

MINIATURE TYPE



Miniature Model

•Small-size Encoder with OD 18mm.

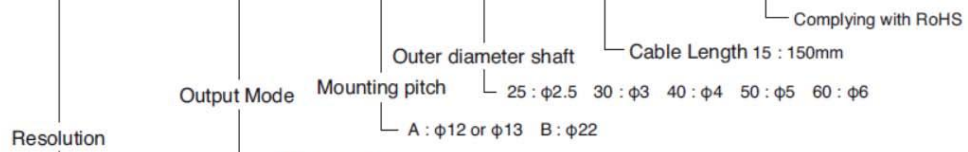
18M Model



Model



18M- [] - [] - [] - [] -15-00E

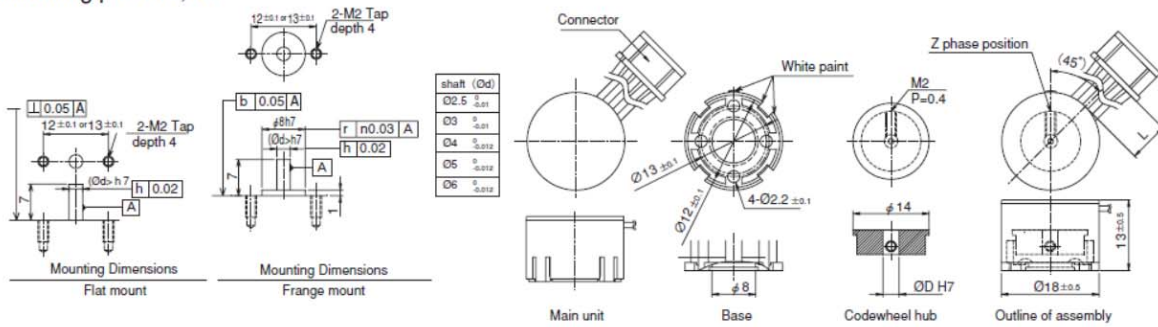


2MC : A, B, Z Open Collector Output
2MD : A, B, Z Line Driver Output

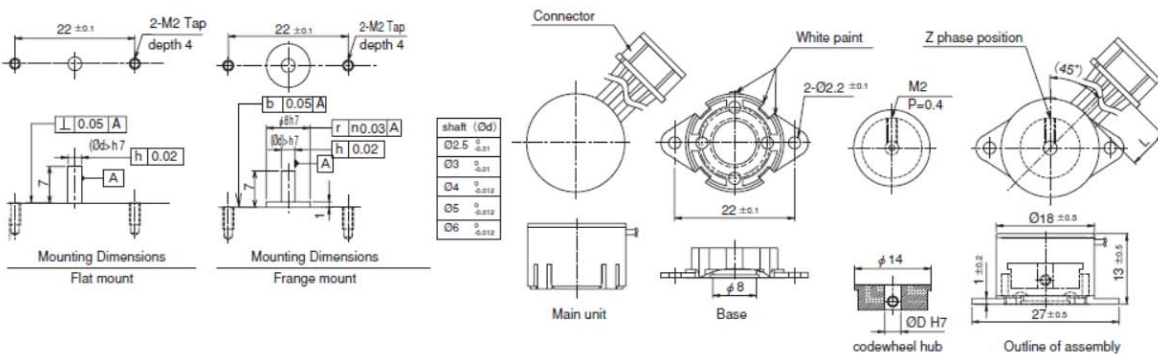
200	200 P/R	400	400 P/R	1000	1000 P/R
300	300 P/R	500	500 P/R	1024	1024 P/R
360	360 P/R	800	800 P/R	1600	1600 P/R

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

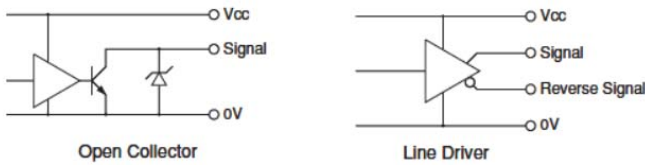
Connector Hirose Electric Co., Ltd. DF3-5S-2C

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

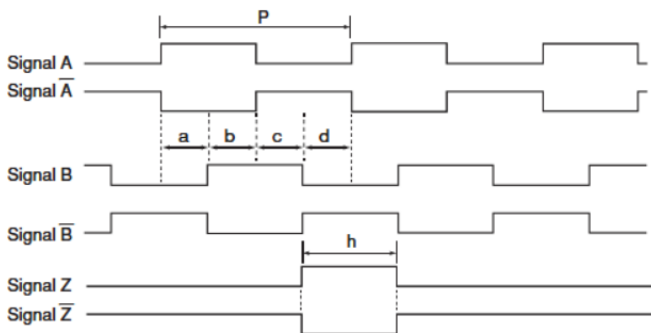
Connector Hirose Electric Co., Ltd. DF3-9S-2C

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 \bar{A} , \bar{B} , \bar{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	$490 \text{m/s}^2, 11 \text{ms}$ X, Y, Z Each 3 times

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