Encoders

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

For combination with
DC-Micromotors

Series PA2-100

		PA2-100	
Lines per revolution	*N*	100	
Frequency range, up to[1]	*f*	35	kHz
Signal output, square wave		2	Channels
Supply voltage	U_{DD}	2,7 ... 3,3	V
Current consumption, typical[2]	I_{DD}	8	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, max. (C_{LOAD} = 50 pF)	*tr*/*tf*	0,1 / 0,1	µs
Inertia of code disc	*J*	0,02	gcm²
Operating temperature range		-25 ... +85	°C

[1] Velocity (min⁻¹) = *f* (Hz) x 60/*N*
[2] U_{DD} = 3 V: with unloaded outputs

For combination with Motor

Dimensional drawing A	**<L1 [mm]**
1016 ... SR - K2565	23,7
1024 ... SR - K2565	31,7

Dimensional drawing B	**<L1 [mm]**
1224 ... SR - K1752	31,1

Characteristics

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

An all-in-one emitter and detector chip transmits and receives LED light reflected off a low inertia reflective disc providing two channels with 90° phase shift.

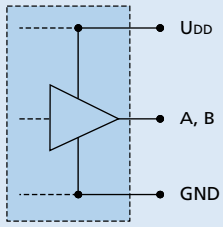
The supply voltage for the encoder and the Micromotor as well as the output signals are interfaced with a flexible printed circuit (FPC).

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

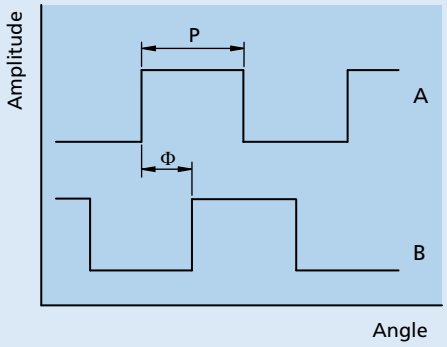
To view our large range of accessory parts, please refer to the "Accessories" chapter.

Circuit diagram / Output signals

Output circuit



Output signals
with clockwise rotation as seen from the shaft end



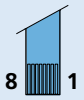
Connector information / Variants

Example product designation: **1016N006SR-K2565 PA2-100**

Option	Type	Description

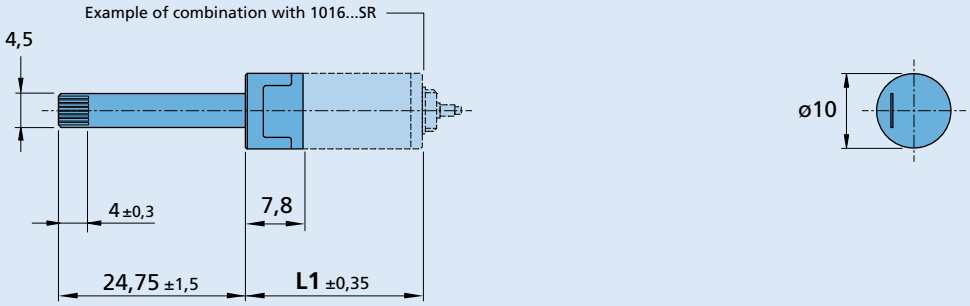
Connection Encoder

No.	Function
1	Motor +
2	Motor +
3	UDD
4	Channel A
5	Channel B
6	GND
7	Motor –
8	Motor –



Recommended connector
Molex 52745, grid 0,5 mm, FPC / FFC, 8-conductors

Dimensional drawing A



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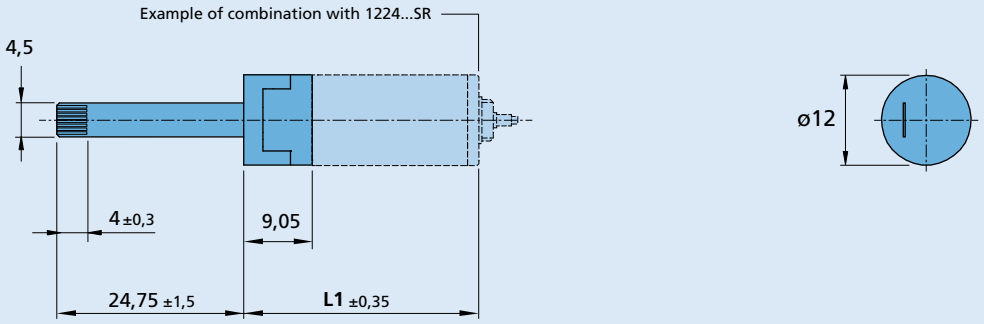
Dimensional drawing B



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