

MINIATURE TYPE

Miniature Model

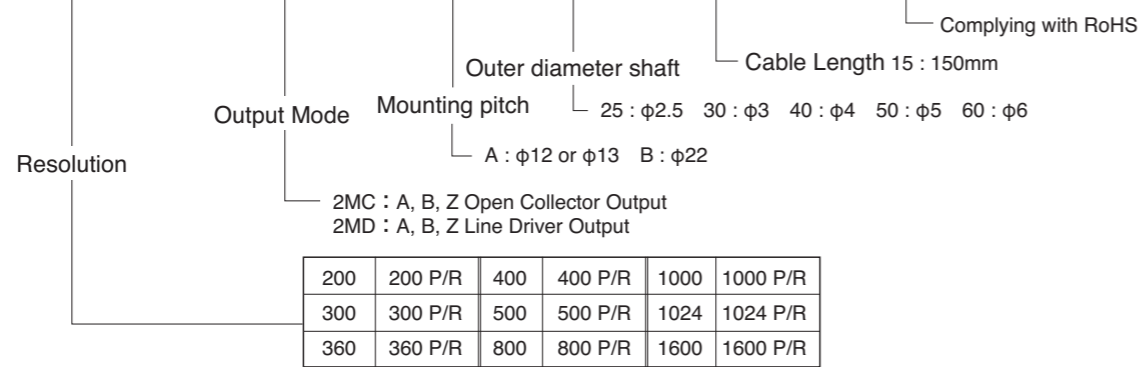
•Small-size Encoder with OD 18mm.

18M Model



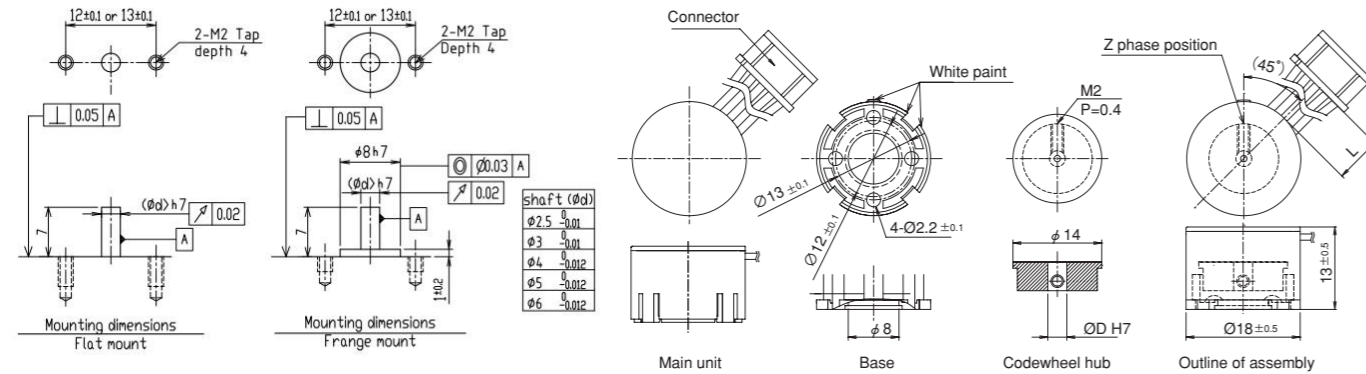
Model

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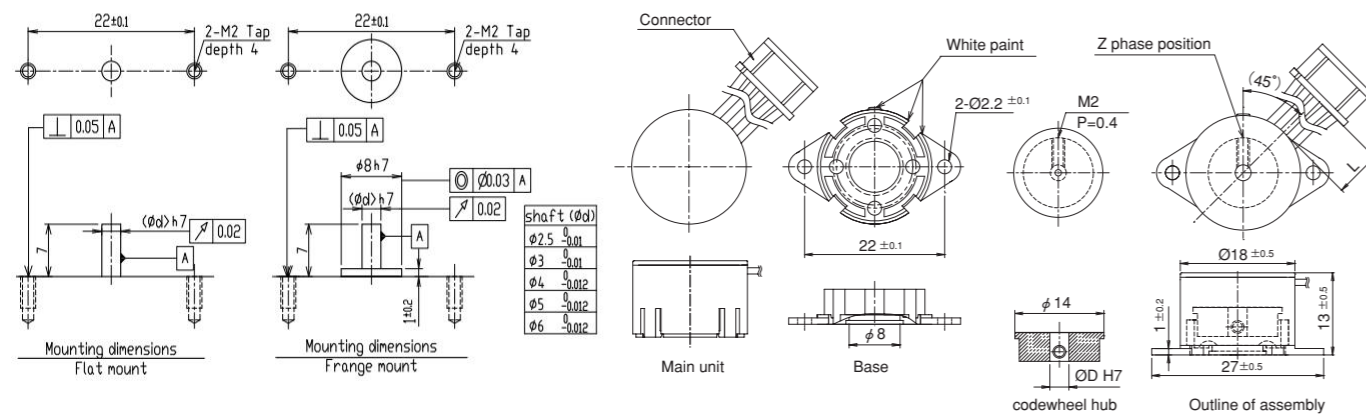


External Dimension

Mounting pitch 12,13



Mounting pitch 22



Electrical Spec

TYPE	2MC	2MD
Power Supply(Vcc)	DC 4.5 to 13.2V (Ripple 100mV (P-P))	DC 4.5 to 5.5V (Ripple 100mV (P-P))
Current Consumption	30mA Max	
Output Voltage	"H"	2.5V Min
	"L" *1	0.5V Max
Maximum Sink Current	20mA	
Maximum Frequency Response	400P/R or less	120kHz
	500P/R or more	240kHz
Rise & Fall Time	1μs Max	100ns Max

*1) at Maximum Sink Current

Electrical Connections

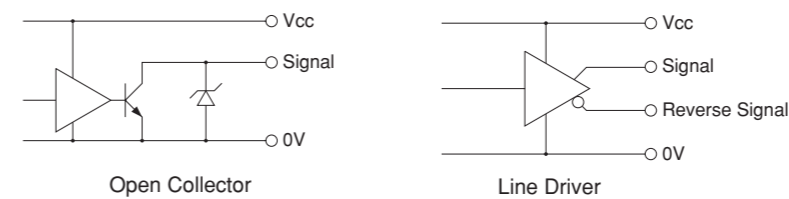
Connector Hirose Electric Co., Ltd. DF3-5S-2C

Open Collector		
1	Brown	Vcc
2	Red	0V
3	Orange	Sig A
4	Yellow	Sig B
5	Green	Sig Z

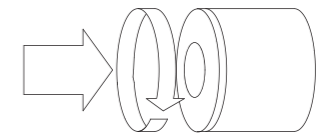
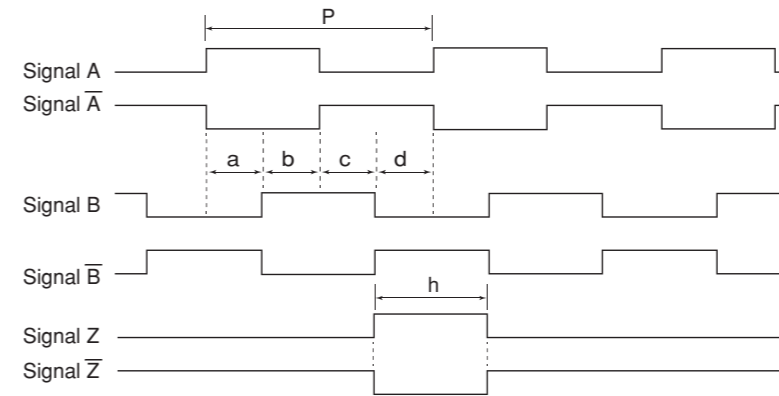
Connector Hirose Electric Co., Ltd. DF3-9S-2C

Line Driver		
1	Brown	Vcc
2	Red	0V
3	Orange	Sig A
4	Yellow	Sig A
5	Green	Sig B
6	Blue	Sig B
7	Purple	Sig Z
8	Gray	Sig Z
9	N.C	N.C

Output Circuit



Wave Form



$P = 1 / \text{Resolution}$

Line driver output is available for only A, B, Z signal.

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

Duty = $(P/2) \pm (P/4)$

Signal Z $(P/4) \leq h \leq (3P/4)$

An option fixture is needed to mount the modular encoder.
For positioning the mounting base: Misumi DCLB-D8-V*-H10-T1-L12
For securing specified clearance between sensor and code disc : Misumi CIMWS12-1.0

Mechanical Spec

Moment of Inertia	$8 \times 10^{-8} \text{kg} \cdot \text{m}^2$
Allowable Value of shaft play	Thrust : $\pm 0.3 \text{mm}$
Angular Acceleration	$1 \times 10^5 \text{rad/s}^2$
Maximum Permissible Speed	18000min^{-1}
Net Weight	10g 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