SHAFT TYPE

38S Model

Small Standard Model

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

TÜV CE EN 50081-2 EN 50082-2

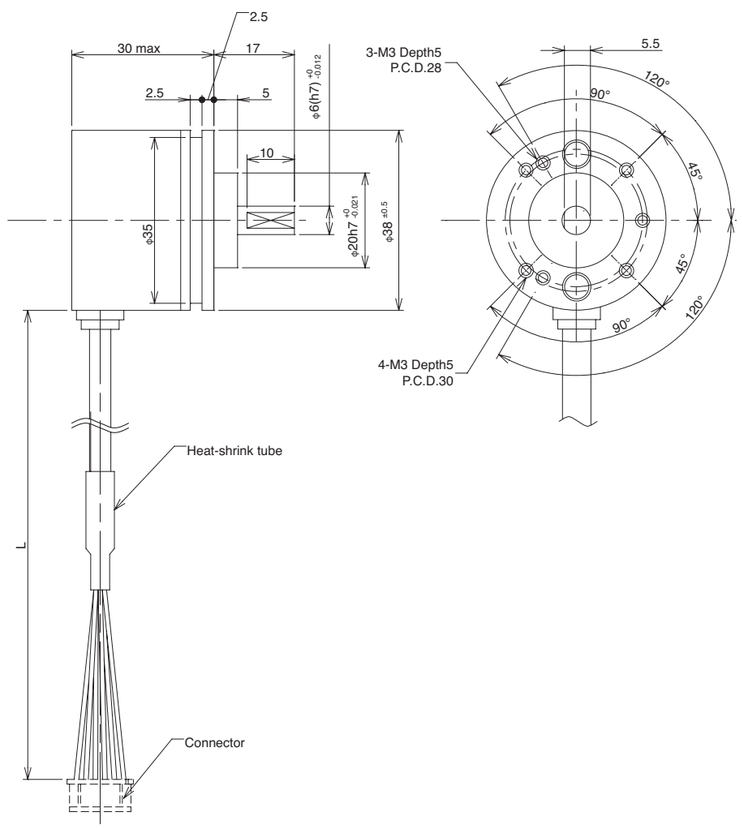
Model

38S-□□-□□-6-50-B00E

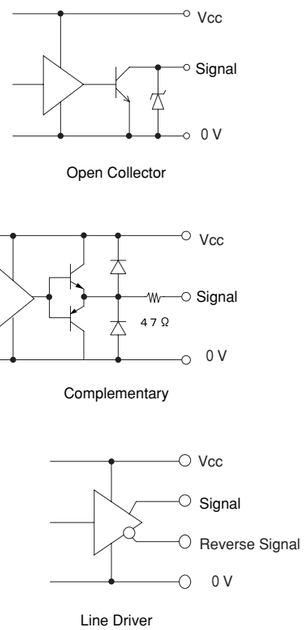
- Resolution
- Output Mode
  - 2MC : A, B, Z Open Collector Output
  - 2MT : A, B, Z Complementary Output
  - 2MD : A, B, Z Line Driver Output
- Outer diameter shaft
  - 6 : φ6
- Cable Length
  - 50 : 500mm
- Complying with RoHS

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

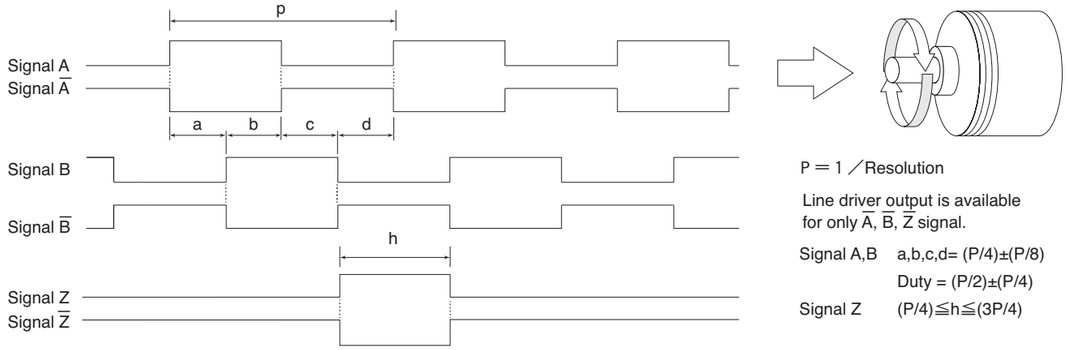


Electrical Spec

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 ／Resolution

Line driver output is available for only Ā, B̄, Z̄ signal.

Signal A,B a,b,c,d= (P/4)±(P/8)
Duty = (P/2)±(P/4)

Signal Z (P/4)≦h≦(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 Ā
5	White	Sig B
6	Gray	Sig B̄
7	Yellow	Sig Z
8	Orange	Sig Z̄
9	Shield	N.C

Mechanical Spec

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

Environmental Spec

Operating Temperature	–10℃～+85℃
Storage Temperature	– 30℃～+85℃
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