AK36

ABSOLUTE ROTARY ENCODER

Absolute singleturn and multiturn (battery buffered) solid shaft rotary encoders are used for generation of coded output signals which provide information about controlled object absolute position.

In singleturn version rotary encoder AK36 has resolution from 9 up to 21 bit per revolution. Output signals interface is BiSS C or SSI. Operating principle is photoelectrical.

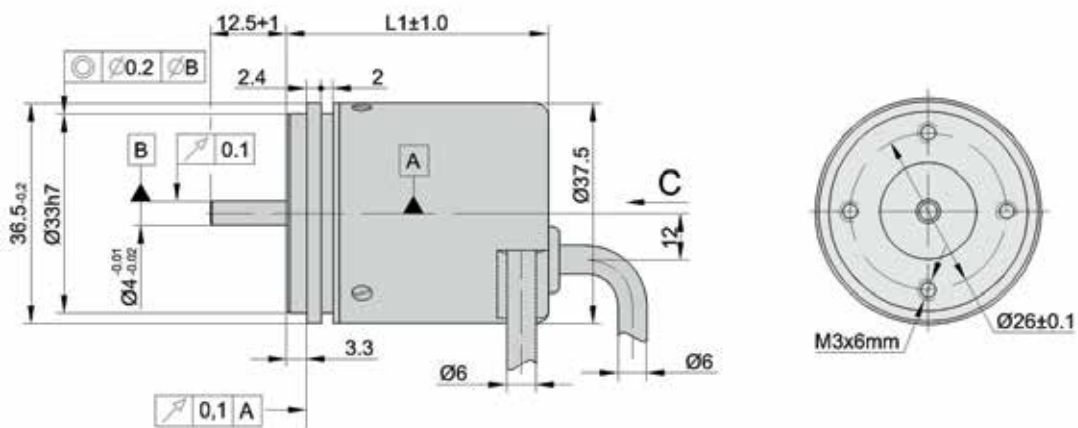In multiturn version AK36 has singleturn resolution from 9 up to 21 bit per revolution with 12/16/20/24 bit resolution of multiturn counter on BiSS C interface. With SSI interface the encoder AK36 has resolution from 9 up to 21 bit per revolution with 9 up to 40 bit resolution of multiturn counter. Battery is placed inside of encoder. Operating principle is photoelectrical and magnetic.

Absolute encoder is intended to use in robotics industry, automated and automatized lines in industry, control devices of equipment and machines, various control systems, precise machine tools and others.
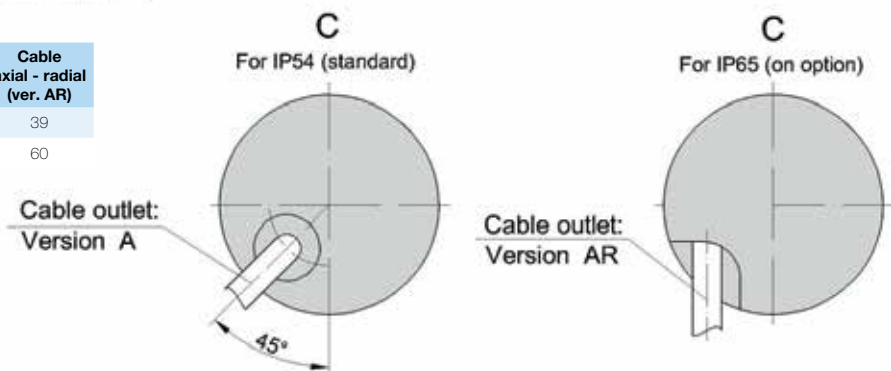
MECHANICAL DATA

Maximum shaft speed	10000 rpm
Maximum shaft load: - axial - radial (at shaft end)	5N 10N
Starting torque at 20°C	≤ 0.002 Nm
Rotor moment of inertia	< 2 gcm²
Protection (IEC 529) - Standart - Optional	IP54 IP64
Maximum weight without cable	0.1 kg

Operating temperature: - singleturn version - multiturn version	-20...+80 °C -10...+70 °C
Storage temperature: - singleturn version - multiturn version	-30...+90 °C -20...+80 °C
Maximum humidity (non-condensing)	98 %
Permissible vibration (55 to 2000 Hz)	≤ 100 m/s²
Permissible shock (11 ms)	≤ 300 m/s²

	Cable outlet	Cable axial (ver. A)	Cable axial - radial (ver. AR)
Singleturn	L1	39	39
Multiturn	L1	55	60

For IP54 (standard)
Cable outlet: Version A

For IP65 (on option)
Cable outlet: Version AR

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ELECTRICAL DATA

Resolution:

Singleturn version:
- with interface BiSS C	9... 21 bit
- with interface SSI	9... 21 bit

Multiturn version:
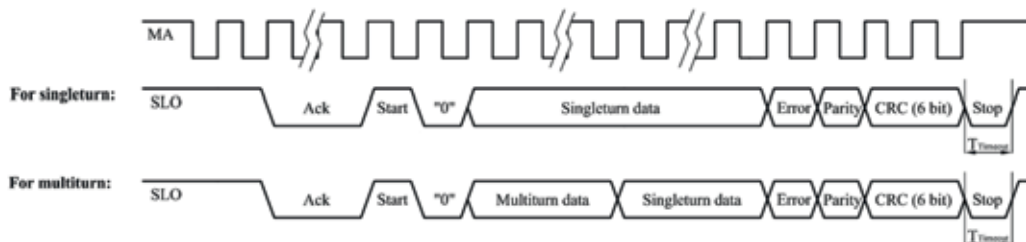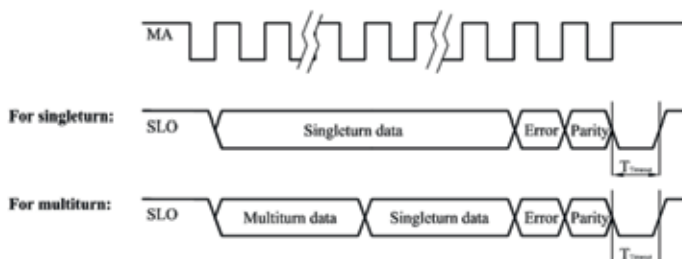|	
- single turn resolution with BiSS C	9... 21 bit
- multiturn resolution with BiSS C	12/16/20/24 bit
- single turn resolution with SSI	9 ... 21 bit
- multiturn resolution with SSI	9 ... 40 bit
Output code	Gray, binary
Data interface	SSI, BiSS C

Accuracy	± 30 arc sec
Supply voltage	+5V ± 5%
Light source	LED
Maximum operating frequency:	
- with interface BiSS C	10 MHz
- with interface SSI	4 MHz
Cable length (standard)	1 m
Standard cable length	1 m, without connector
Maximum cable length	25 m

BiSS C serial interface

SSI serial interface

Interface	BISS C
T$_{Timeout}$	1,2 µs - 26 µs
Clock frequency	62,5 kHz - 10 MHz

Interface	SSI
T$_{Timeout}$	1,2 µs - 26 µs
Clock frequency	62,5 kHz - 4 MHz

Note:
1. *Error and parity bits should be deteminated during order.*

ACCESSORIES

CONNECTORS FOR CABLE	C9 9-pin round connector	C12 12-pin round connector	D9 9-pin flat connector

COUPLING	SC30

ORDER FORM

AK36 - XX - X - XX/XX - X - XX/XX - X

VERSIONS:	OUTPUT SIGNALS INTERFACE (SERIAL):	SINGLETURN BIT NUMBER*:	MULTITURN BIT NUMBER*:	OUTPUT CODE:	CABLE LENGTH:	CONNECTOR TYPE:	COUPLING:
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 ...-... AR 01 - 1m (AR- universal cable outlet) AR02 - 2m AR03 - 3m ...-...	W - without connector C9 -round, 9 pins C12 - round, 12 pins D9 - flat, 9 pins RS10 - round, 10 pins ONC - round, 10 pi	0 - without coupling 1 - with coupling

* See electrical data for possible bit selection with specific interface

ORDER EXAMPLES:	1) AK36-ST-S-B9/M0-B-AR02/W-0
	2) AK36-MT-B-B20/M12-G-AR01/C12-1

Please confirm configuration options before ordering or contact Customer Service for assistance.