

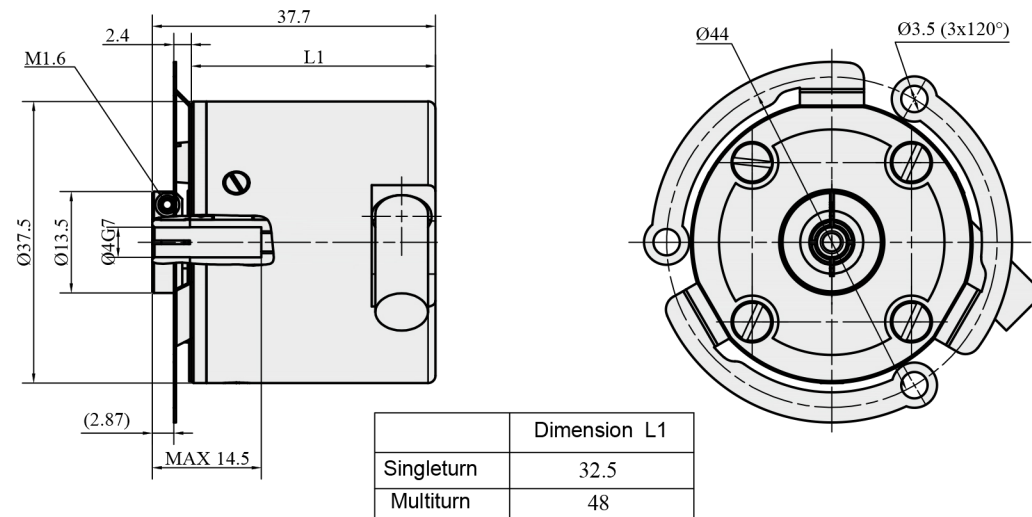
# PHOTOELECTRIC ROTARY ENCODER

## AK36HME1

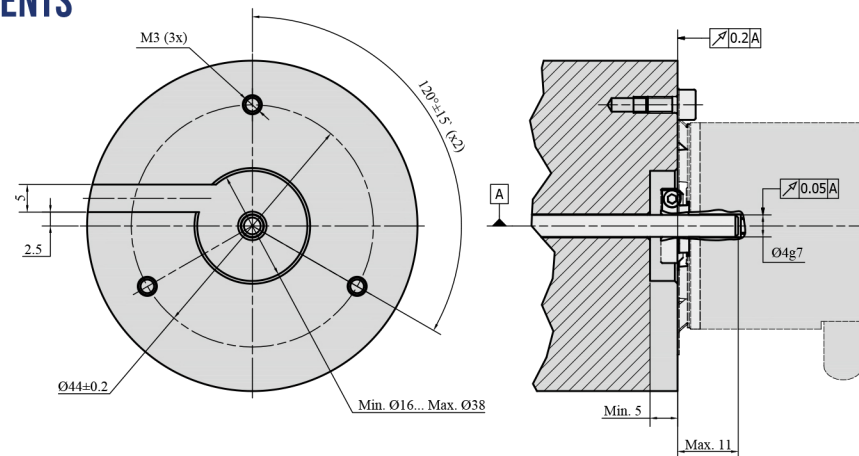


AK36HME1 is a photoelectric absolute encoder that is available in singleturn and multiturn (battery buffered) versions. The encoder has up to 21 bit resolution in singleturn option and up to 40 bit resolution

when using the multiturn version. It outputs the signal through BiSS C or SSI interface and has a blind hollow shaft.



### MOUNTING REQUIREMENTS



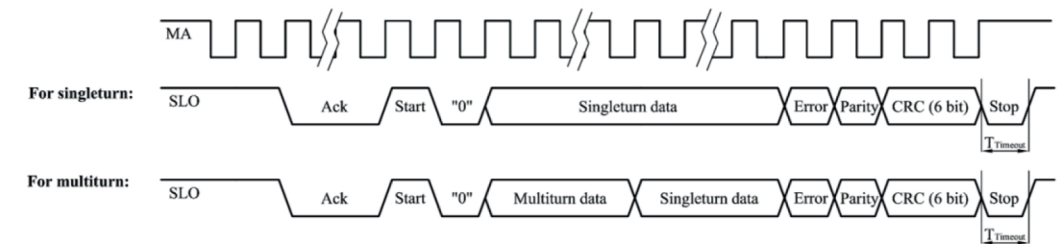
### MECHANICAL DATA

Maximum shaft speed	10000 rpm	Operating temperature:	
Permissible motion of shaft:		- singleturn version	-20...+80 °C
- axial	±0.5 mm	- multiturn version	-10...+70 °C
- radial (at shaft end)	±0.03 mm	Storage temperature:	
Starting torque at 20°C	≤ 0.002 Nm	- singleturn version	-30...+90 °C
Rotor moment of inertia	< 2 gcm <sup>2</sup>	- multiturn version	-20...+80 °C
Protection (IEC 529)	IP54 IP64	Maximum humidity (non-condensing)	98 %
- Standard	IP54	Permissible vibration (55 to 2000 Hz)	≤ 100 m/s <sup>2</sup>
- Optional	IP64	Permissible shock (11 ms)	≤ 300 m/s <sup>2</sup>
Maximum weight without cable	0.1 kg		

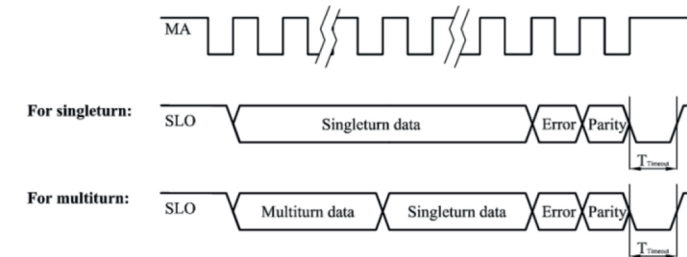
### ELECTRICAL DATA

Resolution:		Accuracy	± 30 arc sec
Singleturn version:		Supply voltage	+5V ± 5%
- with interface BiSS C	9... 21 bit	Light source	LED
- with interface SSI	9... 21 bit	Maximum operating frequency:	
Multiturn version:		- with interface BiSS C	10 MHz
- single turn resolution with BiSS C	9... 21 bit	- with interface SSI	4 MHz
- multiturn resolution with BiSS C	12/16/20/24 bit	Cable length (standard)	1 m
- single turn resolution with SSI	9... 21 bit	Maximum cable length	25 m
- multiturn resolution with SSI	9... 40 bit	Output code	Gray, binary
Data interface	SSI, BiSS C		

#### BiSS C serial interface



#### SSI serial interface



Interface	BiSS C
T <sub>Trans</sub>	1.2 µs - 26 µs
Clock frequency	62,5 kHz - 10 MHz

Interface	SSI
T <sub>Trans</sub>	1.2 µs - 26 µs
Clock frequency	62,5 kHz - 4 MHz

Note:

- Error and parity bits should be determined during order.

### ACCESSORIES

<b>CONNECTORS FOR CABLE</b>	B12 12-pin round connector	C9 9-pin round connector	C12 12-pin round connector	D9 9-pin flat connector	RS10 10-pin round connector	ONC 10-pin round connector
<b>DIGITAL READOUT DEVICES</b>	CS3000			CS5500		
<b>COUPLING</b>				SC30		
<b>EXTERNAL INTERPOLATOR</b>				NK		

### ORDER FORM

AK36HME1 - X1 - X2 - X3/X4 - X5 - X6/X7

Versions (X1):	Output signals Interface (serial) (X2):	Singleturn bit number* (X3):	Multiturn bit number* (X4):	Output code (X5):	Cable length (X6):	Connector type (X7):
ST - singleturn MT - multiturn	S - SSI B - BiSS C	B9 - 9 B10 - 10 B11 - 11 B12 - 12 ... B20 - 20 B21 - 21	M0 - 0 (for singleturn version) M9 - 9 M10 - 10 M11 - 11 M12 - 12 ... M40 - 40	B - Binary G - Gray	A01 - 1m (A-axial cable) A02 - 2m ... AR01 - 1m (AR-universal cable outlet) AR02 - 2m ... ...	W - without connector B12 - round, 12 pins C9 - round, 9 pins C12 - round, 12 pins D9 - flat, 9 pins RS10 - round, 10 pins ONC - round, 10 pins

\* See electrical data for possible bit selection with specific interface

ORDER EXAMPLES: 1) AK36HME1-ST-S-B9/M0-B-AR02/W  
2) AK36HME1-MT-B-B20/M12-G-AR01/C12