

Encoders

Magnetic Encoders

Features:
 10 Lines per revolution
 2 Channels
 Digital output

Series 30B

		30B	
Lines per revolution	N	10	
Signal output, square wave		2	channels
Supply voltage	V _{CC}	4,5 ... 5,5	V DC
Current consumption, typical (V _{CC} = 5 V DC)	I _{CC}	5	mA
Pulse width	P	180 ± 45	°e
Phase shift, channel A to B	Φ	90 ± 45	°e
Logic state width	S	90 ± 45	°e
Cycle	C	360 ± 30	°e
Signal rise/fall time, typical	tr/tf	5 / 0,2	µs
Frequency range ¹⁾	f	up to 7,2	kHz
Inertia of code disc	J	0,09	gcm ²
Operating temperature range		- 20 ... + 85	°C

¹⁾ Velocity (rpm) = f (Hz) x 60/N

Ordering information

Encoder type	number of channels	lines per revolution	in combination with DC-Micromotors
30B19	2	10	series 1016
30B20	2	10	series 1212, 1219, 1224
30B18	2	10	series 1319, 1331, 1336

Features

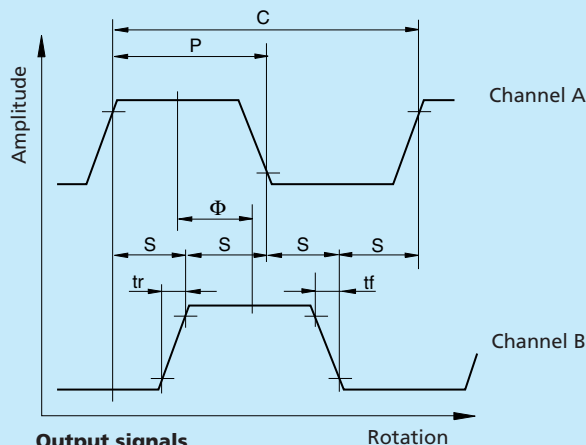
These incremental shaft encoders in combination with the FAULHABER DC-Micromotors are designed for indication and control of both, shaft velocity and direction of rotation as well as for positioning.

Solid state Hall sensors and a low inertia magnetic disc provide two channels with 90° phase shift.

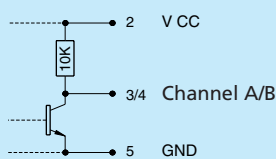
The supply voltage for the encoder and the DC-Micromotor as well as the two channel output signals are interfaced with a 150 mm ribbon cable and a 10-pin connector.

Details for the DC-Micromotors and suitable reduction gearheads are on separate catalog pages.

Output signals / Circuit diagram / Connector information



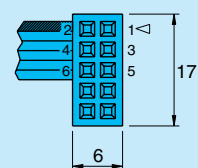
Output signals
 with clockwise rotation as seen from the shaft end



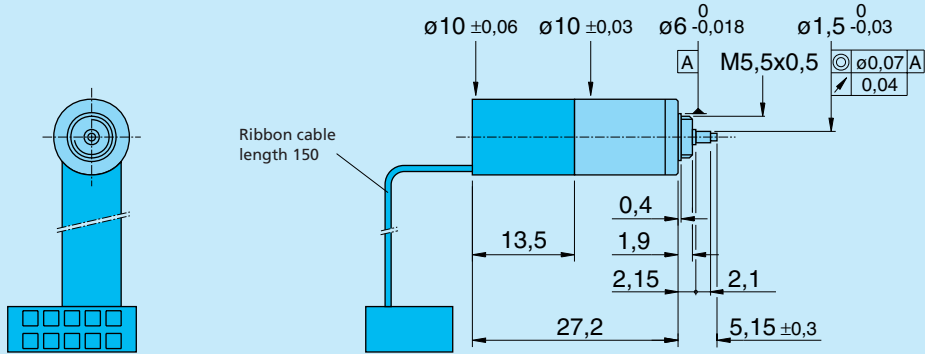
Output circuit

Pin Function

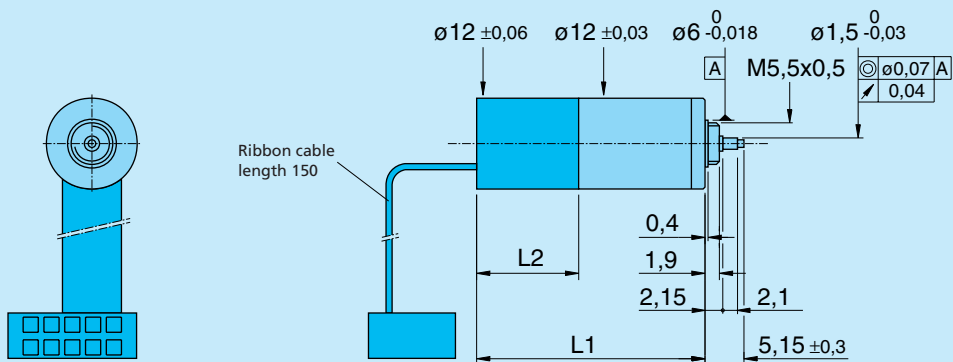
- 1 Motor +
- 2 V_{CC}
- 3 Channel A
- 4 Channel B
- 5 GND
- 6 Motor -
- 7 -
- 8 -
- 9 -
- 10 -



Connector
 (Panduit 050-010-455)
 Ribbon cable – PVC
 6 conductors – 0,09 mm²

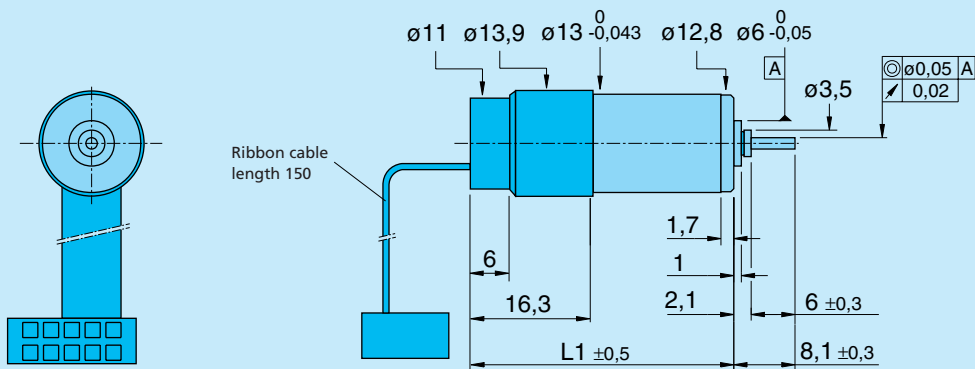


Encoder 30B19
with DC-Micromotor 1016



Encoder 30B20
with DC-Micromotors 1212, 1219, 1224

Motor type	L1	L2
1212	23,2	13,5
1219	30,2	13,5
1224	33,7	11,7



Encoder 30B18
with DC-Micromotors 1319, 1331, 1336

Motor type	L1	Shaft \varnothing
1319	32,3	1,5
1331	44,5	1,5
1336	49,5	2,0