

Series 36Y PBSL



Technical drawing of a mechanical part showing front and top views with dimensions in mm.

Front View Dimensions:

- Total width: 10.6
- Distance from left edge to centerline: 1.6
- Distance from centerline to right edge: 2.5
- Left flange thickness: 1.5
- Left flange outer diameter: $\varnothing 20$
- Left flange inner diameter: $\varnothing 6$
- Right flange outer diameter: $\varnothing 36.5$
- Right flange thickness: 1.0

Top View Dimensions:

- Overall diameter: $\varnothing 30$
- Central hole diameter: $\varnothing 6$
- Number of holes: 12
- Hole pitch circle diameter: $M3 \times 6H - 3Nos$
- Angle between adjacent holes: 120°
- Distance from center to hole center: 1.2
- Distance from outer edge to hole center: 9.4
- Angle from centerline to first hole: 113°
- Distance from centerline to outer edge: 5

All dimensions are in mm.

ELECTRICAL CHARACTERISTICS

Electrical angle	0 - 360°
Resolution	12 bit (4096 steps)
Output signal	Digital serial synchronous (SSI)
Supply voltage	5V ± 10% / 9 - 30 VDC
Supply current	< 30 mA
Update rate	10 KHz

Mechanical angle	360° (continuous)
Starting torque (approx.)	0.4 Ncm
Protection	IP 40
Operating temperature	- 40 to +85° C
Operating life (approx.)	40 million rotations
Mechanical speed (max.)	9000 rpm
Electrical speed (max.)	1600 rpm
Weight	60 gm

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

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.

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.

Refer to electrical and mechanical options on page 2

Housing diameter	Serial Synchronous output	Pewatron Angular Sensor	Servomount Goldline	Signal	Rotational direction	12 bit output	Programming options	Output connections
36	Y	PB	SL	SSI 05 SSI 24 SSI	CW CCW	S 12	POX POZ	OCX
36	Y	PB	SL	xx SSI	CW / CCW	S 12	POx	OCx

example with description **36Y PBSL 24SSI CCW S12 POZ OCT - 36mm diameter, SSI output, PB Series, Servomount Goldline, Signal - 24V, Counter clockwise direction, 12 bit output, Zero point, Terminal block**

Standard Version : 360° CW Electrical & Mechanical angle, OCP - 6 pins

ELECTRICAL OPTIONS FOR SSI VERSION 36Y 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 36Y PBSL

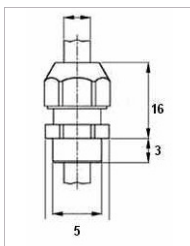
Type / Series	Standard mechanical options	Customized mechanical options
36Y PBSL	Cable gland (OCG) ; Terminal Block (OCTA / OCTR) ; Miniature connector (OCM)	Special shaft length ; Special cable

INTERCONNECTIONS

Standard Interconnections - 6 Pins

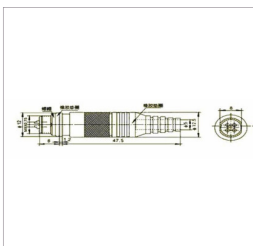
Cable gland (OCG)

6, core cable of 1 m length



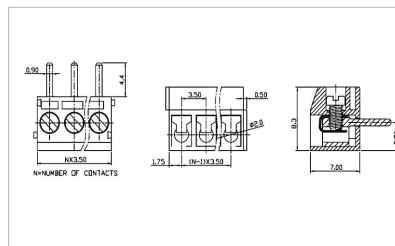
Miniature connector (OCM)

6 pin in integrated socket with plug



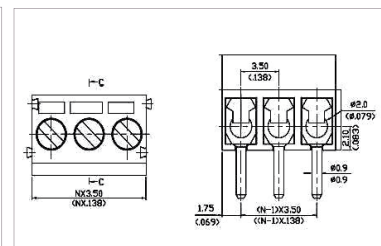
Terminal block - Axial (OCTA) Wires leaving axial to shaft axis

6 sockets



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

6 sockets



We are here for you. Addresses and Contacts.

Headquarter Switzerland:

Angst+Pfister Sensors and Power AG
Thurgauerstrasse 66
CH-8050 Zurich
Phone +41 44 877 35 00
sensorsandpower@angst-pfister.com

Office Germany:

Angst+Pfister Sensors and Power Deutschland GmbH
Edisonstraße 16
D-85716 Unterschleißheim
Phone +49 89 374 288 87 00
sensorsandpower.de@angst-pfister.com

Office North America:

Angst+Pfister North America Inc.
10391 Brecksville Rd.
US-Brecksville, OH 44141
Phone +1 440 375-5212
info.apus@angst-pfister.com

Scan here and get an overview of personal contacts!



<https://sensorsandpower.angst-pfister.com/en/>
