

Encoders

optical Encoder, digital outputs,
2 channels, 100 - 500 lines per revolution

For combination with
Brushless DC-Motors
DC-Micromotors

Series HEDS 5500

		HEDS 5500 C	HEDS 5500 A	
Lines per revolution	N	100	500	
Frequency range, up to ¹⁾	f	100	100	kHz
Signal output, square wave		2		Channels
Supply voltage	U_{DD}	4,5 ... 5,5		V
Current consumption, typical ²⁾	I_{DD}	17		mA
Pulse width	P	180 ± 45		°e
Phase shift, channel A to B	Φ	90 ± 20		°e
Logic state width	S	90 ± 45		°e
Cycle	C	$360 \pm 5,5$		°e
Signal rise/fall time, max. ($C_{LOAD} = \text{pF}$)	tr/tf	$0,25 / 0,25$		μs
Inertia of code disc	J	0,6		gcm^2
Operating temperature range		-40 ... +100		°C

¹⁾ Velocity (min^{-1}) = f (Hz) x 60/ N

²⁾ $U_{DD} = 5$ V: with unloaded outputs

For combination with Motor

Dimensional drawing A	<L1 [mm]		
2230 ... S	52,8		
2233 ... S	55,6		
2036 ... B - K312	56,8		
2057 ... B - K312	75,8		
2057 ... BHS - K312	75,8		
2444 ... B - K312	64,9		
3056 ... B - K312	76,1		
3564 ... B - K312	84,1		
4490 ... B - K312	116,3		
4490 ... BS - K312	116,3		

Characteristics

These incremental shaft encoders in combination with the DC-Motors are designed for the indication and control of both shaft velocity and direction of rotation as well as for positioning.

A LED source and lens system transmits collimated light through a low inertia metal disc to give two channels with 90° phase shift. The single 5 volt supply and the two or three channel digital output signals are interfaced with a 5-pin connector.

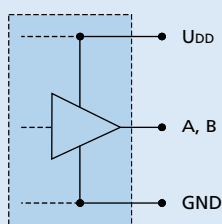
Motors with ball bearings are recommended for continuous operation at low and high speeds and for elevated radial shaft load.

Details for the Motors and suitable reduction gearheads are on separate catalogue pages.

To view our large range of accessory parts, please refer to the "Accessories" chapter.

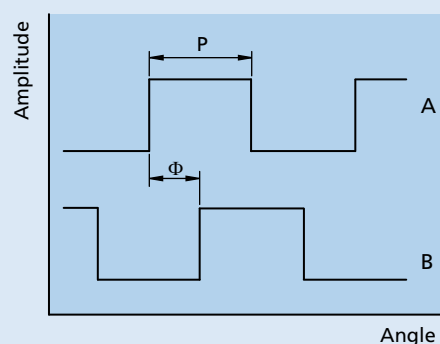
Circuit diagram / Output signals

Output circuit



Output signals

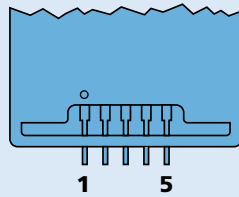
with clockwise rotation as seen from the shaft end



Connection information

No.	Function
1	GND
2	N.C.
3	Channel A
4	U _{DD}
5	Channel B

Connection Encoder



Recommended connector

AMP 103686-4/640442-5,
Molex 2695/2759
FCI 65039-032/4825x-000

Full product description

■ Example:
24445024B-K312 HEDS5500C
4490H024BS-K312 HEDS5500A

Dimensional drawing A

