

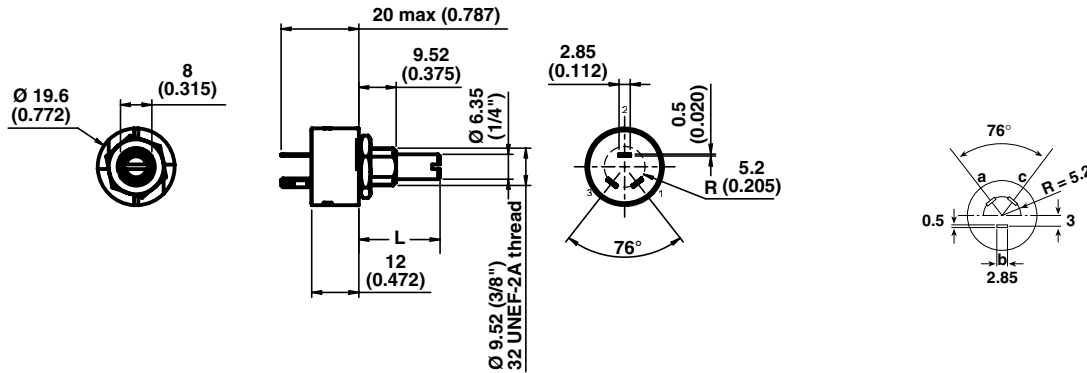
Industrial Potentiometer


FEATURES

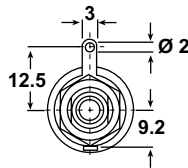
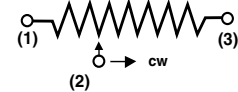
- High power rating 2 Watt at 70 °C
- Full sealing
- Low contact resistance variation (1 % typical)
- Robust nickel plated brass shaft
- Use of faston 2.86 connections
- Cermet element
- Electrical performance in accordance with MIL-PRF-94 standards


RoHS
COMPLIANT

DIMENSIONS in millimeters

PRV4F


LENGTH L	1/2"	7/8"	2"
SHAFT CODE	GBS	GJS	GRS

PRV4 LPRP - WITH LOCATING PEG

CIRCUIT DIAGRAM




**SPECIAL FEATURES
COMMAND SHAFT**

Length is measured from the mounting surface to the free end of the shaft. The screwdriver slot is aligned with the wiper within $\pm 10^\circ$. Special shafts are available, in accordance to drawings supplied by customers. We recommend that customers should not machine shafts, in order to avoid damage. Bending or torsion of terminals should also be avoided.

LINEARITY

The typical linearity of linear variation law potentiometers is $\pm 5\%$. Guaranteed linearity on request. Consult VISHAY.

ELECTRICAL SPECIFICATIONS		
Resistive Element		cermet
Electrical Travel		$270^\circ \pm 10^\circ$
Resistance Range	Linear Law	20 Ω to 10 M Ω
	Logarithmic Laws	100 Ω to 2.5 M Ω
Standard series		1 - 2 - 2.5 - 5
Tolerance	Standard	$\pm 20\%$
	On Request	$\pm 10\%$
Power Rating	Linear	2 W at + 70 $^\circ\text{C}$
	Logarithmic	1 W at + 70 $^\circ\text{C}$
Temperature Coefficient		See Standard Resistance Element Data
Limiting Element Voltage (Linear Law)		500 V
Contact Resistance Variation (Typical)		1 % Rn or 3 Ω
End Resistance		4 Ω
Dielectric Strength (RMS)		1500 V
Insulation Resistance (500 VDC)		10^4 M Ω

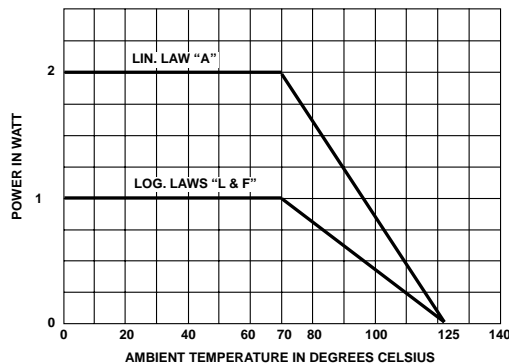
MECHANICAL SPECIFICATIONS

Mechanical Travel 300 $^\circ \pm 5^\circ$
 Operating Torque (max. Ncm) 3 typical [4.3 oz. inch]
 End Stop Torque (max. Ncm) 70 [6 lb. inch]
 Max Tightening Torque of Mounting Nut (Ncm) 200 [17.3 lb. inch]
 Unit Weight (max. g) 23 to 32 [0.82 oz to 1.14 oz]

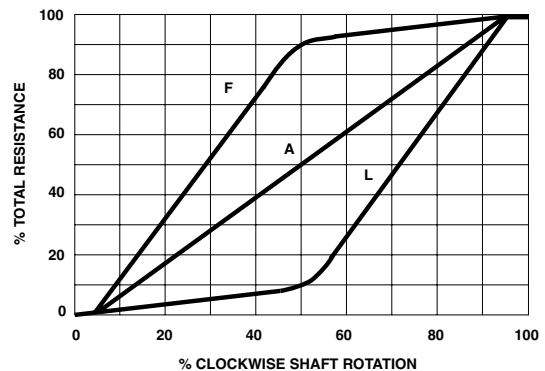
ENVIRONMENTAL SPECIFICATIONS

Temperature Range - 55 $^\circ\text{C}$ to + 125 $^\circ\text{C}$
 Climatic Category 55/125/10
 Sealing fully sealed container IP67

POWER RATING CHART



RESISTANCE LAWS





PERFORMANCE			
TESTS	CONDITIONS	TYPICAL VALUES AND DRIFTS	
		$\frac{\Delta RT}{RT}$ (%)	$\frac{\Delta RT_{1-2}}{RT_{1-2}}$ (%)
Load Life	1000 h at rated power 90°/30° - ambient temp. 70 °C	± 3 % Contact resistance variation: < 5 %	± 5 %
Moisture Resistance	MIL STD 202 Method 105 10 cycles of 24 hours constituted with damp heat - cold - vibrations	± 2 % Dielectric strength: 100 V RMS Insulation resistance: > 10 ⁴ MΩ	± 3 %
Long Term Damp Heat	Temperature 40 °C - RH 93 % 10 days	± 2 % Dielectric strength: 100 V RMS Insulation resistance: > 10 ⁴ MΩ	± 3 %
Thermal Shock	55 °C to + 125 °C - 5 cycles	± 1 %	$\frac{\Delta V_{1-2}}{V_{1-3}} \leq \pm 2 \%$
Rotational Life (Electrical and Mechanical)	25 000 cycles	± 5 %	
Shock	MIL STD 202 Method 213/1 100 g - 6 ms 3 successive shocks in 3 directions	± 1 %	$\frac{\Delta V_{1-2}}{V_{1-3}} \leq \pm 1 \%$
Vibration	MIL STD 202 Method 204/D 20 g - 12 hours	± 1 %	$\frac{\Delta V_{1-2}}{V_{1-3}} \leq \pm 1 \%$

STANDARD RESISTANCE ELEMENT DATA							
STAN- DARD RESIS- TANCE VALUES	LINEAR LAW			LOGS LAW			TCR 55 °C + 125 °C ppm/°C
	MAX. POWER AT 70 °C	MAX. WORKING VOLTAGE	MAX. CUR. THROUGH ELEMENT/ WIPER	MAX. POWER AT 70 °C	MAX. WORKING VOLTAGE	MAX. CUR. THROUGH ELEMENT/ WIPER	
Ω	W	V	mA	W	V	mA	
20	2	6.32	316	1	4.47	224	0 + 400
25	↓	7.07	283	↓	5.00	200	
50	↓	10.0	200	↓	7.07	141	
100	↓	14.1	141	↓	10.0	100	± 200
200	↓	20.0	100.0	↓	14.1	70.7	
250	↓	22.4	89.4	↓	15.8	53.2	
500	↓	31.6	53.2	↓	22.4	44.7	
1K	↓	44.7	44.7	↓	31.5	31.6	
2K	↓	53.2	31.6	↓	44.7	22.4	
2.5K	↓	70.7	28.3	↓	50.0	20.0	
5K	↓	100	20.00	↓	70.7	14.1	
10K	↓	141	14.14	↓	100	10.0	
20K	↓	200	10.00	↓	141	7.07	
25K	↓	224	6.04	↓	158	6.32	
50K	↓	315	6.32	↓	224	4.47	
100K	2	447	4.47	↓	315	3.16	
200K	1	500	2.50	↓	447	2.24	
250K	1	500	2.00	↓	499	2.00	
500K	0.50	500	1.00	0.50	500	1.00	
1M	0.25	500	0.50	0.25	500	0.50	
2M	0.13	500	0.25	0.13	500	0.25	
2.5M	0.10	500	0.20	0.10	500	0.20	

MARKING

- Printed:
 - VISHAY trademark
 - SERIE
 - ohmic value (EIA Resistance Code)
 - tolerance (IEC Code)
 - manufacturing date
 - marking of terminals 1, 2, 3

ORDERING INFORMATION									
PRV4	F	Ø	GJS	200 KΩ	± 20 %	A	BO	e3	
MODEL	BUSHING	OPTION	SHAFT	OHMIC VALUE	TOLERANCE	LAW	PACKAGING	LEAD FINISH	
		0: none L: LPRP			± 20 % standard ± 10 % on request	A F L	Linear clockwise reverse logarithmic clockwise logarithmic	Box 50 pcs e3: pure Sn	

SAP PART NUMBERING GUIDELINES																	
P	R	V	4	F	0	G	J	S	2	0	4	M	A				
MODEL			BUSHING		OPTION	SHAFT		OHMIC VALUE			TOL	LAW	SPECIAL (IF APPLICABLE)				
See the end of this data book for conversion tables																	



Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.