ED1 Incremental Rotary Encoder

ADTEK

FEATURES

- Easy installation, high-speed pulse generator, high-speed rotation control, and more.
- Φ 38 diameter with high resolution up to 1024P/R
- Push-pull output can use for NPN or PNP input meter

APPLICATIONS

RPM and line speed detection, length and angle detection, Counting Control, Gap Control, Positioning Control ...

ORDERING INFORMATION

ED1– [Connection Type] – [Cycles per Resolution] – [Output Phase] – [Output Configuration] – [Length of wire]

CODE	CONNECT. TYPE
S	Shaft

CODE	CPR	CODE	CPR
0100	100 P/R	0400	400 P/R
0200	200 P/R	0500	500 P/R
0250	250 P/R	0600	600 P/R
0300	300 P/R	1000	1000 P/R
0360	360 P/R	1024	1024 P/R

CODE	OUTPUT PHASE
Q	A, B Phase
Z	A, B, Z Phase

CODE	OUTPUT CONF.
N	Push Pull (NPN+PNP)

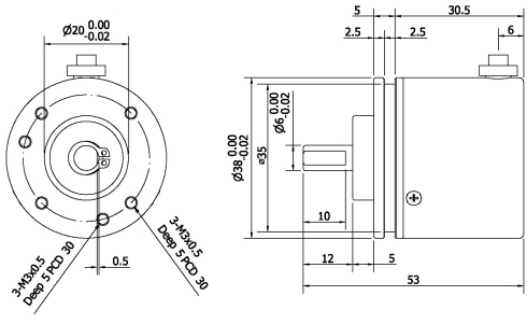
CODE	LENGTH OF WIRE
05	Pre-wire 0.5 M
XX	Pre-wire X.X M(Specified)

TECHNICAL SPECIFICATION

ITEM		ED1
ELECTRICAL		
Power supply voltage		DC 8 ~ 26 V
Current consumption		60 mA max.
Resolution		100, 200, 256, 300, 360, 400,500, 600, 1000, 1024 P/R
Output phases		A, B, and A, B, Z
Output configuration		Push Pull (NPN+PNP), Open collector circuit output
Output capacity		Vcc Voltage: 8~26 VDC max. Output current: 50mA max. Residual voltage: 1 V max.
Output a low level		≤ 1V
Output a high level		= Vcc-2V
Maximum frequency		100 KHz
Phase difference on output		90°±45° between A and B (1/4T±1/8T) ، Z (T±1/2T)
Rise and fall times of output		≤ 2μsec
Insulation resistance		100 MΩ min. (at 500 Vdc)
Dielectric strength		500 VAC, 50/60 Hz for 1 min between output and case
MECHANICAL		
Shaft		Stainless steel; Shaft: 6.0 mm
Shaft loading	Radial	100~400PPR :2 kgf (20.0 N) ; 400PPR Above: 1 kgf (10.0 N)
	Axial	100~400PPR :1 kgf (10.0 N) ; 400PPR Above: 0.5 kgf (5.0 N) ;
Moment of inertia		1.0 x 10^{-5} Kg-m^2
Starting torque		≤30 gf-cm
Max. shaft speed		6000 rpm
Max. acceleration		1 x 10^4 rad/sec^2
Vibration resistance		1.5mm @ 10~55Hz, X/Y/Z 3 direction for 30 min
Shock resistance		20g per 11ms , X/Y/Z 3 direction for 2 times
ENVIRONMENTAL		
Ambient temperature		Operation: 0°C ~ 60°C; Storage: -20°C~ 80°C
Ambient humidity		35% ~ 90% (with no condensation)
Protective circuit		Protection from load short-circuiting and power supply reverse polarity wiring
Protection		IP50 Dust protection
Pre-wired		5C /4.5 Ø * 0.5M PVC
Weight		about 200 g
Materials	Case	Hulled + black paint
	Fix holder	Aluminum

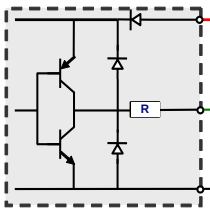
Duty Ratio: X1 + X2 = 0.5T ± 0.1T X3 + X4 = 0.5T ± 0.1T
Phase Differential: Xn > 0.25T (n = 1, 2, 3, 4)
Channel Z: 1T ± 0.5T
Progressive difference on Channel Z = 0.1T
Periodic difference on Channels A.B = 0.1T

DIMENSIONS



CONNNECTION OF OUTPUT

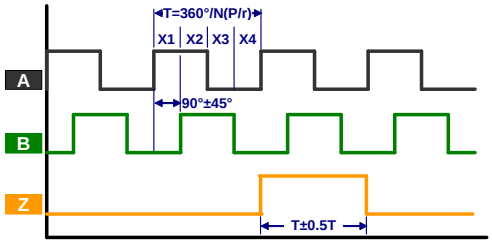
Output Configure: Push Pull (NPN+PNP)



CONNECTION				
Red	Black	White	Green	Yellow
+	-	A	B	Z

R=47 ohm ; Imax: 50mA

TIME CHART OF OUTPUT



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