

SHAFT TYPE

38S Model



Small Standard Model

- Wide Range of Resolution from 100 to 4096 P/R.



Model

38S- - - -6-50-B00E

Output Mode

Outer
diameter
shaft

— Cable Length
50 : 500mm

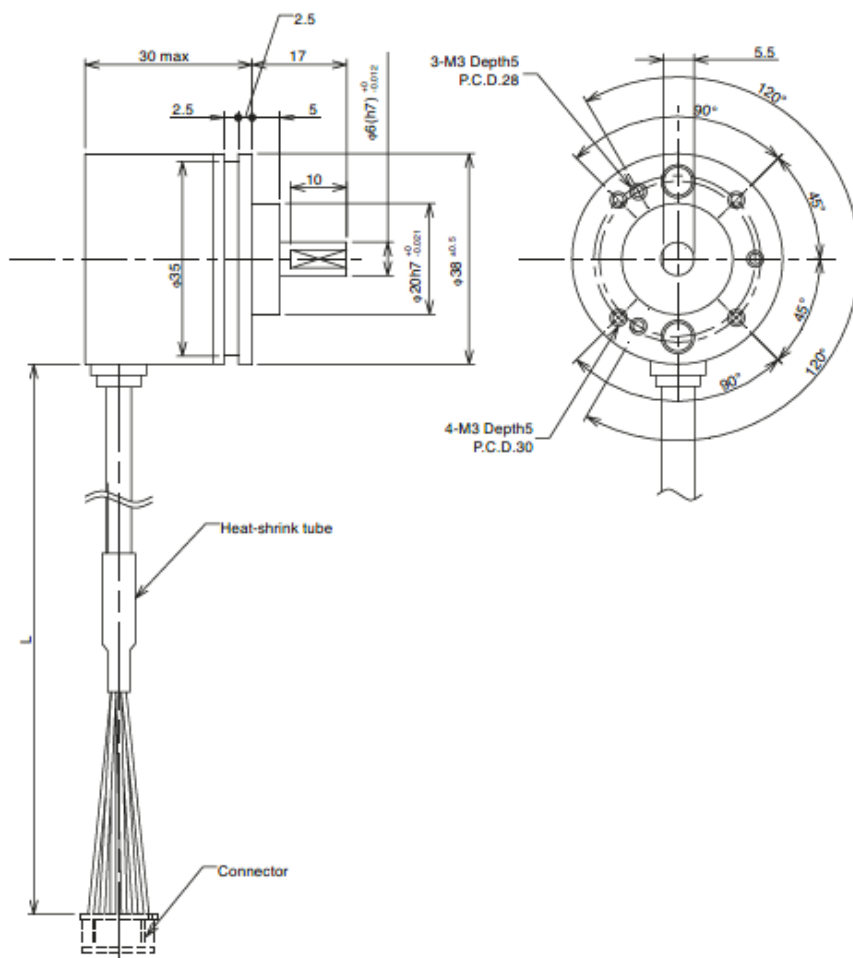
Complying
with
RoHS

Resolution

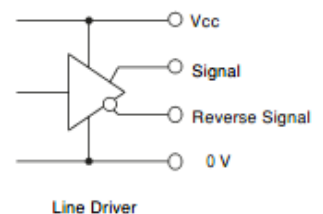
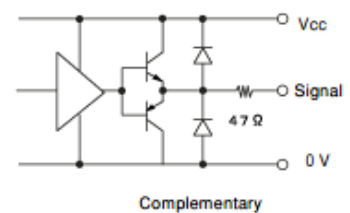
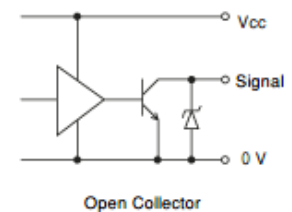
2MC: A, B, Z Open Collector Output
2MT: A, B, Z Complementary Output
2MD: A, B, Z Line Driver Output

100	100 P/R	360	360 P/R	600	600 P/R	2000	2000 P/R	4000	4000 P/R
200	200 P/R	400	400 P/R	800	800 P/R	2048	2048 P/R	4096	4096 P/R
250	250 P/R	500	500 P/R	1000	1000 P/R	2500	2500 P/R	-	-
300	300 P/R	512	512 P/R	1024	1024 P/R	3600	3600 P/R	-	-

External Dimension



Output Circuit

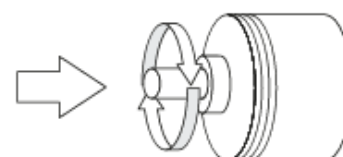
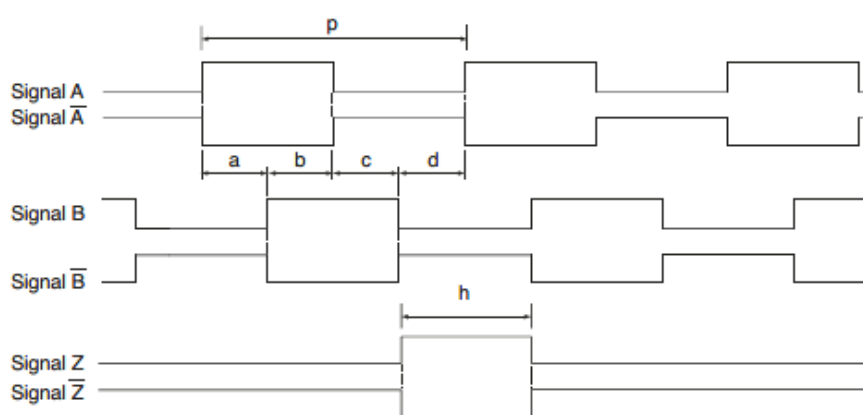


Electrical Spec

TYPE		2MC	2MT	2MD
Power Supply(Vcc)		DC 4.5 to 30V (Ripple 3% or less(P-P))		DC 4.5 to 13.2V (Ripple 3% or Less(P-P))
Current Consumption		30mA Max	60mA Max	30mA Max
Output Voltage	"H"	-	Vcc -3V Min	2.5V Min
	"L" ※1	0.5V Max	3V Max	0.5V Max
Maximum Sink Current		40mA		20mA
Maximum Frequency Response	1024P/R or less	120kHz		
	2000P/R or more	240kHz		
Rise & Fall Time		1μs Max	200ns Max	100ns Max

※1) at Maximum Sink Current

Wave Form



$$P = 1 / \text{Resolution}$$

Line driver output is available for only $\bar{A}$, $\bar{B}$, $\bar{Z}$ signal.

$$\text{Signal A, B} \quad a, b, c, d = (P/4) \pm (P/8)$$

$$\text{Duty} = (P/2) \pm (P/4)$$

$$\text{Signal Z} \quad (P/4) \leq h \leq (3P/4)$$

Electrical Connections

Connector Hirose Electric Co., Ltd. DF3-6S-2C

Open Collector • Complementary		
1	Red	Vcc
2	Black	0 V
3	Blue	Sig A
4	White	Sig B
5	Yellow	Sig Z
6	Shield	N.C

Connector Hirose Electric Co., Ltd. DF3-9S-2C

Line Driver		
1	Red	Vcc
2	Black	0 V
3	Green	Sig A
4	Blue	Sig $\bar{A}$
5	White	Sig B
6	Gray	Sig $\bar{B}$
7	Yellow	Sig Z
8	Orange	Sig $\bar{Z}$
9	Shield	N.C

Mechanical Spec

Starting Torque		$0.98 \times 10^{-3} \text{ N} \cdot \text{m Max}$
Angular Acceleration		$1 \times 10^5 \text{ rad} \cdot \text{s}^{-2}$
Shaft Loading	Thrust	19.6N
	Radial	29.4N
Moment of Inertia		$8 \times 10^{-7} \text{ kg} \cdot \text{m}^2$
Maximum Permissible Speed		6000 min^{-1}
Net Weight		100g Max(Without Cable)

Environmental Spec

Operating Temperature	$-10^{\circ}\text{C} \sim +85^{\circ}\text{C}$
Storage Temperature	$-30^{\circ}\text{C} \sim +85^{\circ}\text{C}$
Humidity	RH 85% Max No Condensation
Vibration	10~55 Hz / 1.5mm X, Y, Z Each 2h
Shock	490m/s ² , 11ms X, Y, Z Each 3 times
Ingress Protection	IP50

We are here for you. Addresses and Contacts.

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