

HID145H Incremental Encoder



Main Features

- Up to 1200 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
- Hollow shaft
- With hollow shaft $\Phi 60 \dots 80 \text{mm}$
- Industrial standard encoder
- Protection IP54

Electrical Data

Resolution	1...1200PPR
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: VccX70% Complementary: VccX70% Voltage/ Open collector: VccX70%
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: 1us Voltage/ Open collector: 1us
EMC	DIN EN 61000-6-2 DIN EN 55011

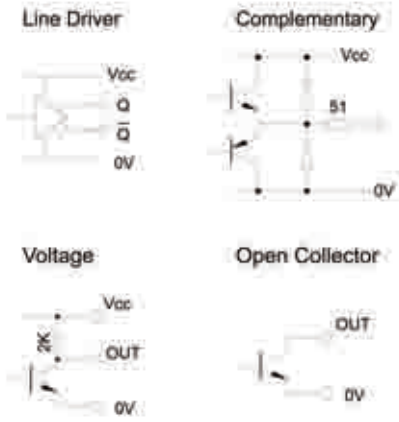
Mechanical Data

Max. rotational speed	2500r/min
Axial shaft load	100N
Radial shaft load	50N
Weight	1500g (Without cable)
Starting torque(25°C)	5X10 ⁻² N.m
Bearing life	10 ⁸ RPM
Protection	IP54
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

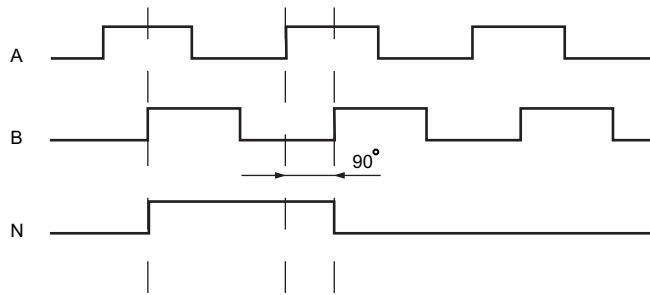
Operating temperature	-10°C ... 70°C
Storage temperature	-20°C ... 80°C
Humidity	98% RH
Shock	1000m/s ² , 6ms
Vibration	100m/s ² , 10 ... 200Hz

Output Circuit

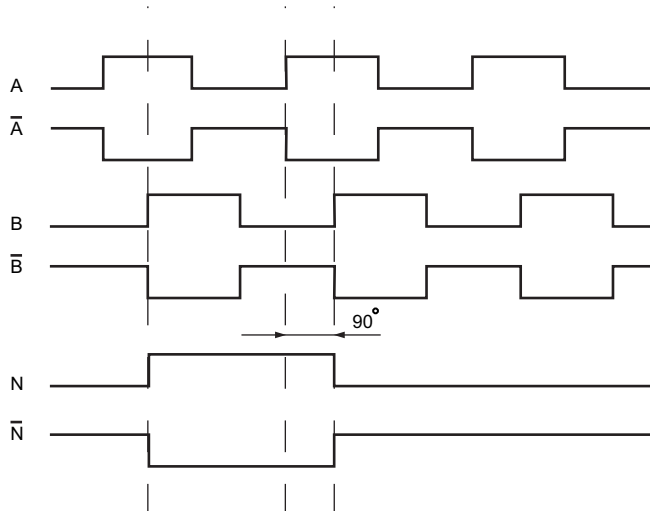


Output Signals

Track A,B,N



Track A,B,N and inv.

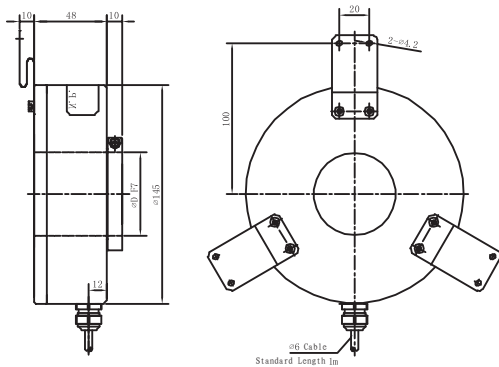


Connection diagrams

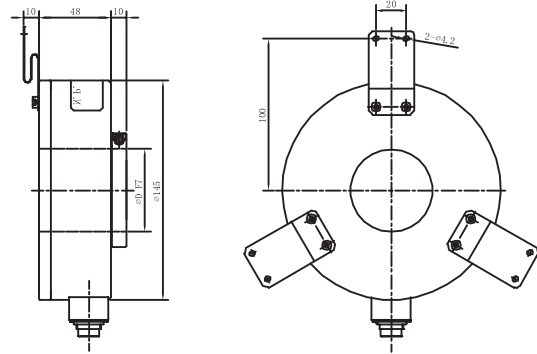
Cable Color	Cable	Connector 7 pin	Connector 12 pin
Brown	Vcc	Vcc Pin 2	Vcc Pin 12
White	0V	0V Pin 1	0V Pin 10
Green	A	A Pin 3	A Pin 5
Yellow	B	B Pin 4	B Pin 8
Gray	N	N Pin 5	N Pin 3
Red	\bar{A}		\bar{A} Pin 6
Black	\bar{B}		\bar{B} Pin 1
Purple	\bar{N}		\bar{N} Pin 4

Dimensions

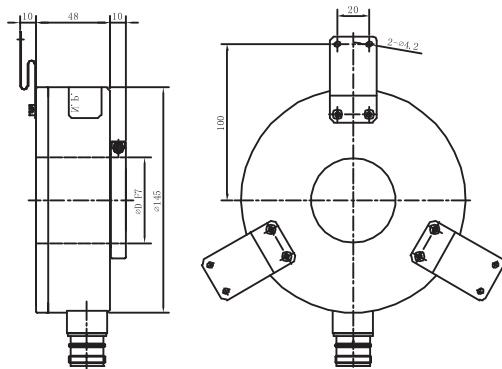
Cable radial:



Connector 7 pin radial:



Connector 12 pin radial:



Ordering Information

HID — 145 — H

Housing diameter

145(mm)

Flange

H -- Hollow shaft

— [] — []

Shaft diameter

60,65,70

72,80(mm)

Resolution

— [] []

Output

— []

E-Connectors

5 -- Cable 1m, radial

N -- Connector, Pin7, radial

Q -- Connector, Pin12, radial

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)
37 (10)	07 (200)	24 (1024)
51 (25)	10 (250)	
40 (50)	14 (360)	
41 (60)	15 (400)	
42 (100)	16 (500)	

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