

Series 50Y PBSL



ELECTRICAL CHARACTERISTICS

FUNCTION PRINCIPLE

The angular position and the signal generation is detected by a CMOS Hall sensor over which a parallel diametrically polarized magnet induces a magnetic field. An integrated electronic provides the output of a 2 byte WORD in Grey-code for SSI interface.

SERIAL SYNCHRONOUS INTERFACE



With the SSI interface the absolute angular position is provided serially and synchronous to a receiving electronic which has an SSI input (PLC indicator etc). The main advantage of the SSI interface is that long cable distances can be overcome by very few data lines. The actual angle of position is provided in 2 byte WORD Grey code with 12 bit over 360°. The receiving electronic provides pulse sequences and thus determines the transmission rate. With the first following signal of the pulse sequence, the angular position is detected and kept. The following rising ramps control the bit-wise transmission of the data word. After a small pause a new angular value can be transmitted.

MATERIAL

Housing	anodized aluminium
Shaft	stainless steel
Cable	6 pins brass gold plated
Bearings	2 precision ball bearing

OPTIONS AND ORDERING REFERENCES

Refer to electrical and mechanical options on page 2

Housing diameter	Serial Synchronous output	Pewatron Angular Sensor	Servomount Goldline	Signal	Rotational direction	Clockwise Counter clockwise	12 bit output	Programming options Zero point	Output connections	6 Pins (standard) 6 Core Flat cable Miniature connector Cable gland with 1m round cable Terminal block (A- Axial & R - Radial)
50	Y	PB	SL	SSI 05 SSI 24 SSI						
50	Y	PB	SL	xx SSI	CW / CCW	S12	POx	OCx		
example with description 50Y PBSL 24SSI CCW S12 POZ OCP - 50mm diameter, SSI output, PB Series, Servomount Goldline , Signal - 24V, Counter clockwise direction, 12 bit output, Zero point, 3 Pins (standard)										
Standard Version : 360° CW Electrical & Mechanical angle, OCP - 6 pins										

ELECTRICAL OPTIONS FOR SSI VERSION 50Y PBSL

PB Series are the latest development in rotational position sensors and contactless devices. Modern Hall IC's in combination with special magnets and RISC processors provide intelligent customizing of output signals and interfacing. Not only precision potentiometer but also optoelectronic incremental and absolute encoders are replaced. The PB series is divided into 3 groups : analog types with analog output (replacement for precision potentiometer), incremental output (replacement of optoelectronic encoders), absolute digital SPI and SSI output. Because of wide variety of mechanical and electrical options it is possible to use them in almost any automation and control application where rotary angular sensing is required. Regardless of the wide variety of existing technical features, the price is relative low.

SSI - Serial Synchronous Interface is wide spread in industrial applications with absolute angle sensors. There are a lot of programmable logic controls (PLC) or other peripheral appliances like counters available that can be easily configured for this communication. Furthermore this interface is very insensitive against electromagnetic interferences because of the differential signals that should be transmitted via twisted pair leads.

Direction of Rotation (CW / CCW)

The standard direction of rotation is clockwise (CW). It is also possible to change the direction of turning to counter clockwise mode (CCW).

Zero Point Programming (POZ)

The electrical zero point is at the beginning of the signal rise. If a shaft marking is brought in line with the housing marking, the electrical zero point can be set to that position. Beside that is it also possible to position the zero point at any position within the mechanical angle. In any case it is necessary to have a reference to the shaft marking.

MECHANICAL OPTIONS FOR SSI VERSION 50Y PBSL

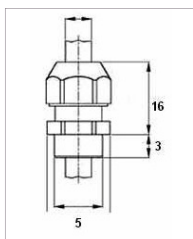
Type / Series	Standard mechanical options	Customized mechanical options
50Y PBSL	Cable gland (OCG) ; Terminal Block (OCTA / OCTR) ; Miniature connector (OCM)	Special shaft length ; Special cable

INTERCONNECTIONS

Standard Interconnections - 6 Pins

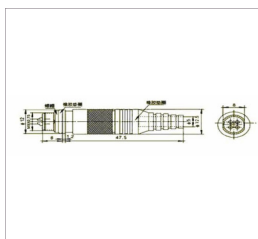
Cable gland (OCG)

6, core cable of 1 m length



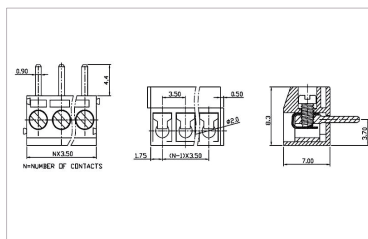
Miniature connector (OCM)

6 pin in integrated socket with plug



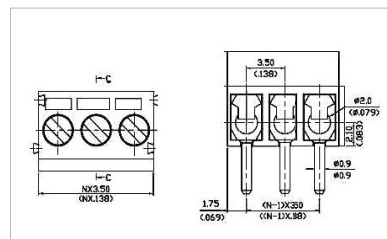
Terminal block - Axial (OCTA) Wires leaving axial to shaft axis

6 sockets



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

6 sockets



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