NEW

Micro Encoders

Optical Encoders

Features:
50 Lines per revolution
2 Channels
Digital output

PA2-50

Signal output, square wave		2	channels
Supply voltage (ripple < 100 mV_{p-p})	V_{CC}	2,7 ... 3,3	V DC
Current consumption, typical (V_{CC} = 3 V DC)	I_{CC}	8,5	mA
Current output, per channel	I_{out}	– 1 ... 8	mA
Pulse width	P	180 ± 50	°e
Phase shift, channel A to B	Φ	90 ± 45	°e
Logic state width	S	90 ± 50	°e
Cycle	C	360 ± 36	°e
Signal rise/fall time, typical (C_{LOAD} = 25 pF)	tr/tf	0,3 / 0,1	µs
Rotational speed up to	$n_{max.}$	24 000	rpm
Inertia of code disc	J	0,02	gcm^2
Operating temperature range		– 30 ... + 85	°C

Ordering information

Encoder	number of channels	lines per revolution	for combination with: DC-Micromotors series
PA2-50	2	50	0615 ... S

Note: Lines per revolution refers to pre-quadrature resolution and equals the cycles per revolution

Features

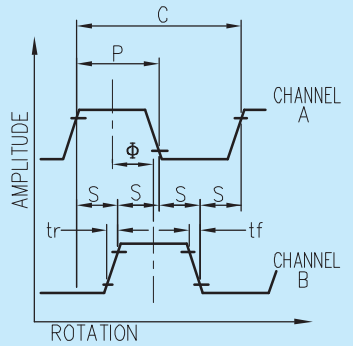
These incremental shaft encoders in combination with the DC-Micromotors and Brushless DC-Servomotors are designed for both indication and control of both shaft velocity and direction of rotation as well as for positioning.

An all-in-one emitter and detector chip (AEDR 8400) transmits and receives LED light reflected off a low inertia reflective disc providing two channels with 90° phase shift.

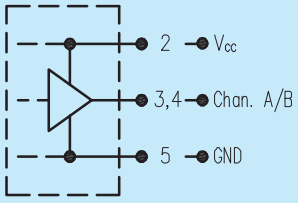
The supply voltage for the encoder and the DC-Micromotor and Brushless DC-Servomotor as well as the output signals are interfaced with a flexible printed circuit (FPC) for connection to a 6-pin 0,5 mm pitch Molex ZIF connector.

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

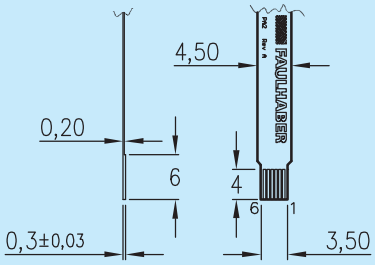
Output signals / Circuit diagram / Connector information



Output Signals
with clockwise rotation as seen from the shaft end



Output circuit



Side View **Contact Side**

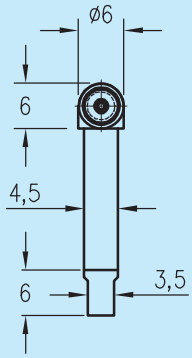
PIN	FUNCTION
1	MOT +
2	Vcc
3	Chan A
4	Chan B
5	Gnd
6	MOT –

Suggested Connector:
Molex 52745 series
Pitch 0.5mm
FPC/FFC, 6 circuits

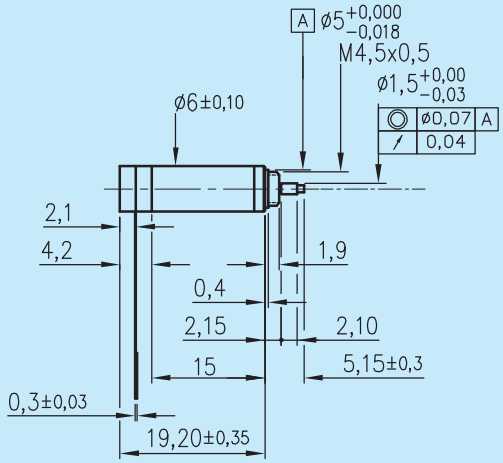
Connection

PA2-50

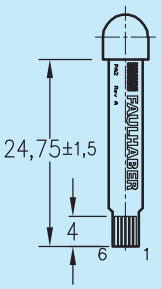
DC Micromotor 0615 N ... S - K1655 with encoder PA2-50



Front View



PA2-50 + 0615 N



Rear View