

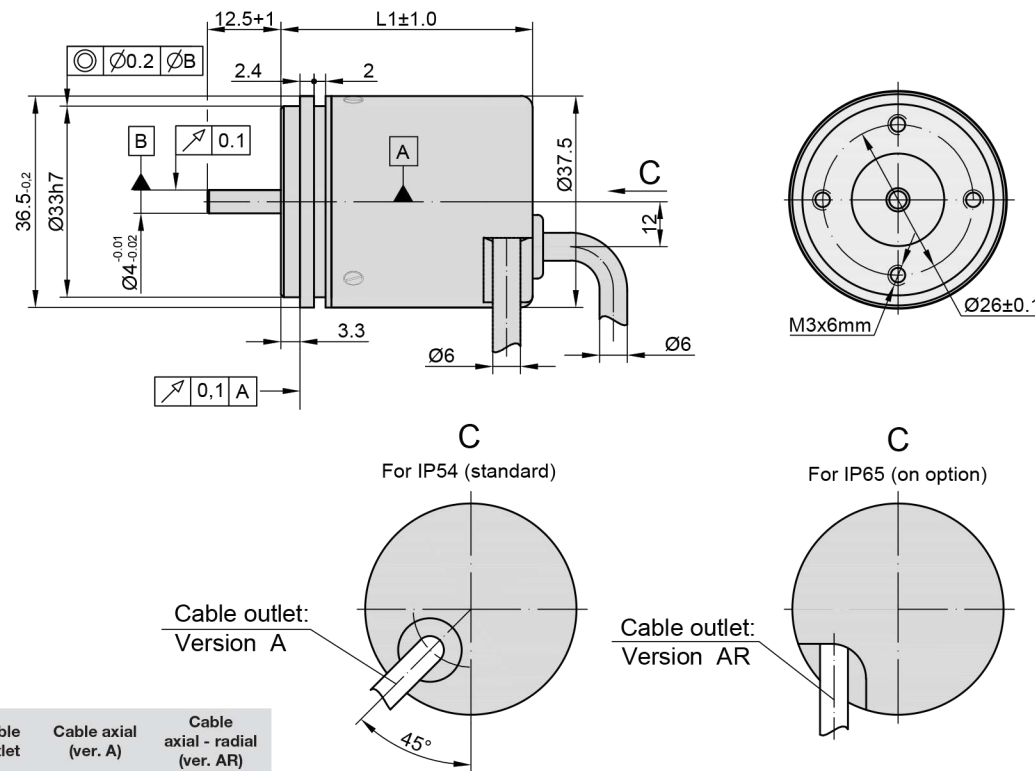
PHOTOELECTRIC ROTARY ENCODER

AK36



Absolute rotary encoder AK36 uses photoelectric technology and is available in singleturn and multiturn versions. Using SSI or BiSS seri-

al interface, it can reach up to 21 bit singleturn and 40 bit multiturn resolutions per revolution.



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

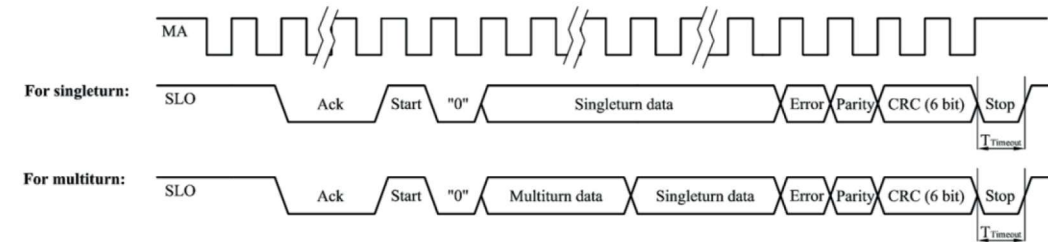
MECHANICAL DATA

Maximum shaft speed	10000 rpm	Operating temperature: - singleturn version -20...+80 °C - multiturn version -10...+70 °C	
Maximum shaft load: - axial - radial (at shaft end)	5N 10N		
Starting torque at 20°C	≤ 0.002 Nm	Storage temperature: - singleturn version -30...+90 °C - multiturn version -20...+80 °C	
Rotor moment of inertia	< 2 gcm ²		
Protection (IEC 529) - Standard - Optional	IP54 IP64	Maximum humidity (non-condensing)	98 %
Maximum weight without cable	0.1 kg	Permissible vibration (55 to 2000 Hz)	≤ 100 m/s ²
		Permissible shock (11 ms)	≤ 300 m/s ²

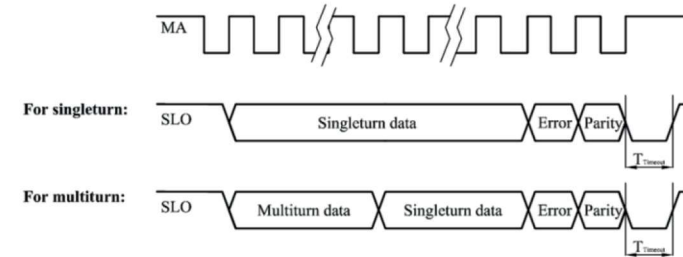
ELECTRICAL DATA

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

- Error and parity bits should be determined 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 - 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 M24 - 40	B - Binary G - Gray	A01 - 1m (A-axial cable) A02 - 2m AR01 - 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

* See electrical data for possible bit selection with specific interface

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