

## HID90T Incremental Encoder



### Main Features

- Up to 2500 PPR
- Highly interference-resistant when used with frequency converters
- Robust and economical encoder with small dimensions  
Maximum mechanical and electrical safety
- High noise immunity
- With control output
- Execrable environment
- Taper shaft
- With taper shaft  $\Phi 14 \dots 17 \text{mm}$
- Industrial standard encoder
- Protection IP65

### Electrical Data

Resolution	1...1200,2500PPR
Output circuit model	Difference line driver TTL/HTL (not adapted to Connector 7 pin ) Complementary Voltage Open collector
Voltage supply	Line driver 26LS31 TTL: DC5V $\pm$ 0.25 Line driver 26ET31 HTL: DC10...30V Complementary: DC5V,DC10...30V Voltage/ Open collector: DC5V, DC10...30V
Current consumptions	Line driver(TTL,HTL): 150mA Complementary: 60mA Voltage/ Open collector: 60mA
Output frequency	100 KHz
Load current	Line driver(TTL,HTL): 20mA Complementary: 30mA Voltage/ Open collector: 30mA
High level signal	Line driver TTL: 2.5V Line driver HTL: $V_{cc} \times 70\%$ Complementary: $V_{cc} \times 70\%$ Voltage/ Open collector: $V_{cc} \times 70\%$
Low level signal	Line driver: 0.5V Complementary: 1V Voltage/ Open collector: 0.5V
Rise/fall time $t_r / t_f$	Line driver: 100ns Complementary: 1 $\mu$ s Voltage/ Open collector: 1 $\mu$ s
EMC	DIN EN 61000-6-2 DIN EN 55011

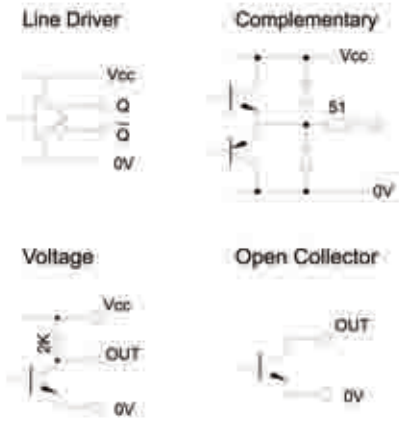
### Mechanical Data

Max. rotational speed	2500r/min
Axial shaft load	80N
Radial shaft load	50N
Weight	1300g (Without cable)
Starting torque(25°C)	$5 \times 10^{-2} \text{N.m}$
Bearing life	10 <sup>9</sup> RPM
Protection	IP65
Material	Bearing: Stainless steel Housing: Cast aluminum Main body: Aluminum alloy
Connection	Cable axial / radial, Connector 7 pin axial / radial, Connector 12 pin axial / radial

### Environmental Data

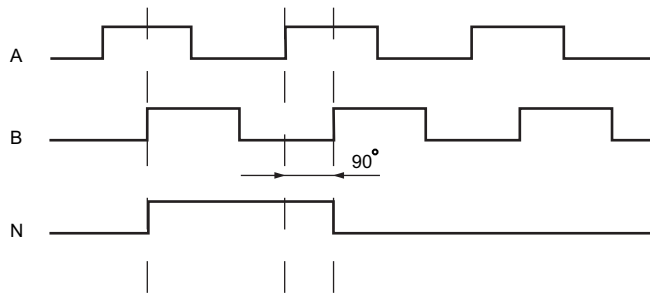
Operating temperature	-10°C ... 70°C
Storage temperature	-20°C ... 80°C
Humidity	98% RH
Shock	1000m/s <sup>2</sup> , 6ms
Vibration	100m/s <sup>2</sup> , 10 ... 200Hz

Output Circuit

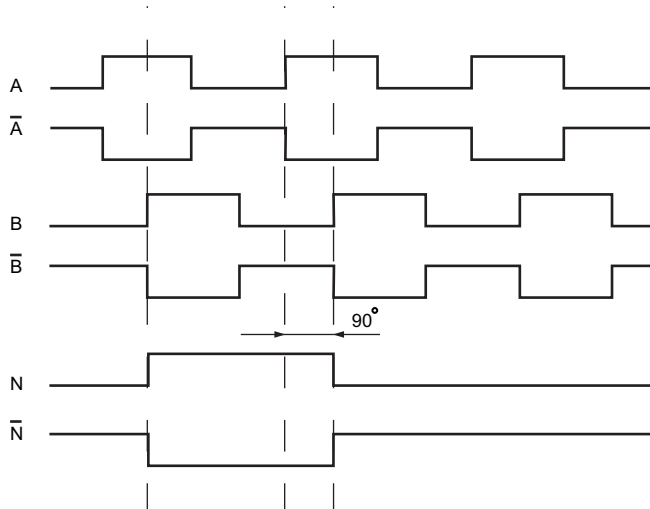


Output Signals

Track A,B,N



Track A,B,N and inv.

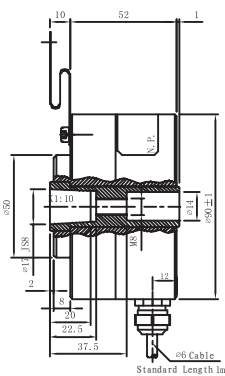


### Connection diagrams

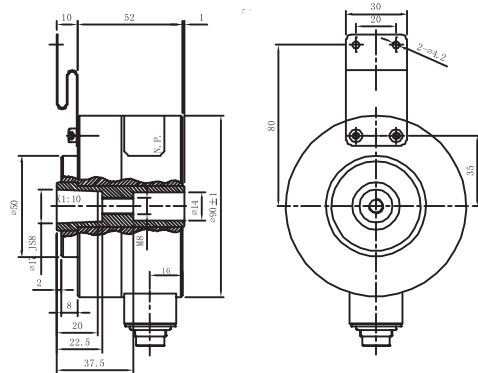
Cable Color	Cable	Connector 7 pin	Connector 12 pin
Brown	Vcc	Vcc Pin 2	Vcc Pin 12
White	0V	0V Pin 1	0V Pin 10
Green	A	A Pin 3	A Pin 5
Yellow	B	B Pin 4	B Pin 8
Gray	N	N Pin 5	N Pin 3
Red	$\bar{A}$		$\bar{A}$ Pin 6
Black	$\bar{B}$		$\bar{B}$ Pin 1
Purple	$\bar{N}$		$\bar{N}$ Pin 4

### Dimensions

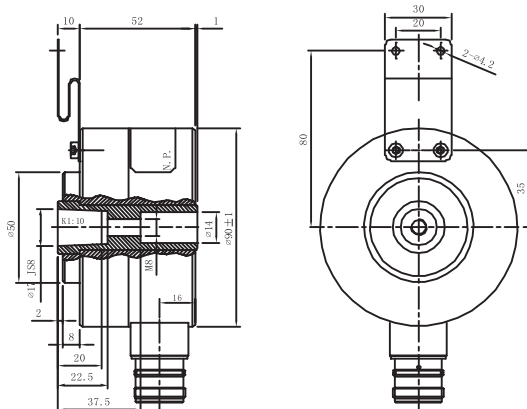
Cable radial:



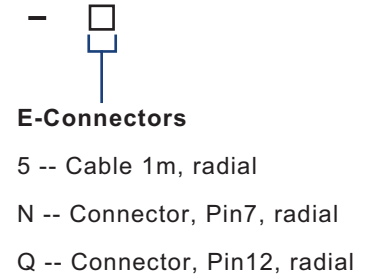
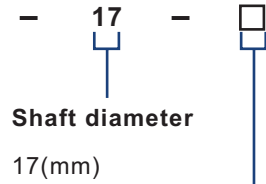
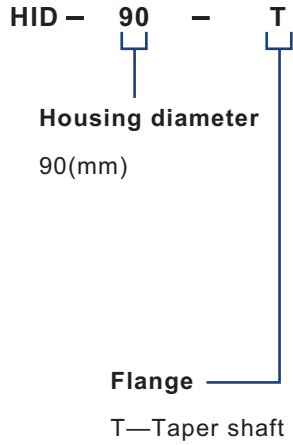
Connector 7 pin radial:



Connector 12 pin radial:



## Ordering Information



- 05L—5VDC Line driver TTL
- 24H—24VDC Line driver HTL
- 05F—5VDC Complementary
- 24F—24VDC Complementary
- 05U—5VDC Voltage
- 24U—24VDC Voltage
- 05I—5VDC Open collector
- 24I—24VDC Open collector

### Resolution

50 (5)	58 (128)	23 (1000)	31 (2500)
37 (10)	07 (200)	24 (1024)	
51 (25)	10 (250)	25 (1250)	
40 (50)	14 (360)	27 (1500)	
41 (60)	15 (400)	29 (2000)	
42 (100)	16 (500)	30 (2048)	

Example: Ordering key 58 = 128 pulses.  
Other pulse numbers on request.