Modular Encoder

Miniature Model

•Small-size Encoder with OD 18mm.

18M Model

Model

TÜV CE EN 50081-2 EN 50082-2

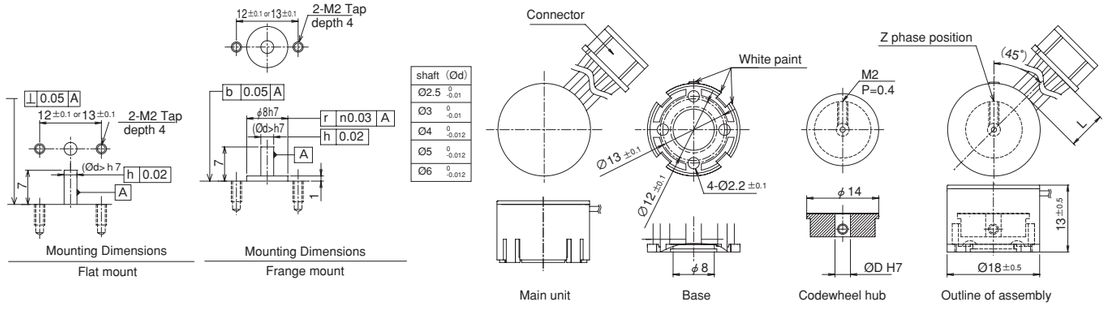
18M–□□–□□–□□□–15-00E

- Resolution
- Output Mode
  - 2MC：A, B, Z Open Collector Output
  - 2MD：A, B, Z Line Driver Output
- Mounting pitch
  - A : ϕ12 or ϕ13　B : ϕ22
- Outer diameter shaft
  - 25 : ϕ2.5　30 : ϕ3　40 : ϕ4　50 : ϕ5　60 : ϕ6
- Cable Length 15 : 150mm
- Complying with RoHS

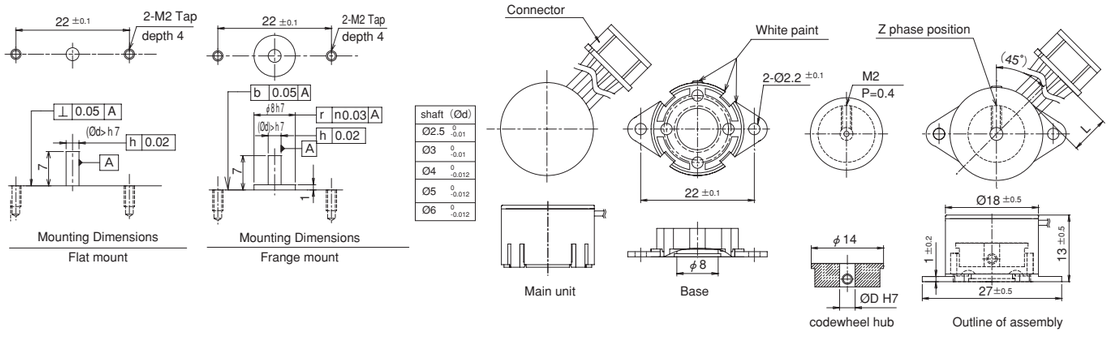
200	200 P/R	400	400 P/R	1000	1000 P/R
300	300 P/R	500	500 P/R	1024	1024 P/R
360	360 P/R	800	800 P/R	1600	1600 P/R

External Dimension

Mounting pitch 12,13



Mounting pitch 22

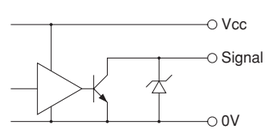


Electrical Spec

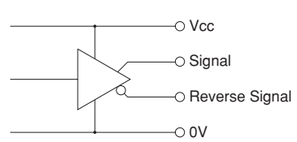
TYPE		2MC	2MD
Power Supply(Vcc)		DC 4.5 to 13.2V（Ripple 100mV（P-P))	DC 4.5 to 5.5V（Ripple 100mV（P-P))
Current Consumption		30mA Max	
Output Voltage	"H"	-	2.5V Min
	"L" ※1	0.5V Max	
Maximum Sink Current		20mA	
Maximum Frequency Response	400P/R or less	120kHz	
	500P/R or more	240kHz	
Rise & Fall Time	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

※1）at Maximum Sink Current

Output Circuit



Open Collector



Line Driver

Electrical Connections

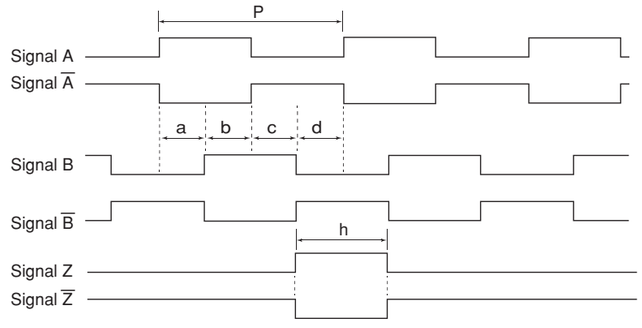
Connector Hirose Electric Co., Ltd.
DF3-5S-2C

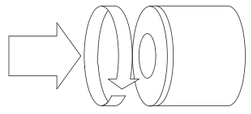
Open Collector		
1	Brown	Vcc
2	Red	0V
3	Orange	Sig A
4	Yellow	Sig B
5	Green	Sig Z

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

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

Wave Form





P ＝ 1 ／Resolution
Line driver output is available
for only $\overline{A}$, $\overline{B}$, $\overline{Z}$ signal.
Signal A,B　a,b,c,d= (P/4)±(P/8)
　　Duty = (P/2)±(P/4)
Signal Z　(P/4)≦h≦(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	8×10^{-8}kg･m^2
Allowable Value of shaft play	Thrust：±0.3mm
Angular Acceleration	1×10^5 rad/s^2
Maximum Permissible Speed	18000min^{-1}
Net Weight	10g 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