

SHAFT TYPE

OVF_{Model}



Water Resistant 38mm Diameter Encoder

- Most Advanced IP65 Encoder.
- Mating Shaft Diameter Up to 8mm.

Model

OVF- **- 2M** **-** **-** **-** **0 0**

Resolution

002	20P/R	05	500P/R
003	30P/R	0512	512P/R
0032	32P/R	06	600P/R
004	40P/R	08	800P/R
005	50P/R	09	900P/R
006	60P/R	10	1000P/R
01	100P/R	1024	1024P/R
0125	125P/R	12	1200P/R
02	200P/R	15	1500P/R
0250	250P/R	18	1800P/R
0256	256P/R	20	2000P/R
03	300P/R	2048	2048P/R
036	360P/R	25	2500P/R
04	400P/R	36	3600P/R

Outer diameter shaft

- 800 : $\phi 8$
- (635 : $\phi 6.35$)
- (600 : $\phi 6$)
- (500 : $\phi 5$)

Output Mode

- No Indication : Voltage Output
 - C : Open Collector Output
 - HC : Open Collector Output / High Voltage
 - HCP : PNP Mode Open Collector Output / High Voltage
 - HT : Push-Pull Output / High Voltage
 - D : Line Driver Output
- Low Power Consumption C-MOS Output Available

Option

Cable Length

- 050: 500mm (Standard)
- 100: 1000mm
- 300: 3000mm

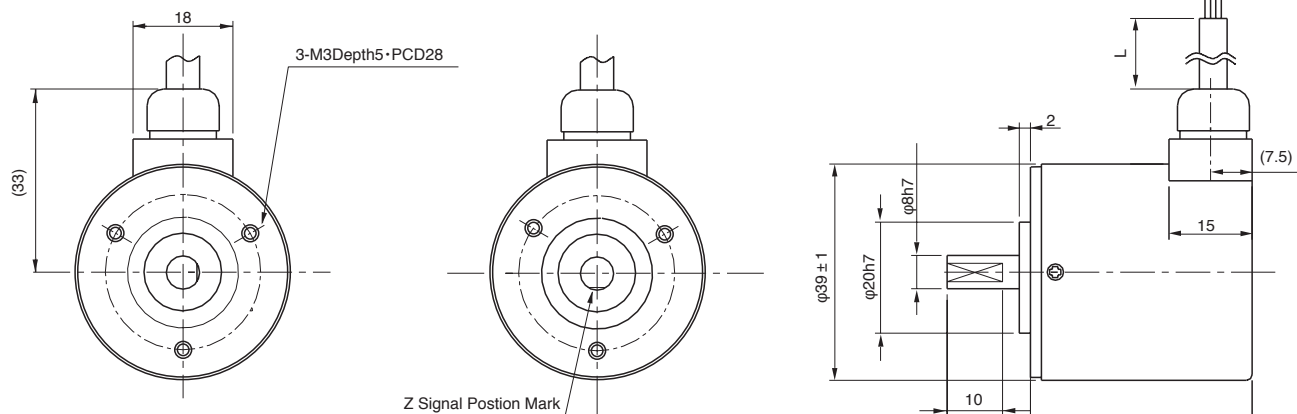
No Indication : Other than D output

No Indication : D output with LS

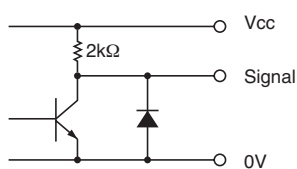
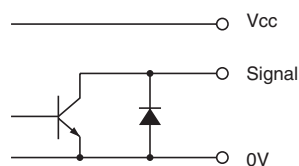
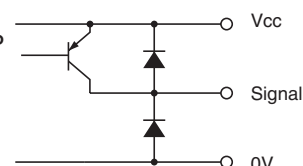
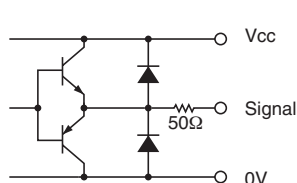
C : D output with C-MOS

Signals — 2M: AB90° Phase Difference + Zero Signal

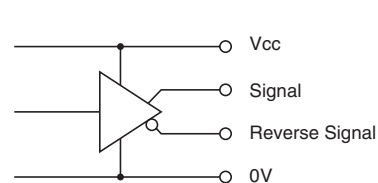
External Dimension



Circuit of Output Signal

2
2M2C
2MC
2HC
2MHC2HCP
2MHCP2HT
2MHT

2MD



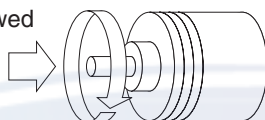
Electrical Spec.

※1) at Maximum Output Current ※2) Maximum Source Current

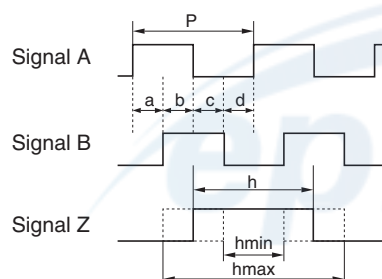
TYPE		2・2M	2C・2MC	2HC・2MHC	2HCP・2MHCP	2HT・2MHT	2MD
Supply Voltage		DC4.5 ~ 13.2 V			DC10.8 ~ 26.4 V		DC4.75 ~ 5.25V C-MOS DC4.5 ~ 5.5V
Requirement		80 mA Max	60 mA Max		100 mA Max	90 mA Max	150 mA Max C-MOS60 mA Max
Output Voltage	“H”	Within −1 Power Volt	—————		Within −1 ² Power Volt	Within −3 Power Volt	2.5 V or More
	“L” ※1	0.5 V Max			—————	3 V Max	0.5 V Max
Maximum Output Current		20 mA MAX				40 mA MAX	20 mA MAX
Rise & Fall Time		1 μs Max					200 ns Max
Maximum Frequency Response		200 kHz			50 kHz	200 kHz	
Withstanding Voltage of Output Tr.		—————	50 V MAX.		—————		

Wave Form.

CW → Rotating Toward Clockwise Viewed from an Arrow



Rising point of A-Signal is always at one point while Z-Signal is at H-Level in CW.



$$P = \frac{1}{1 \text{ Resolution}} \quad \frac{P}{2} \leq h \leq \frac{3P}{2}$$

$$a, b, c, d = \frac{P}{4} \pm \frac{P}{8}$$

Wave Ratio (Duty); 50 ± 25 (%)

Electrical Connections

	Color of Lead Wire	Description
2	Red	Power Source
2M	Black	0V Common
2C	Green or Blue	Signal A
2MC	White	Signal B
2HC	Yellow	Signal Z
2MHC	Shielding Braid	NC
2MCP		
2MHCP		
2HT		
2MHT		

	Color of Lead Wire	Description	Color of Lead Wire	Description
2MD	Red	Power Source	White	Signal B
	Black	0V Common	Gray	Signal B
	Green	Signal A	Yellow	Signal Z
	Blue	Signal A	Orange	Signal Z
	Shielding Braid	NC		

Mechanical Spec.

Starting Torque		4.9×10 ⁻³ N • m Max
Angular Acceleration		1×10 ⁵ rad/s ²
Shaft Loading	Thrust axial	9.8N
	Radial	19.6N
Moment of Inertia		1.2×10 ⁻⁶ kg • m ²
Maximum RPM		5000r/min
Net Weight		140g Max

Environmental Spec.

Operating Temperature	-10°C ~ +70°C
Storage Temperature	-30°C ~ +80°C
Humidity	RH 85% Max No Condensation
Vibration	10~55 Hz / 1.5mm 2 h
Shock	294m/s ² , 11ms X, Y, Z Each 3 times
Degree of Protection	IP65