

PS40A

Encoder modules



● Application

- Stepping motor
- Automated equipment

● Feature

- Reliable sturdy design
- Small size
- Easy mounting

● Resolution

600, 625, 720, 800, 1000, 1024, 1200, 1250, 1440, 1600, 2000, 2048, 2400, 2500, 2880, 3200, 4000, 4096, 16000, 16384P/R

● Electrical Spec

Resolution	600 ~ 4096			4800 ~ 16384
Output circuit	Z $\square$ VH、Z $\square$ VT Z $\square$ OH、Z $\square$ OT	Z $\square$ PH、Z $\square$ PT	Z $\square$ LH、Z $\square$ LT	Z $\square$ LH、Z $\square$ LT
Supply voltage	8 ~ 28V、4.5 ~ 5.5V			8 ~ 28V、4.5 ~ 5.5V
Supply current (Max.)	80mA		100mA	110mA
Signal	A, B, Z		A+,A-,B+,B-,Z+,Z-	A+,A-,B+,B-,Z+,Z-
Rise/Fall time (Max.)	250ns*	50ns		10ns
Frequency	300kHz	500kHz		1.5MHz
Outout voltage	"H"	VCC – 2V		2.4V min.
	"L"	0.5V Max.		0.5V Max.
Max. output current	20mA	100mA	20mA、100mA	20mA

*Pull up Resistance = 2k Ω

● Mechanical Spec

Hollow diameter	Φ 5, 6, 6.35, 8mm
Housing material	PC
Max. R.P.M.	7500 rpm *
Net weight	60g

*R.P.M = Frequency * 60 / Resolution

● Environmental Spec

Operating temp.	-20 ~ +85°C
Storage temp.	-20 ~ +85°C
Operating humidity	RH 85% Max. non-collecting
Shock	490 m/s ² , 3Dx2 times
Vibration	1.2mm,10~55KHz, 3Dx30min.
Protection	IP 40

PS40A

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● Connection

Signal : A, B, Z (UL2464 · AWG 26 · 5pin + Shield)

JST-S6B-ZR-SM4A-TF (Compatible headers)

Red	Black	White	Green	Yellow	Blue
Vcc	Gnd	A	B	Z	Shield

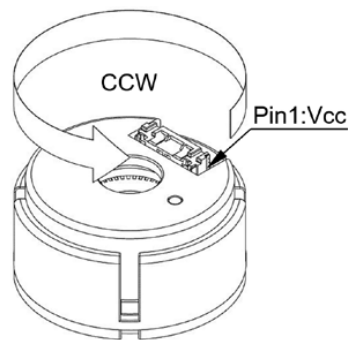
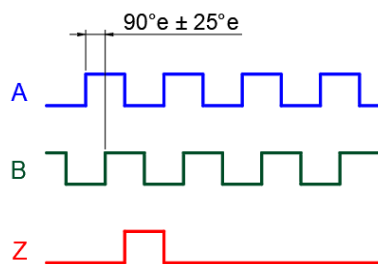
Signal : A+, A-, B+, B-, Z+, Z- (UL2517 · AWG 28 · 8pin + Shield)

Molex-5023860970 (Compatible headers)

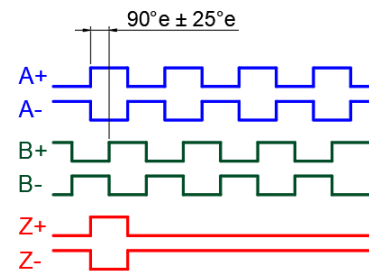
Red	Black	White	White/Black	Green	Green/Black	Yellow	Yellow/Black	Blue
Vcc	Gnd	A+	A-	B+	B-	Z+	Z-	Shield

● Output Waveform

Shaft rotation CCW
A leads B

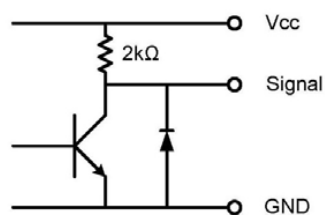


Shaft rotation CCW
A leads B

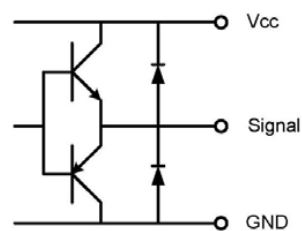


● Output Circuit

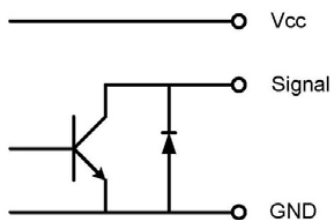
Voltage output



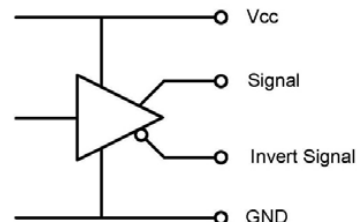
Push pull



Open collector



Line driver 5V =>(26C31) · 28V(7272)



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Ordering Information

PS40A - XXXX - X X X X - X X - NXXX

Resolution
600 ~ 16000

Phase
Z A, B, Z

Hollow
5 5mm
6 6mm
6.35 6.35mm
8 8mm

Type No.
001, 002, 003 ...

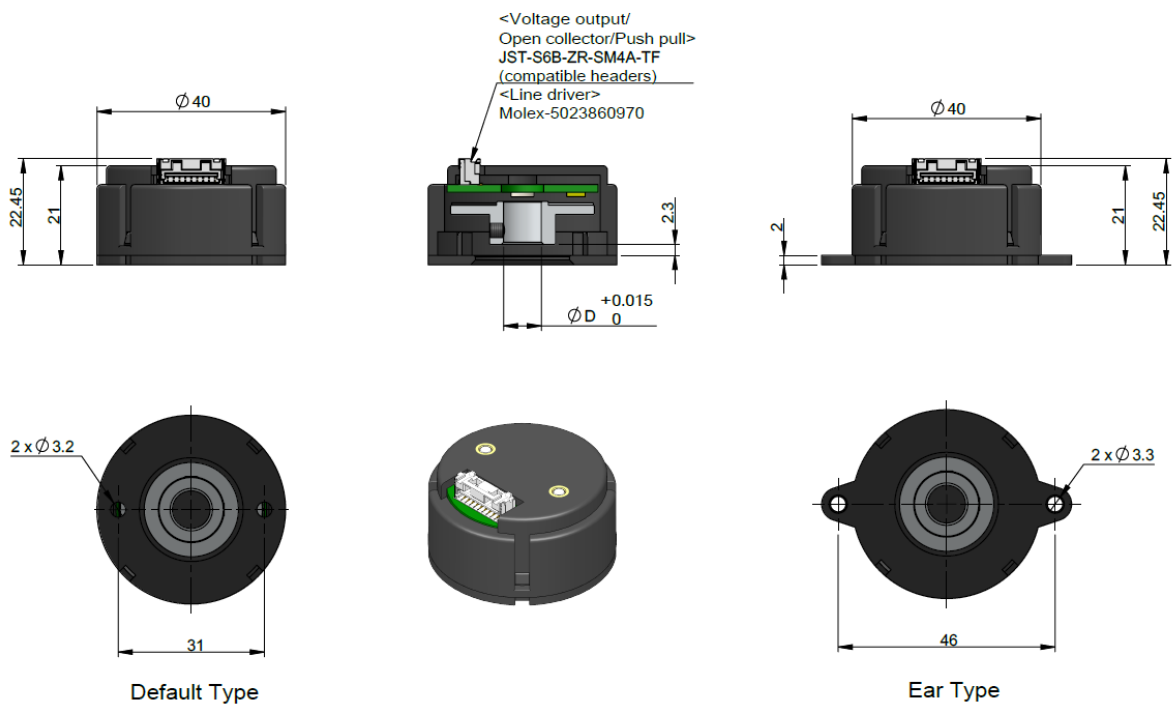
Base
D Default
E Ears

Cover
H Hole on cover
C Closed cover

Supply voltage
H 8~28V
T TTL (5V)

Output circuit
V Voltage output(NPN)
O Open collector(NPN)
P Push pull
K Push pull(with inverted signal)
L Line driver

Mechanical Drawing



Unit : mm

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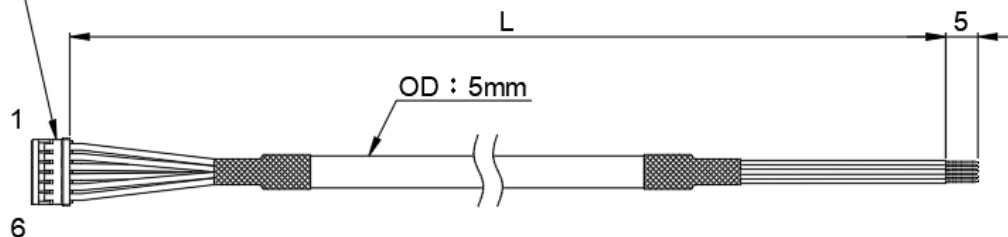
● Cable Introduction

<Voltage output / Open collector / Push pull>

JST
ZHR-6
SZH-002T-P0.5

Color :

1. Red
2. Black
3. White
4. Green
5. Yellow
6. Blue



<Wire spec>
AWG26 、UL2464 、Braid shielding

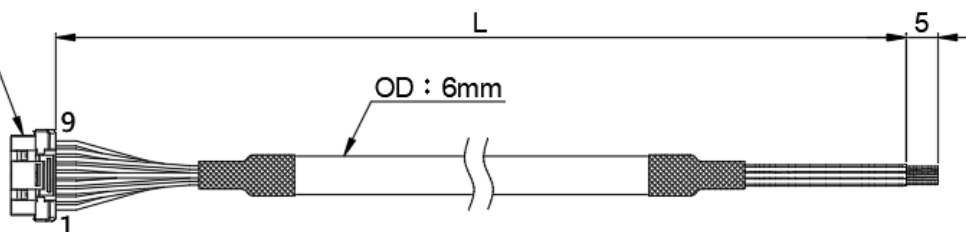
Cable length : 500 、 1000 、 2000mm

<Line driver>

Molex
5023800900
5023810000

Color :

1. Red
2. Black
3. White
4. White/Black
5. Green
6. Green/Black
7. Yellow
8. Yellow/Black
9. Blue



<Wire spec>
AWG28 、UL2517 、Braid shielding

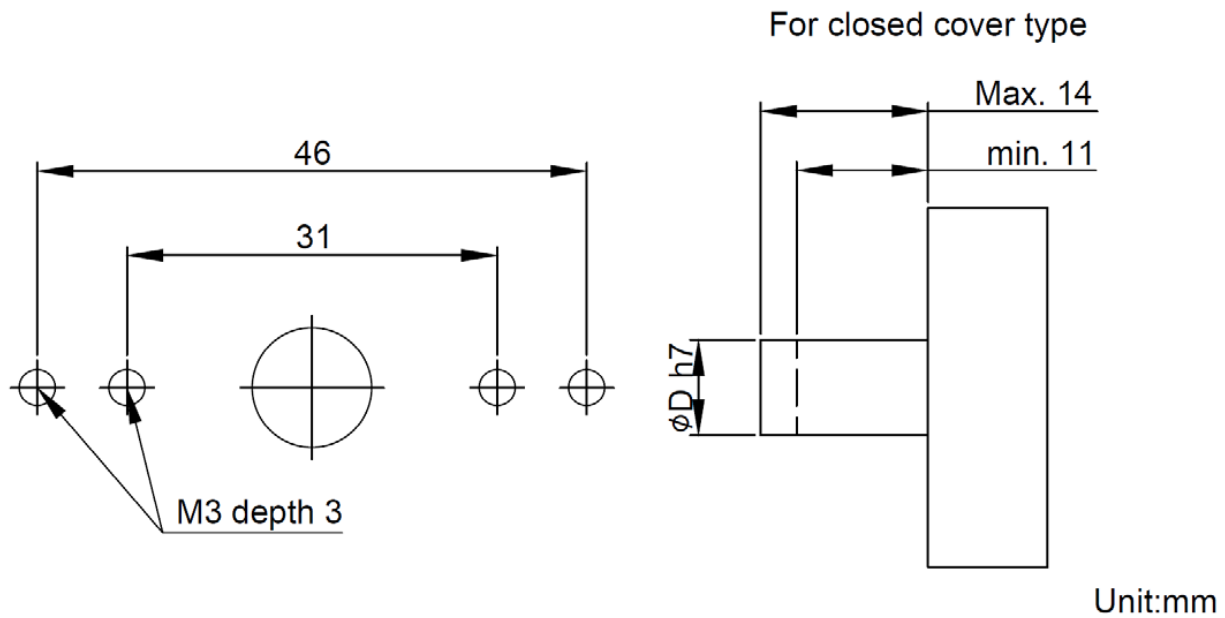
Cable length : 500 、 1000 、 2000mm

PS40A

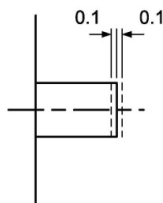
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● Setting Dimension

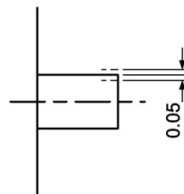
Mounting Screw Size : M3 x 5mm



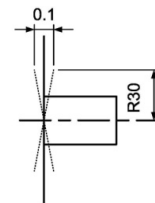
Axial assembly tolerance



Radial assembly tolerance



Concentric angle tolerance



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/>
