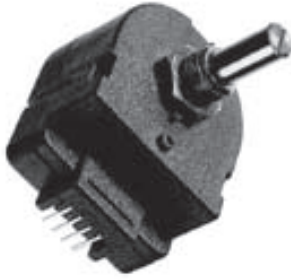# 601-1045

Vishay Spectrol

Full 360° Smart Position Sensor

VISHAY

FEATURES

• Ratiometric output over 360° range with no dead band

• Self-contained package not requiring external electronic interface

• Angular response 50μ secs

• 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 analogue 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 5.5VDC
Supply Current	20mA maximum
Absolute Maximum Supply	6V
Independant Linearity	± 1% Typical
Resolution	Resolves down to a minimum of 0.5°
Electrical Track	360° continuous
Analogue Voltage Output	Not less than 90% of supply (ratiometric) - see graphs on next page
Output Ramp Slope	Electrically switchable - see graphs P157
Output Impedance	1Ω typical
Temperature Characteristic	±1° max. over - 40/+ 70°C
Insulation Resistance	1000MΩ minimum
Dielectric Strength	1000V$_{RMS}$, 50/60Hz

MECHANICAL SPECIFICATIONS

Rotation	360° continuous
Rotational Speed	5 maximum revs/sec (duration 60 secs)
Operating Torque Maximum	3.68 (0.5) mNm (oz in)
Weight	30gm

ENVIRONMENTAL SPECIFICATIONS

Operating Life	5,000,000 Cycles
Operating Temp. Range	- 40°C to + 70°C
Storage Temp. Range	-40°C to + 105°C
Sealing	IP54

ORDERING INFORMATION

601-1045
MODEL

XXXX
STANDARD
CONFIGURATION
CODE

PRODUCT NUMBER	ø 1.57 PIN	ø 3.18 PIN
0000	Yes	Yes
0001	Yes	-
0002	-	Yes
0003	-	-

Example: **601 - 1045 - XXXX**

DIMENSIONS in millimeters
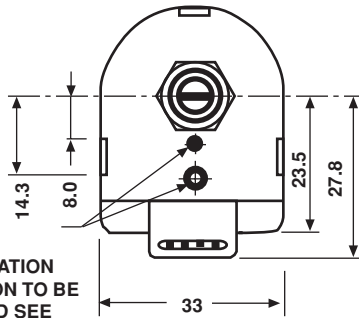
ANTI-ROTATION PIN OPTION TO BE SPECIFIED SEE ORDERING INFORMATION
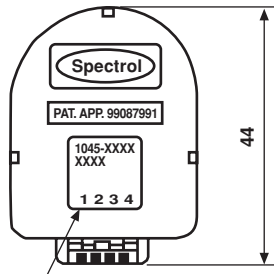
PRODUCT NO. DATE CODE AND TERMINAL I.D. LABEL
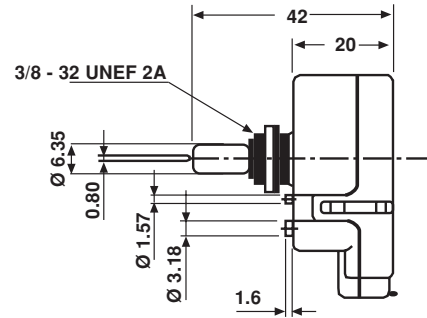
PIN CONNECTIONS		FUNCTION
1	+ 5V	Supply
2	0V	
3	Output	O/P Voltage
4	Direction	Ramp Polarity

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 (250mm)
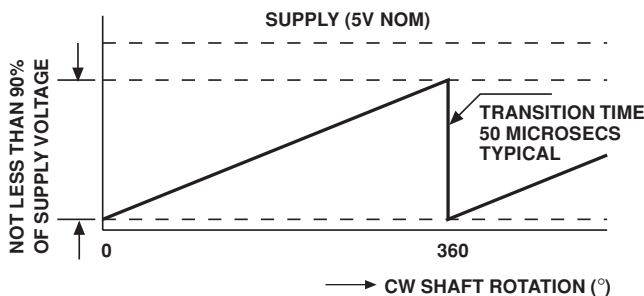
DEFAULT OUTPUT [Terminal #4 Open-Circuit]
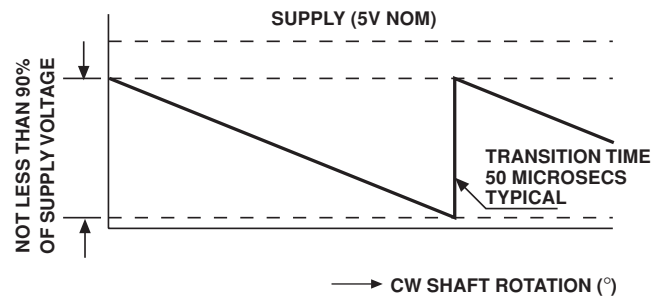
REVERSE SLOPE [Terminal #4 Connected to 0V]

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