



PRV6 PARV6

fully sealed potentiometers

- cermet (PRV6)
- conductive plastic (PARV6)

PRV6
1,5 W at 70°C
PARV6
0,75 W at 70°C

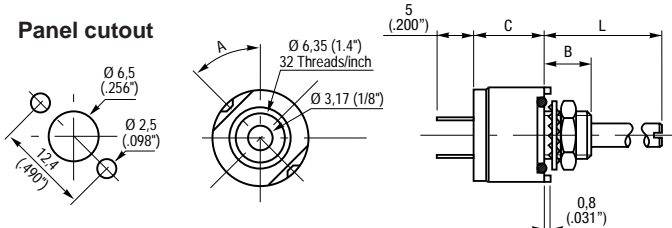


- MILITARY PERFORMANCES
- LOW COST
- FULLY SEALED AND PANEL SEALED
- COMPATIBLE RV6 (MIL R 94)
- HIGH POWER RATING (CERMET)
- HIGH STABILITY
- MECHANICAL LIFE 50.000 CYCLES

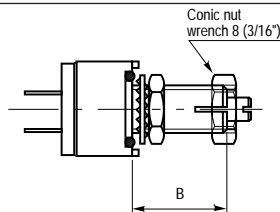
PRV cermet PRV6 PARV conductive plastic PARV6

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

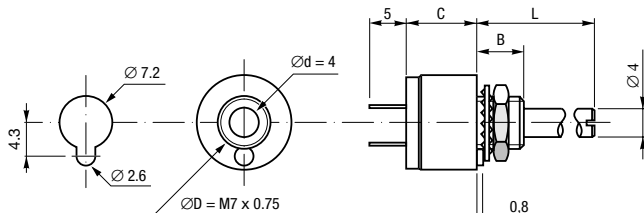
Panel cutout



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



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

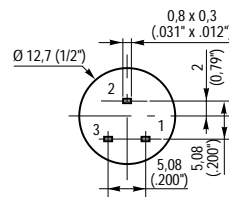


See ordering procedure for quotation.

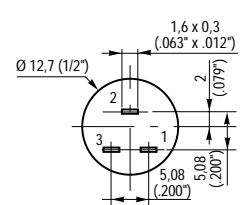
Dimensions in mm (inches)

Terminal options available on all types

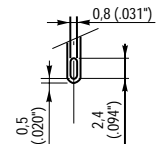
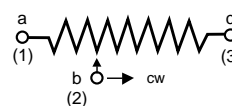
PCB pins W option



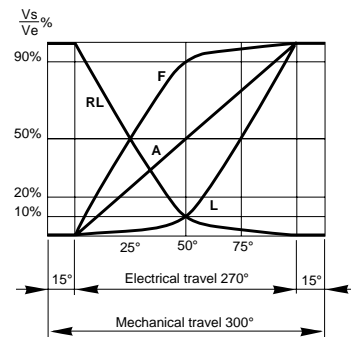
Solder lugs



CIRCUIT DIAGRAM



VARIATION LAWS



SPECIFICATIONS

	MECHANICAL	ELECTRICAL	PRV6	PARV6
MECHANICAL TRAVEL...	300° ±5°	RESISTIVE ELEMENT...	cermet	conductive plastic
OPERATING TORQUE...	0,5 to 2 Ncm or 0,7 to 3 oz.in.	ELECTRICAL TRAVEL...	270° ±15°	270° ± 15°
END STOP TORQUE max....	35 Ncm or 3 lb.in.	RESISTANCE RANGE...		
TIGHTENING TORQUE max....	150 Ncm or 13 lb.in.	linear law (A)	20 Ω to 10 MΩ	1 kΩ to 500 kΩ
		non linear laws (RL-F-L)	500 Ω to 1 MΩ	470 Ω to 220 kΩ (±20%)
		TOLERANCE standard...	± 20 % ±10 %	± 20 %
		on request...	± 5 %	± 10 % (1 kΩ to 100 kΩ)
		POWER RATING at +70°C linear...	1,5 W	0,75 W
		others tapers...	0,75 W	0,75 W
		TYPICAL T.C.R. (for Rn >100 Ω)...	100 ppm/°C	500 ppm/°C
		LIMITING ELEMENT VOLTAGE...	350 V	350 V
		CONTACT RESIST. VARIATION CRV...		2 % or 3 Ω
		END RESISTANCE (typical)...		1 Ω
		DIELECTRIC STRENGTH...	1750 VRMS (2000 VRMS on request)	
		INSULATION RESISTANCE (500VDC)...		10 ⁹ MΩ

TAPERS

Tapers A - L - F - are measured between the wiper (2) and the CCW terminal (1).
Taper RL, is measured between the wiper (2) and the CW terminal (3).

ENVIRONMENTAL

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

PERFORMANCES PRV6

Table 2

CECC 41 300 and/or MIL R 94				TYPICAL VALUES AND DRIFTS	
TESTS	CONDITIONS	REQUIREMENTS		$\frac{\Delta RT}{RT}$ (%)	$\frac{\Delta R1-2}{R1-2}$ (%)
		$\frac{\Delta RT}{RT}$ (%)	$\frac{\Delta R1-2}{R1-2}$ (%)		
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. > 100 MΩ Dielectric strength 250 V	±10 %	±0,5 % Insulation resist. > 10 ⁴ MΩ Dielectric strength 1000 V	±1 %
RAPID TEMPERATURE CHANGE	5 cycles -55°C at +125°C	±3 %		±0,5 %	
MOISTURE RESISTANCE	10 cycles humidity 5 cycles low temp. + vibrations	±10 % + average ±6 % Insulation > 100 MΩ		±1 % Insulation resist. > 10 ⁴ MΩ	
VIBRATIONS	10 g 55 to 2000 Hz 2 h each direction	±2 % no CUT > 0.1 ms	±5 %	±0,1 %	±0,2 %
SHOCKS	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

Table 3

Standard resistance values	PRV6 linear law			PARV6 and 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				
1 k		38.7	38.7	0.75	27.3	27.4	
2 k		54.8	27.4		38.2	19.3	
5 k		86.6	17.3		61.2	12.2	
10 k		122.5	12.2		87	8.7	
20 k		173	8.26		122	6.1	PRV6 ±100
50 k	1.5	274	5.65		194	3.9	
100 k	1.22	350	3.5	0.75	273	2.74	PARV6 ±1000
200 k	0.61	350	1.75	0.61	350	1.75	
500 k	0.25	350	0.7	0.25	350	0.7	
1 M	0.12	350	0.35				
2 M	0.06	350	0.17				
5 M	0.025	350	0.07				
10 M	0.012	350	0.035				

PANEL SEALING

Except for dia. 4 mm shaft an O.ring is systematically supplied with the potentiometer. This O.ring placed into the groove of the body assures the panel sealing.
For dia. 4 mm shaft please note "P" (see ordering procedure).

SHAFTS

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

HARD WARE

Nuts, washer and O.ring are **separately supplied** (unmounted on the potentiometer), into a small bag placed in the packaging.

LOCATING PEG

Except for dia. 4 mm shaft others are delivered with 2 opposite locating pegs oriented at 45°. These 2 pegs can be easily broken by the customer.

On request, their orientation can be at 30° in place of 45°
Designation : PRV6 L (see ordering procedure).

MARKING

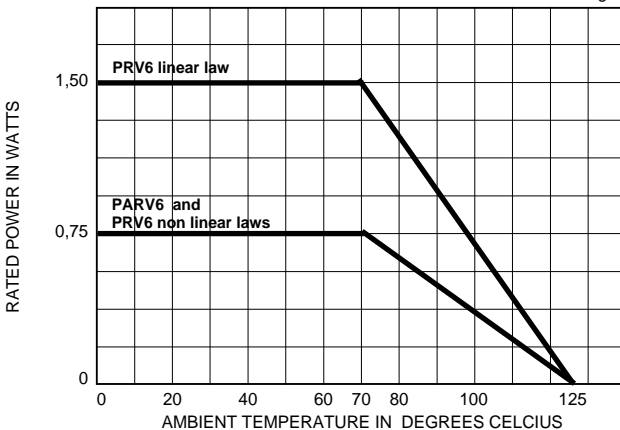
SFERNICE trademark, series, style, ohmic value (in Ω, kΩ or MΩ), tolerance in %, taper code, manufacturing date (4 digits : 2 for year, 2 for week), terminal 1.

PACKAGING

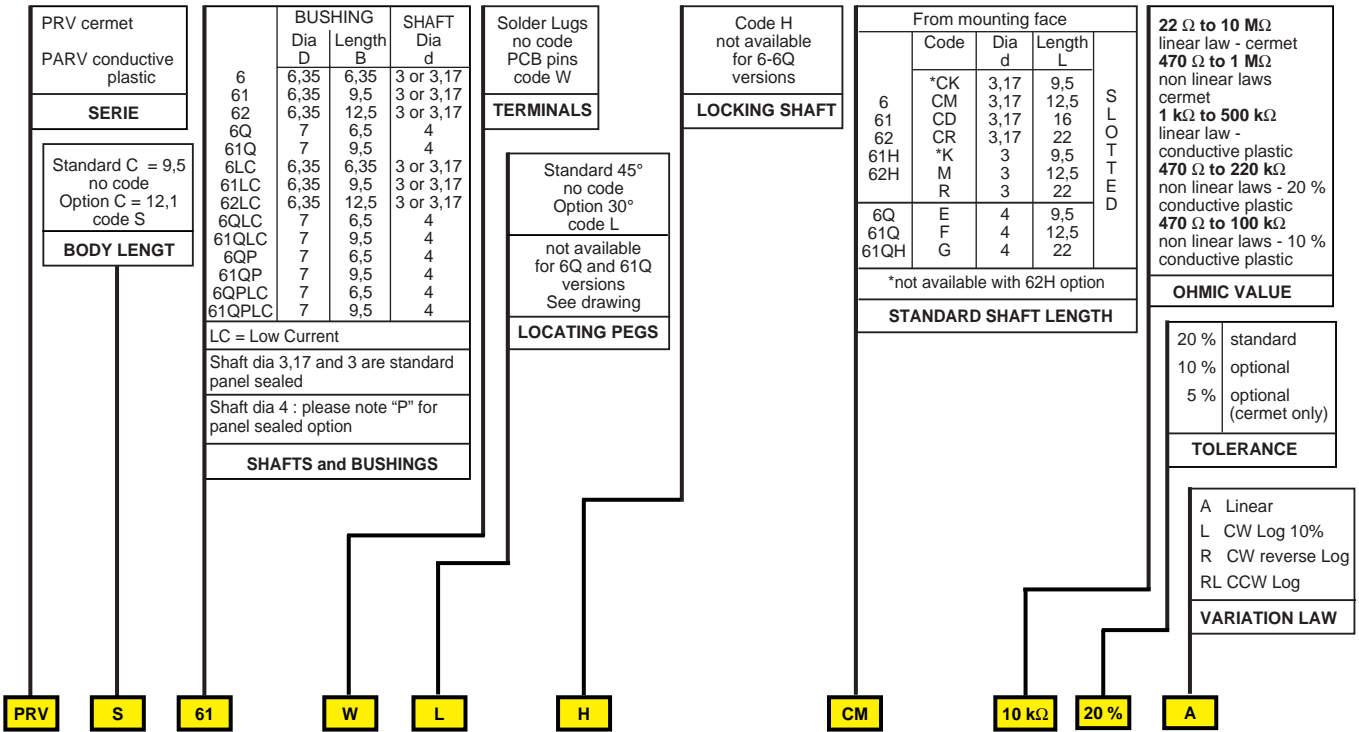
Carton box of 50.

POWER RATING CHART

Fig. 2



ORDERING PROCEDURE



"LC" OPTION Low Current

For sensitive applications, when the current going through the wiper of the potentiometer is very low (less than 1 μ A) 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 0 Amp.

