Model
601-1045
Full 360° Smart Position Sensor

Spectrol ®

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 for external electronics. The low power consumption and non volatile output makes this universal sensor the real cost-effective alternative to optical encoders. Its versatile design makes it suitable for a variety of industries and applications, such as CCTVs, Medical instruments, Robotic arms control, CNC machinery, Rotational control systems, Pick n' place machines and Angular feedback applications.

PRODUCT HIGHLIGHTS
- Ratiometric output over **360°** range with **no dead band**.
- Self-contained package **not requiring external electronic interface**.
- Angular response 50 μsecs.
- Reverse polarity protection.
- Absolute and non volatile positioning output.

ELECTRICAL
Supply:
4.5 to 5.5V DC

Supply Current:
20 mA max.

Absolute Max. Supply:
6V

Independent Linearity:
±1% Typical

Resolution:
Resolves down to a minimum of 0.50

Electrical Track:
360° continuous

Analogue Voltage Output:
Not less than 90% of supply (ratiometric) - see graphs below

Output Ramp Slope:
Electrically switchable - see graphs below

Output Impedance:
1 ohm typical

Temperature Coefficient:
±1° max. over -40/+70°C

Insulation Resistance:
1000M ohm min.

Dielectric Strength:
1000V RMS 50/60 Hz

MECHANICAL
Rotation:
360° continuous

Rotational Speed:
5 revs/sec max. (duration 60 seconds)

Operating Torque Max:
Starting and running 3.68 mNm (0.5Oz in)

Weight:
30 gms

ENVIRONMENTAL

Operating Life:	5,000,000 cycles
Operating Temp. Range:	-40°C to 70°C
Storage Temp. Range:	-40°C to 105°C
Sealing:	IP54
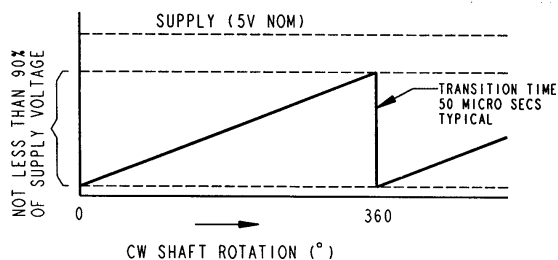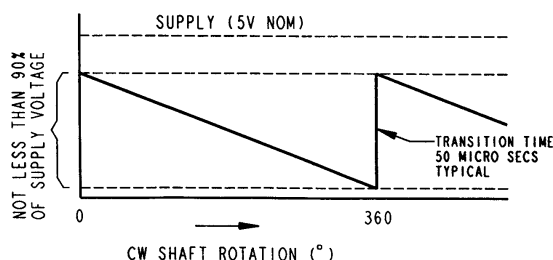
Graph 1

Graph 2

601-1045

Full 360° Smart Position Sensor

DIMENSIONS

ANTI-ROTATION PIN OPTION TO BE SPECIFIED. SEE TABLE 2
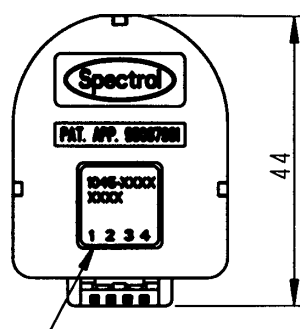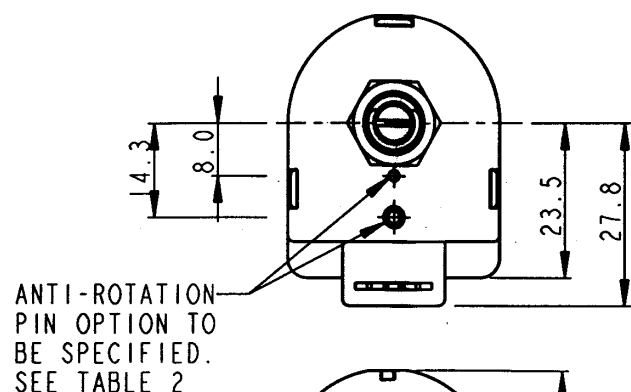
PRODUCT No, DATE CODE AND TERMINAL I.D. LABEL
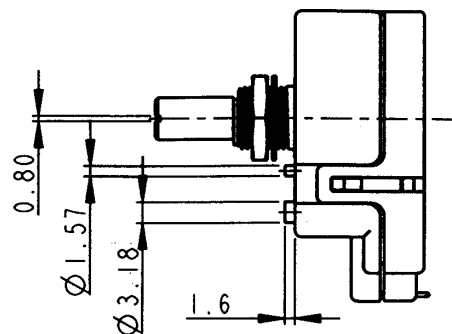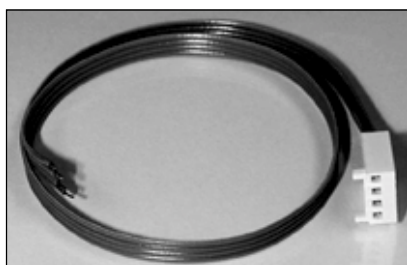
Table 1

Pin Connections		Function
1	+5V	Supply
2	0V	
3	Output	O/P Voltage
4	Direction	Ramp Polarity

Materials	
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: Supplied loose	
Description:	4 way IDC connector
	4 way ribbon cable (300mm)

ORDERING INFORMATION

601-1045   -   XXXX   C

Model Number

Standard Configuration Codes

Cable Harness

Table 2

Product Number	Ø1.57 PIN	Ø3.18 PIN
0000	YES	YES
0001	YES	-
0002	-	YES
0003	-	-