

RVDT INDUCTIVE ANGULAR POSITION SENSOR : SX27 RV SERIES



- Easy mounting
- Unlimited rotation
- Size 11 (27 mm diameter)
- ATEX version available

GENERAL DESCRIPTION

Rotary variable displacement transducers provide a sinusoidal output which is proportional to the angle within the limits of its linear range.

When the primary is excited the position of the rotor will influence the magnetic flux of each secondary winding and thus the transformation ratio. The difference in voltage of the two secondaries will therefore be proportional to the relative angle of the primary.

The zero position is found where the secondary outputs are equal and opposite. This position is marked on the housing and spindle.

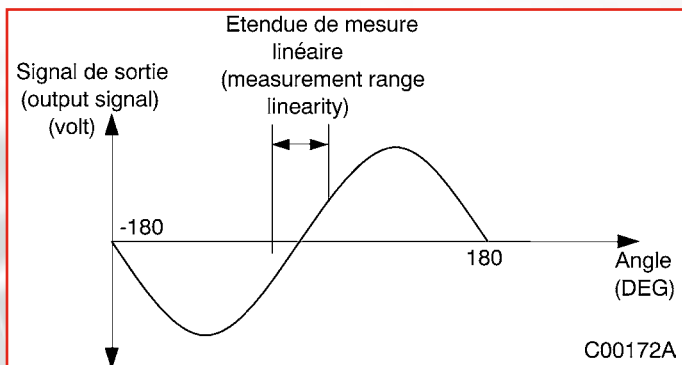
The core may rotate freely, but in practice measurements are made within $\pm 40^\circ$ where the non linearity is 0.5% of full scale. Linearity improves as the measurement range is reduced. For example over $\pm 5^\circ$ non linearity is typically better than $\pm 0.1\%$ FS.

The RVDT must be used in conjunction with an oscillator-demodulator signal conditioner. This RVDT is compatible with any of the SENSOREX LVDT conditioners.

The RVDT housing is a light anodised alloy with a 300 mm long (6 wires output) cables.

This RVDT is also available in intrinsically safe version, according to ATEX norm.

MECHANICAL SPECIFICATIONS (AT 25°C)

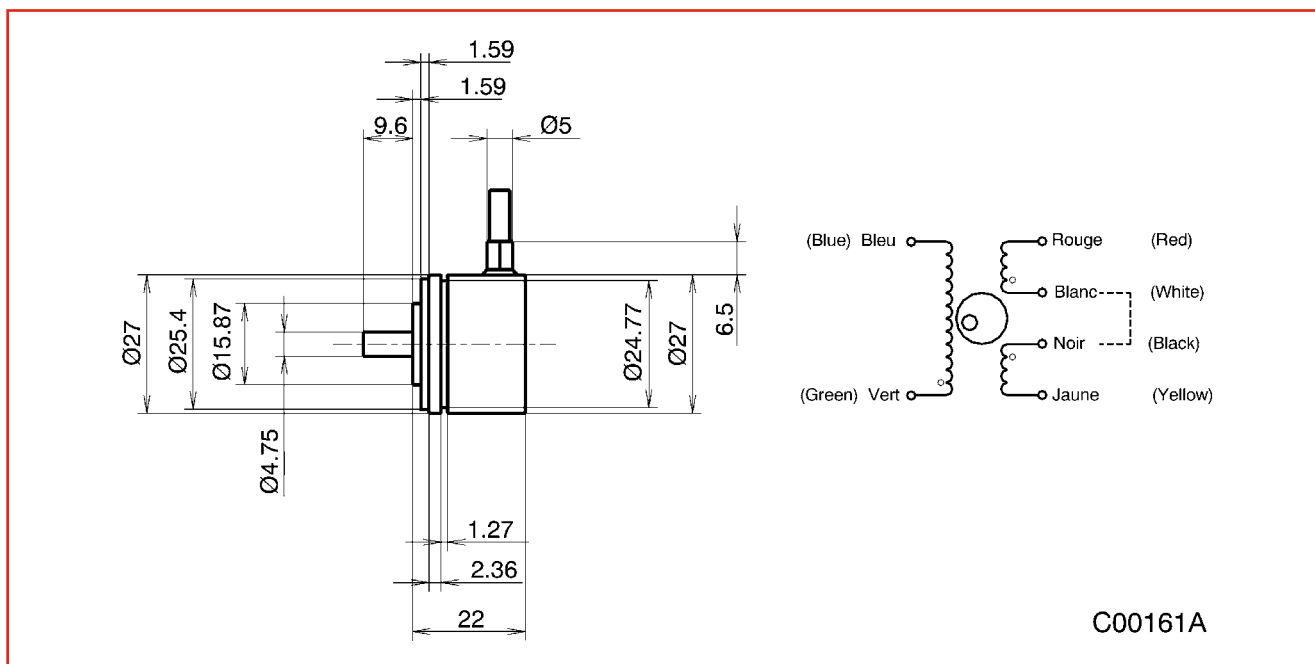


Size	11
Weight (g)	42
Moment of inertia (g.mm.s ²)	9.5
Maximum unbalance (g.cm)	0.3
Axis friction (g.cm)	1.1
Max radial force (end axis)	36
Max axial force	44
Bearing movement	classe P5
Vibration resistance (20 - 200 Hz)	10 g crête
Shock resistance	200 g

ELECTRICAL SPECIFICATIONS (AT 25°C)

References	SX27 RV 020	SX27 RV 60	SX27 RV 80	SX27 RV 120
Excitation	2,2 Veff nominal - 3500 Hz nominal (from 400 to 15 KHz)			
Sensitivity	2,3 mV/V/°			
Impedance at 3,5 KHz				
- primary	140 Ohm			
- secondary	30 Ohm			
Operating temperature	- 40 to + 125 °C [- 55 to + 150 °C optional]			
Sensitivity drift	< 0,08 % / °C of measure			
Etendue de mesure	± 10°	± 30°	± 40°	± 60°
Linearity	< ± 0,15 % FSO	< ± 0,25 % FSO	< ± 0,5 % FSO	< ± 1,5 % FSO

INTERFACE DRAWING



SELECTION GUIDE

SX27 RV XX

Range in degrees

Intrinsically safe version, according to ATEX norm : consult us.