

HIDA 58S2

PRECISION ROTARY ENCODER



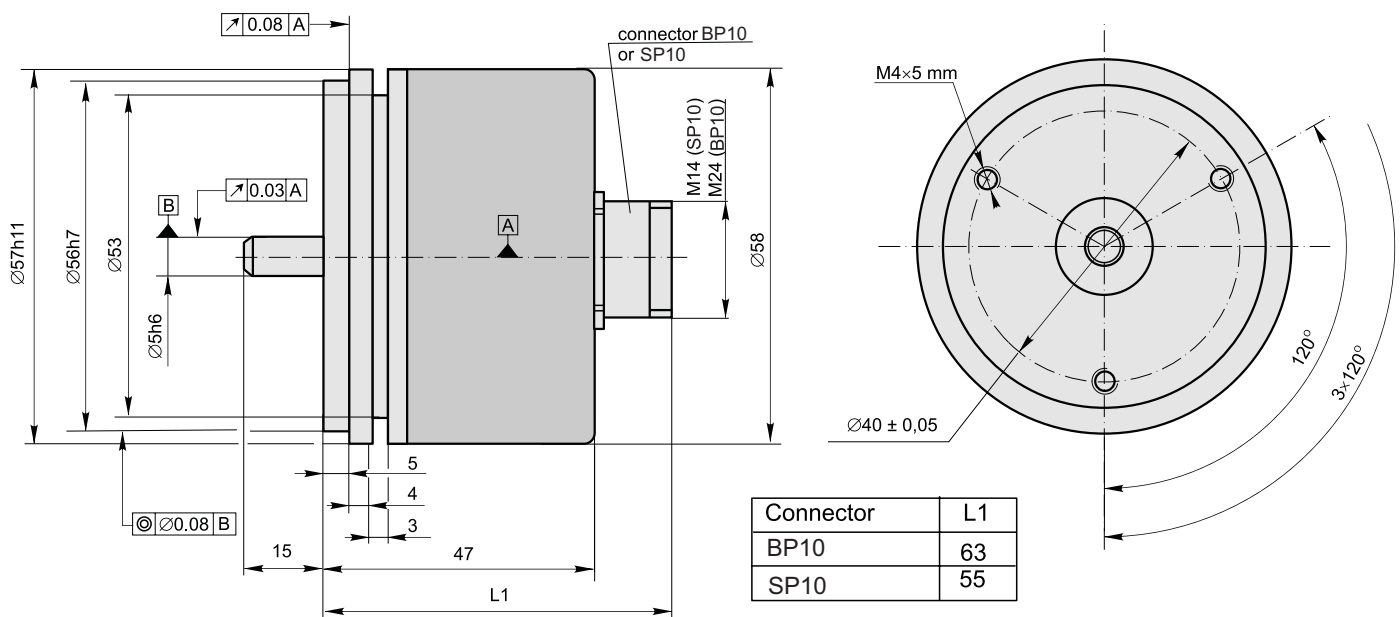
The precision rotary encoder **HIDA58S2** is used to establish an informational link between the key components of machines, industrial robots, comparators and NC or Digital Readout units. It gives the information about the value and direction of the motion of components. The encoder is used in automatic, control, on-line gauging, in process monitoring systems, etc.

The encoder has three versions of output signals:

- sinusoidal signals, with amplitude approx. 11 μ A_{pp};
- sinusoidal signals, with amplitude approx. 1 V_{pp};
- square-wave signals TTL or HTL.

■ Mechanical Data

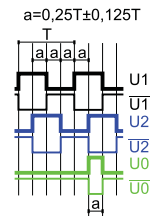
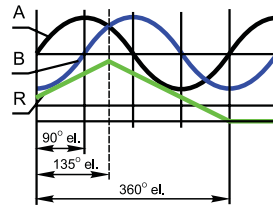
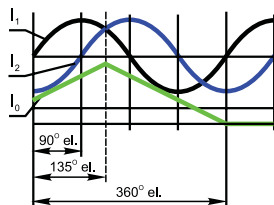
<ul style="list-style-type: none"> •Line number on disc (Z): 100 250 500 600 800 1000 1024 1125 1250 1500 2000 2500 3000 3600 4000 5000 9000 10800 •Pulse number per shaft revolution for Square-wave version: Z x k, where k=1, 2, 3, 4, 5, 8, 10 •Maximum shaft speed 12000 rpm •Maximum shaft load: - axial 10 N - radial (at shaft end) 20 N •Accuracy (T₁-period of lines on disc) $\pm 0.1T_1$ arc. sec •Starting torque at 20°C ≤ 0.2 Ncm 	<ul style="list-style-type: none"> •Moment of inertia of rotor < 15 gm² •Protection (IEC 529) IP64 •Maximum weight without cable 0.25 kg •Operating temperature -10...+70 °C •Storage temperature -30...+80 °C •Maximum humidity (without condensation of moisture) 98 % •Permissible vibration (55 to 2000 Hz) ≤ 100 m/s² •Permissible shock (11 ms) ≤ 1000 m/s²
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Electrical Data

Version	Sine 11 μ App	Sine 1 Vpp	TTL; HTL
◆ Power supply (U_p)	+5 V \pm 5%	+5 V \pm 5%	+5 V \pm 5%; +(10 to 30) V
◆ Maximum consumed current (without load)	80 mA	120 mA	120 mA
◆ Light source	LED	LED	LED
◆ Incremental signals	Two sinusoidal I_1 and I_2 . Amplitude at 1 k Ω load: - $I_1 = 7-16 \mu$ A - $I_2 = 7-16 \mu$ A	Two sinusoidal A and B. Amplitude at 120 Ω load: - A = 0.6-1.2 V - B = 0.6-1.2 V	Square-wave $U1$, $U2$ and their inverted $\overline{U1}$, $\overline{U2}$. Signal levels at 20 mA load current: - low ("0" logic) ≤ 0.5 V at $U_p=+5$ V - low ("0" logic) ≤ 1.5 V at $U_p=10$ to 30 V - high ("1" logic) ≥ 2.4 V at $U_p=+5$ V - high ("1" logic) $\geq (U_p-2)$ V at $U_p=10$ to 30 V
◆ Reference signal	One quasi-triangle I_0 peak per revolution. Signal magnitude at 1 k Ω load: - $I_0 = 2-8 \mu$ A (usable component)	One quasi-triangle R per revolution. Signal magnitude at 120 Ω load: - R = 0.2-0.8 V (usable component)	One square-wave $U0$ and its inverted $\overline{U0}$ per revolution. Signal levels at 20 mA load current: - low ("0" logic) ≤ 0.5 V at $U_p=+5$ V - low ("0" logic) ≤ 1.5 V at $U_p=10$ to 30 V - high ("1" logic) ≥ 2.4 V at $U_p=+5$ V - high ("1" logic) $\geq (U_p-2)$ V at $U_p=10$ to 30 V
◆ Maximum operating frequency	(-3dB cutoff) ≥ 160 kHz	(-3dB cutoff) ≥ 160 kHz	160 kHz
◆ Direction of signals	I_2 lags I_1 with clockwise rotation (viewed from shaft side)	B lags A with clockwise rotation (viewed from shaft side)	$U2$ lags $U1$ with clockwise rotation (viewed from shaft side)
◆ Maximum rising and falling time			< 0.5 μ s
◆ Max. extension cable length	5 m	25 m	25 m

Note: If cable extension is used the power supply conductor section should be not smaller than 0.5 mm².

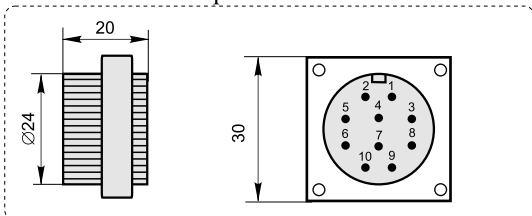


Accessories standard

Accessoires on option

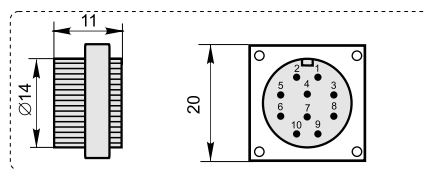
BP10

Round 10-pins connector



SP10

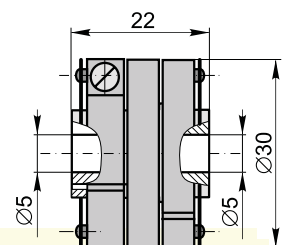
Round 10-pins connector



• Cable armour $\varnothing 10$

• Coupling

HIDA58S2 - SC30



Order form

HIDA 58S2 - - - /

Pulse number per revolution:
100...
10800...

Output:
05L - 5VDC Line driver TTL
24H-10...30VDC Line driver HTL
5AC-5VDC, Analog current sine 11 μ App
5AV-5VDC, Analog voltage sine 1Vpp

Place of connector:
H5 - connector on housing axial
H4 - connector on housing radial

Type of connector:
BP10 - round, 10 pins
SP10 - round, 10 pins

Coupling:
HIDA58S2 - SC30