

Encoders

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

For combination with
DC-Micromotors

Series PA2-100

		PA2-100		
Lines per revolution	<i>N</i>	100		
Frequency range, up to ¹⁾	<i>f</i>	35		kHz
Signal output, square wave		2		Channels
Supply voltage	<i>U_{DD}</i>	2,7 ... 3,3		V
Current consumption, typical ²⁾	<i>I_{DD}</i>	8		mA
Pulse width	<i>P</i>	180 ± 45		°e
Phase shift, channel A to B	<i>Φ</i>	90 ± 45		°e
Logic state width	<i>S</i>	90 ± 45		°e
Cycle	<i>C</i>	360 ± 30		°e
Signal rise/fall time, max. (<i>C_{LOAD}</i> = 50 pF)	<i>tr/tf</i>	0,1 / 0,1		µs
Inertia of code disc	<i>J</i>	0,02		gcm ²
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.

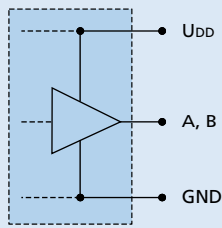
The supply voltage for the encoder and the Micromotor as well as the output signals are interfaced with a flexible printed circuit (FPC).

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

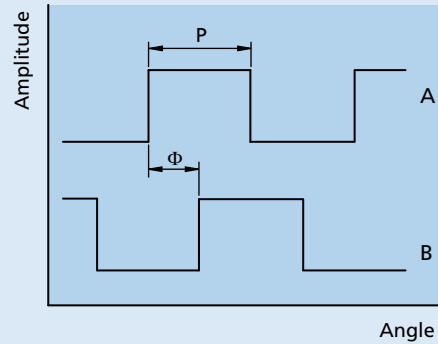
To view our large range of accessory parts, please refer to the "Accessories" chapter.

Circuit diagram / Output signals

Output circuit



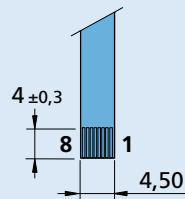
Output signals
with clockwise rotation as seen from the shaft end



Connector information / Variants

No.	Function
1	Motor +
2	Motor +
3	U _{DD}
4	Channel A
5	Channel B
6	GND
7	Motor -
8	Motor -

Connection Encoder

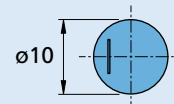
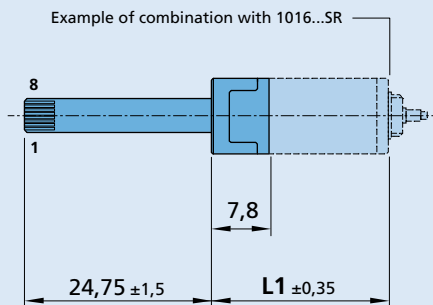


Recommended connector
Molex 52745
grid 0,5 mm
FPC / FFC, 8-conductors

Full product description

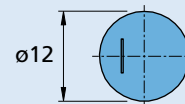
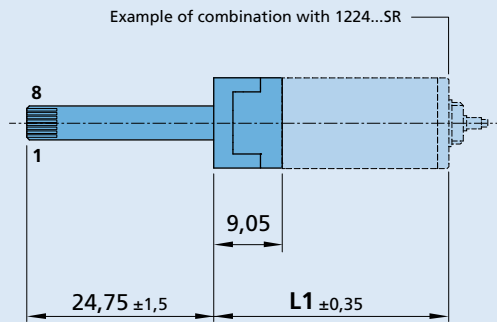
- Examples:
1016N006SR-K2565 PA2-100
1224N012SR-K1752 PA2-100

Dimensional drawing A



PA2-100

Dimensional drawing B



PA2-100