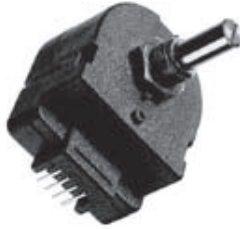


## Full 360° Smart Position Sensor



### FEATURES

- Ratiometric output over 360° range with no dead band
- Self-contained package not requiring external electronic interface
- Angular response 50  $\mu$ s
- Reverse polarity protection
- Absolute and non volatile positioning output



The model 601-1045 represents a new generation of Smart Sensors. This unique electronic device is a self-contained package which provides an analog electrical output over a full 360° without the need of external electronics. The low power consumption and non-volatile output makes this universal sensor the real cost-effective alternative to encoders. It's versatile design makes it suitable for a variety of industries and applications, such as CCTVs, Medical Instruments, Robotic arm control, CNC machinery, Rotational control systems, Pick n' place machines and Angular feedback applications.

STANDARD ELECTRICAL SPECIFICATIONS	
PARAMETER	
Supply	4.5 to 5.5 V <sub>DC</sub>
Supply Current	20 mA max.
Absolute Maximum Supply	6 V
Independent Linearity	$\pm 1$ % typical
Resolution	Resolves down to a min. of 0.5°
Electrical Track	360° continuous
Analog Voltage Output	Not less than 90 % of supply (ratiometric) - see graphs on next page
Output Ramp Slope	Electrically switchable - see graphs
Output Impedance	1 $\Omega$ typical
Temperature Characteristic	$\pm 1^\circ$ max. over - 40/+ 70 °C
Insulation Resistance	1000 M $\Omega$ min.
Dielectric Strength	1000 V <sub>RMS</sub> , 50/60 Hz

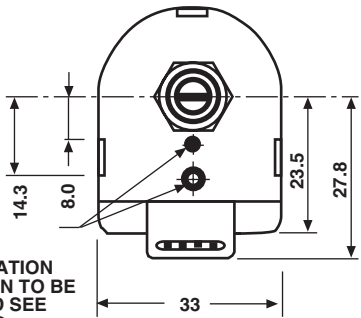
MECHANICAL SPECIFICATIONS	
Rotation	360° continuous
Rotational Speed	5 max. revs/s (duration 60 s)
Operating Torque Maximum	3.68 (0.5) mNm (oz. - in)
Weight	30 g

ENVIRONMENTAL SPECIFICATIONS	
Operating Life	5 000 000 cycles
Operating Temperature Range	- 40 °C to + 70 °C
Storage Temperature Range	- 40 °C to + 105 °C
Sealing	IP54

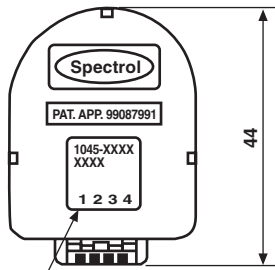
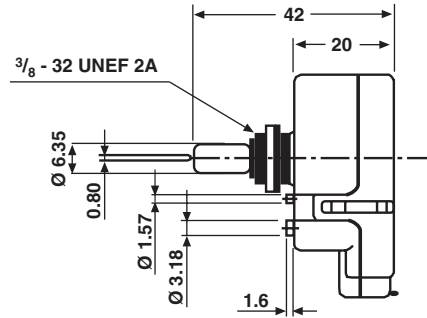
ORDERING INFORMATION/DESCRIPTION																		
601-1045 MODEL	XXXX STANDARD CONFIGURATION CODE	BO1 PACKAGING	e4 LEAD FINISH															
	<table border="1"> <thead> <tr> <th>PRODUCT NUMBER</th> <th>Ø 1.57 PIN</th> <th>Ø 3.18 PIN</th> </tr> </thead> <tbody> <tr> <td>0000</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>0001</td> <td>Yes</td> <td>-</td> </tr> <tr> <td>0002</td> <td>-</td> <td>Yes</td> </tr> <tr> <td>0003</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	PRODUCT NUMBER	Ø 1.57 PIN	Ø 3.18 PIN	0000	Yes	Yes	0001	Yes	-	0002	-	Yes	0003	-	-		
PRODUCT NUMBER	Ø 1.57 PIN	Ø 3.18 PIN																
0000	Yes	Yes																
0001	Yes	-																
0002	-	Yes																
0003	-	-																

SAP PART NUMBERING GUIDELINES			
601 MODEL	1045 STYLE 1045 or 1056	0001 PIN CONFIGURATION	B01 PACKAGING

**DIMENSIONS** in inches (millimeters)



ANTI-ROTATION PIN OPTION TO BE SPECIFIED SEE ORDERING INFORMATION



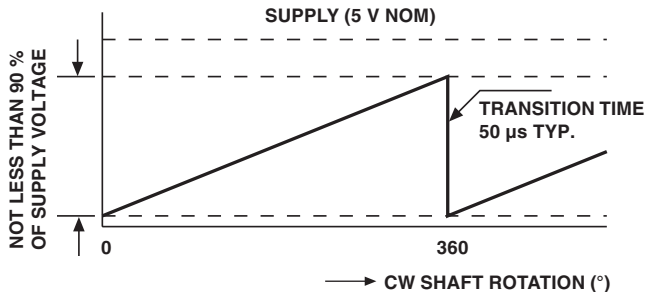
PRODUCT NO. DATE CODE AND TERMINAL I.D. LABEL

PIN CONNECTIONS		FUNCTION
1	+ 5 V	Supply
2	0 V	
3	Output	O/P voltage
4	Direction	Ramp polarity

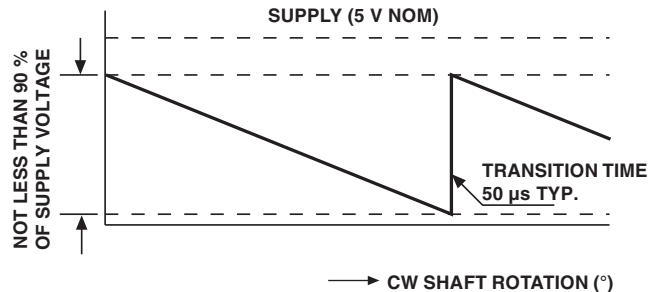
MATERIAL SPECIFICATIONS	
Housing	Plastic
Bushing	Brass, nickel plated
Shaft	Stainless steel
Pin Terminal Connector	Gold plated
Output Connection	Pin header to suit IDC connectors. e.g. Panduit C100 - F22 and Molex 7880
Bushing Mount Hardware Lock Washer, Internal Tooth	Steel, nickel plated
Panel Nut	Brass, nickel plated



CABLE ASSEMBLY FOR CONNECTION	
Part Number	601-1056-0000
Description	Molex KK
	4-way crimp connector
	4 wire (250 mm)



**DEFAULT OUTPUT** [Terminal #4 Open-Circuit]



**REVERSE SLOPE** [Terminal #4 Connected to OV]



## 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.