

NEW

Encoders

Magnetic Encoders

Features:
 1 Lines per revolution
 2 + 2 Channels
 Analog output

Series 05A

		05A	
Lines per revolution	N	1 analog	
Signal output		2 + 2 complementary (sine wave)	
Supply voltage	V _{DD}	2,0 ... 5,5	
Current consumption, max.	I _{DD}	4	
Output resistance ¹⁾	R _{OUT}	8	
Phase shift, channel	Φ	90 ± 5 (X to Y)	
Output voltage	V _{OUT P-P}	0,018 ± 20% (V _{DD} = 5 V DC)	
Offset voltage	V _{OFF}	2,2 ± 5% (V _{DD} = 5 V DC)	
Frequency range ²⁾ , up to	f	2	
Inertia of code disc	J	0,15	
Operating temperature range		- 25 ... +85	

¹⁾ Recommended external amplifier

²⁾ Velocity (rpm) = f (Hz) x 60/N

Ordering information

Encoder type	number of channels	lines per revolution	in combination with DC-Micromotors
05A28	2 (X, \bar{X}) + 2 (Y, \bar{Y})	1	series 0816 ... S - K1310
05A19	2 (X, \bar{X}) + 2 (Y, \bar{Y})	1	series 1016 ... G - K380
05A20	2 (X, \bar{X}) + 2 (Y, \bar{Y})	1	series 1219 ... G - K380
05A29	2 (X, \bar{X}) + 2 (Y, \bar{Y})	1	series 1224 ... S - K380

Features

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

The encoder mounted with the DC-Micromotor series 0816 and extends the overall length by 7 mm, the external diameter of the encoder is only 8 mm as the motor!

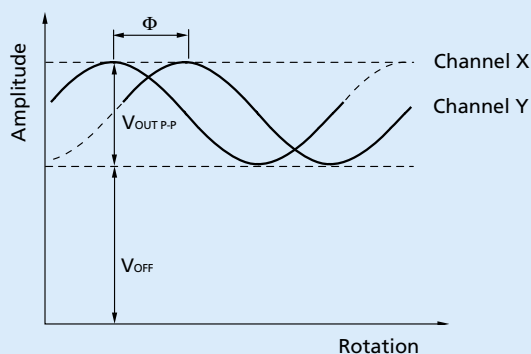
Hybrid circuits with sensor and very low inertia magnetic disc provide two analogs channels (sinus and cosinus) with 90° phase shift and our respected complementary channels.

The supply voltage for the encoder and the DC-Micromotor as well as the four channel output signals are interfaced through a ribbon cable with connector.

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

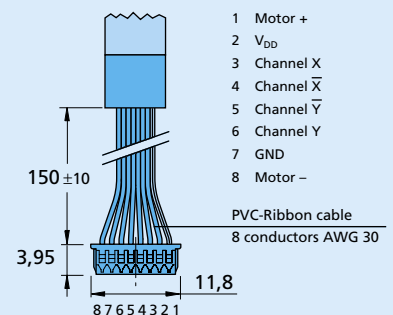
Output signals / Connector information

Analog output signals



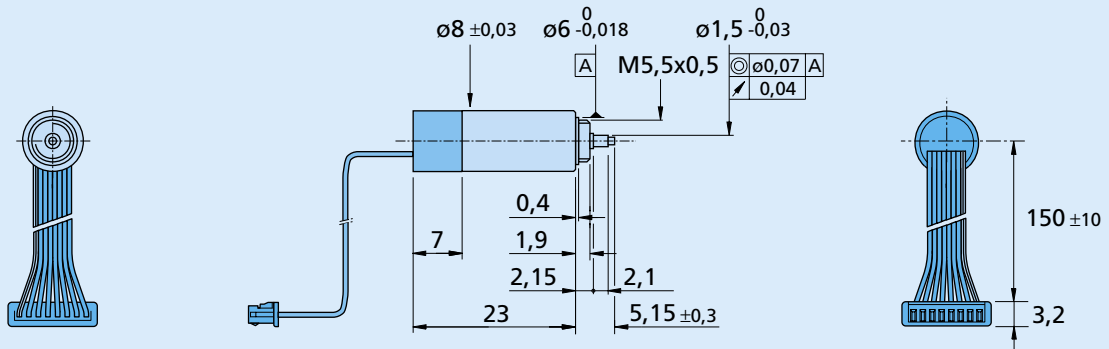
Output signals
 with clockwise rotation as seen from the shaft end

Pin Function

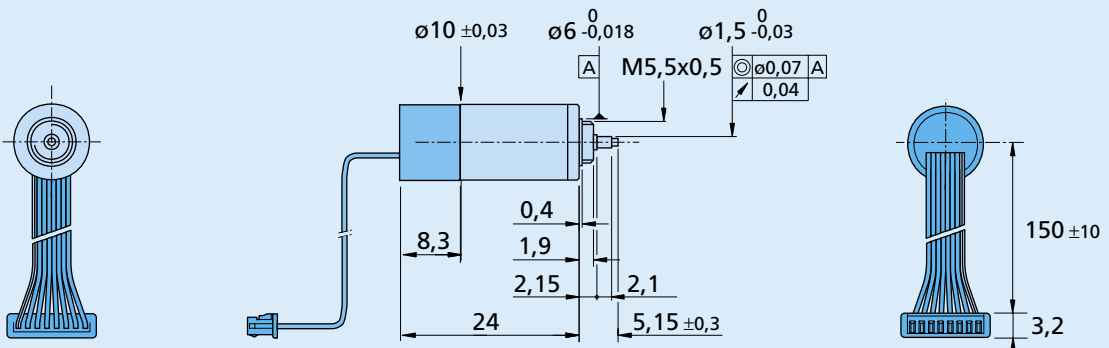


Connector
 Molex 51021/0800
 grid 1,25 mm

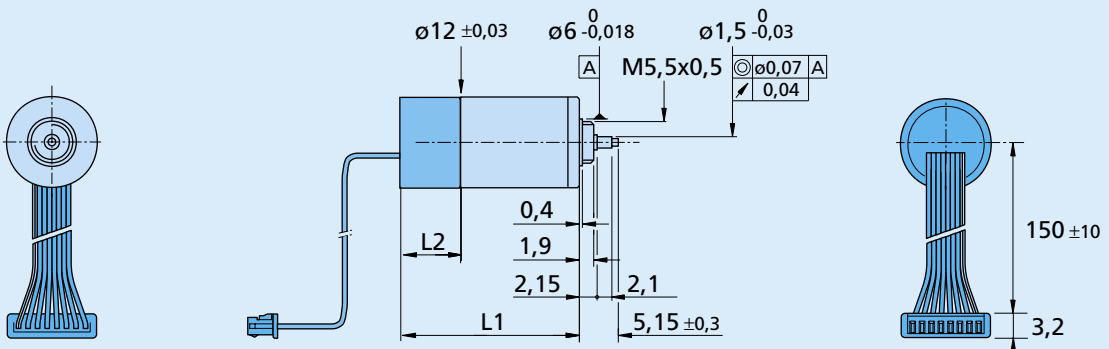
DC-Micromotor 0816 N ... S - K1310 with Encoder 05A



DC-Micromotor 1016 N ... G - K380 with Encoder 05A



DC-Micromotors 1219 N ... G - K380, 1224 N ... S - K380 with Encoder 05A



Motor type	L1	L2
1219	27,0	8,3
1224	30,6	8,5