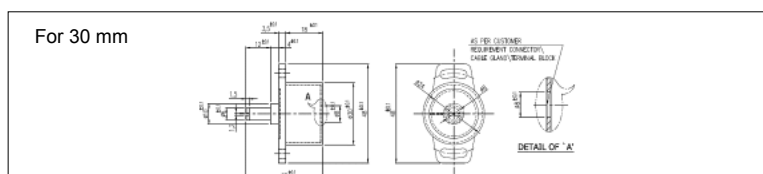
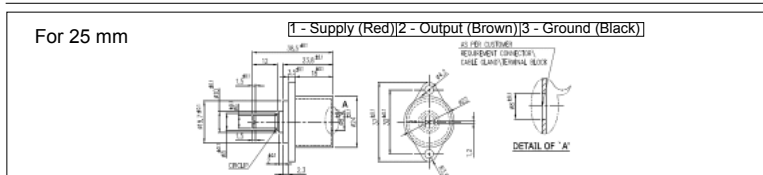


PRECISION ANALOG CONTACTLESS ROTARY POSITION SENSORS - FLANGE VERSION

Ø25 mm & 30 mm plastic robust housing
Flange mounting
Analog output - Current / voltage and PWM output
Shock and vibration proof
Long life design
Cable gland output connection



ELECTRICAL CHARACTERISTICS

Electrical angle	0 to 360°, any angle from 0 - 20... 0 - 360 programmable in steps of 1 °
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Resolution	4096 steps (12 bit)	
Independent linearity tolerance	± 0.3%	
Signal type	Supply voltage	Output signal
0505	5 V ±10%	0 - 5V ratiometric
DC05	9 - 30 V	0 - 5V
2410	15 - 30 V	0 - 10 V
2442	15 - 30 V	4 - 20 mA
2420	15 - 30 V	0 - 20 mA
PWM	5 V ±10%	PWM
Supply current	< 25 mA	

MECHANICAL CHARACTERISTICS

Mechanical angle	360°
Mechanical speed (max.)	3000 rpm
Electrical speed (max.)	160 rpm
Operating life (approx.)	15 million rotations
Starting torque (Ncm) (approx.)	0.5 ± 50%
Operating torque (Ncm) (approx.)	0.4 ± 50%
Operating temperature range	- 40 to +85° C
Output connection	Cable gland (with 1 meter cable)
Weight	12 gm (25A RS F) / 30 gm (30A RS F)

MATERIAL

Housing	Nylon 66, glass fibre reinforced
Shaft	Stainless Steel
Bearing	polymer sleeve bearing with SS shaft
Cable	3 core round cable

OPTIONS AND ORDERING REFERENCES

[illegible]

Refer to electrical & mechanical options on page 2

Series 25A PP F
Series 30A PP F



with connector

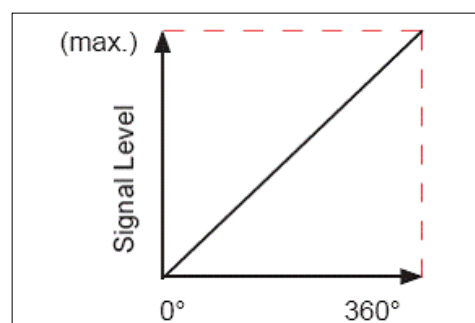


with cable gland

FUNCTION PRINCIPLE

The determination of angular position and signal generation is realised by an intelligent CMOS Hall sensor. A diametrical polarised magnet induces its magnetic field into the sensor. It rotates and provides a conditioned signal to the integrated electronic.

ANALOG INTERFACE



At the output of the sensor a variable voltage or variable current is provided proportional to the position of the shaft / axis over a complete angle range of 360 ° or a subrange. The contactless sensor electronic guarantees a steady signal level and a very low linearity failure of 0.3%. With supply voltages of 5VDC $\pm$ 10% ; 9 - 30VDC; (24VDC) output signals of 0 - 5VDC ; 0 - 10VDC; 0 - 20mA ; 4 - 20mA at the sensor output are provided. A pulse-width modulated (PWM) signal can be generated by the analog interface. This signal can be processed by following connected electronics with PWM input.

ELECTRICAL OPTIONS FOR ANALOG VERSIONS 25/30A PP F

The following options are electrically programmable & are available very cost effective, with short delivery time

Non-effective Electrical Angle (PE1) - Delta 1/2

If the electrical effective angle is programmed smaller than 360°, the remaining electrical non-effective angle is divided in two equal parts : high level & low level (Delta 1/2)

Low level (PE2)

If the electrical effective angle is programmed smaller than 360°, after reaching the maximum, the signal level falls to low level.

High level (PE3)

If the electrical angle is programmed smaller than 360°, the signal level remains high after reaching the full level.

Variable level (PE4)

If the electrical angle is programmed smaller than 360°, remaining electrical non effective angle can be divided into high and low level in any ratio according to customer request.

Direction of Rotation (CW/CCW)

By default the direction of rotation is clockwise (CW). With this option it is also possible to change the direction from clockwise(CW) to counterclockwise (CCW).

Zero point Programming (POZ)

Mechanical zero point is aligned with marking on the sensor housing. Electrical zero point can be aligned to mechanical zero point. Zero point can be programmed at any offset.

Center Point Programming (POC)

Effective electrical angle is aligned with the mechanical zero point in such a way that equal effective angles in both rotating directions are achieved. Center point can be programmed at any offset.

Multi Point Programming (POM)

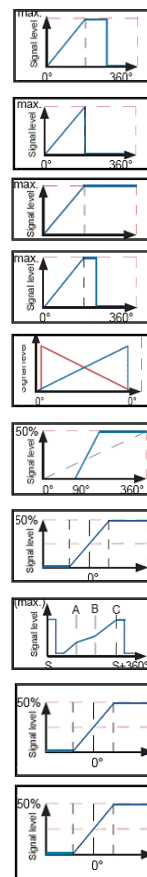
Output characteristics : 3 to 6 rising or falling linear segments. Min and max signal level can be defined within the total electrical angle. First and last linear segment (min/max) is always horizontal. 1 to 3 settable calibration points.

Pulse Width Modulation (PWM)

PWM provides a constant carrier frequency which defines high to low ratio. The ratio between high & low corresponds to the signal characteristics. It is in a fixed relation to the angle. Generally, for further signal processing, no A/D converter is required because many microcontrollers already have PWM input (valid only for 0505 output).

2 Channel Redundant Output (2C)

This is realized by a Hall sensor chip consisting of 2 galvanically separated sensing elements. One magnet provides a magnetic field simultaneously for both elements. Both elements can be programmed identically, or channel 2 can also be programmed independently from channel1. (Valid only for 0505, DC05, and 2410 outputs).



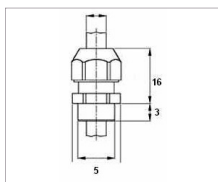
MECHANICAL OPTIONS FOR ANALOG VERSIONS 25/30A PP F

Type / Series	Standard mechanical options	Customized mechanical options
25 / 30A PP F	Sinter bronze bearing in steel, Mu metal cap	Special shaft length

SPEEDCONNECT OUTPUT CONNECTIONS FOR ANALOG VERSIONS 25/30A PP F

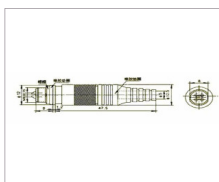
Cable gland (OCG)

3,5,6 core cable of 1 m length according to interface



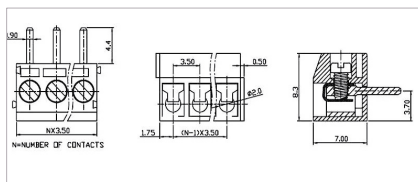
Miniature connector (OCM)

3,5,6 pin in integrated socket with plug according to interface



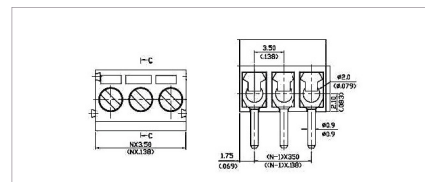
Terminal block - Axial (OCTA) Wires leaving axial to shaft axis

3,5,6 sockets according to interface



Terminal block - Radial (OCTR) Wires leaving radial to shaft axis

3,5,6 sockets according to interface



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