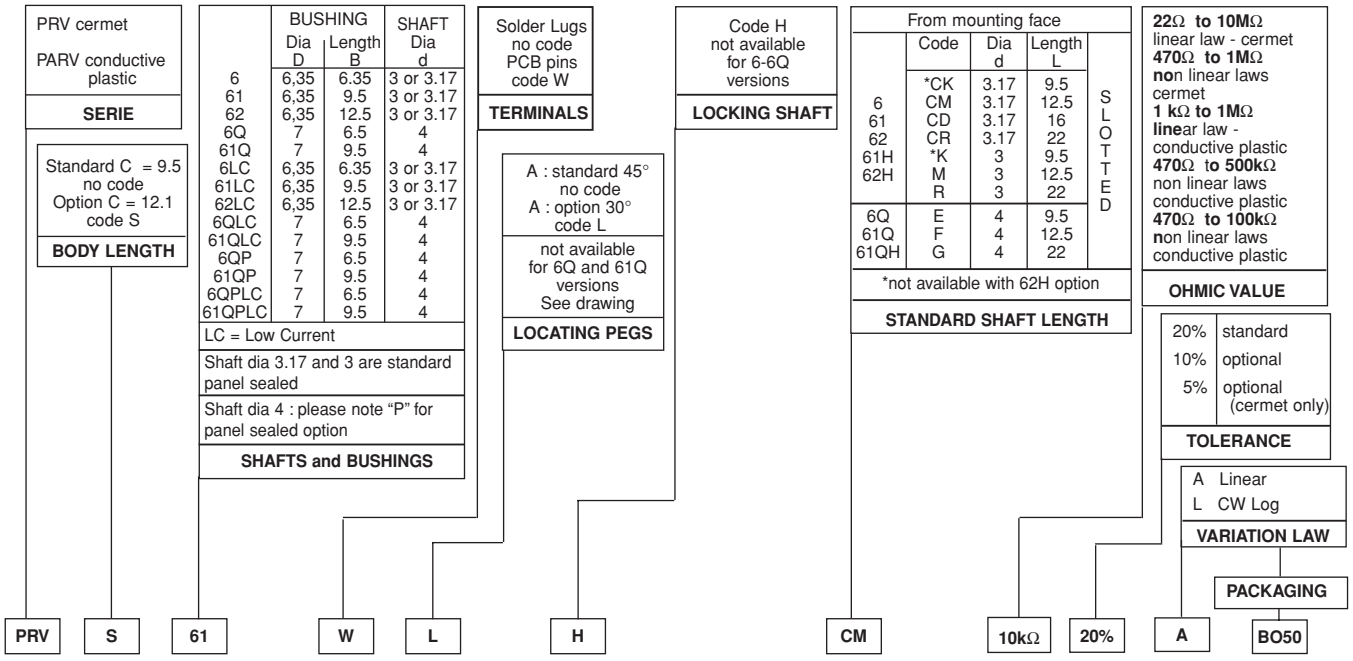
LOCATING PEG

Except for dia. 4 mm shaft, the potentiometers are delivered with 2 opposite locating pegs orientated at 45°. These 2 pegs can be easily broken-off by the customer. On request, the orientation of the pegs can be at 30° instead of 45°. Order Designation: PRV6 L (see ordering information).

MARKING

VISHAY trademark, series, style, ohmic value (in Ω, kΩ or MΩ), tolerance in %, taper code, manufacturing date (4 digits : 2 for year, 2 for week), terminal 1.

ORDERING INFORMATION



“LC” OPTION LOW CURRENT

For sensitive applications, when the current going through the wiper of the potentiometer is very low (less than 1µ Amp) or when the climatic conditions of use are tightened up, we recommend to use the Low Current (LC) option of the PRV6 and PARV6 series.

The general characteristics of this model are identical with the standard PRV6/PARV6 characteristics but it gives exceptional results in matter of stability when used in extreme climatic conditions and/or current close to O Amp.