

MAIN EXPORT COUNTRIES:



The company under the name **JSC "Precizika Metrology"** began work after the change of name of the Lithuanian - American Joint Venture "Brown & Sharpe - Precizika". The company has a proud history of old traditions in the leadership of design and production of metrological equipment. Its workforce has been involved for over fifty years in the supply of measuring technology and systems to automate factories as well as in the development of optical scale manufacturing technology.

In 2000, the production process was certified to fully meeting the requirements of EN ISO 9002:1994, in 2003 – EN ISO 9001:2000.

The company's goal is to consistently supply high quality products and services to meet customer demands on a timely basis. The company's main products are linear and angular glass scale gratings, and the linear and rotary displacement measuring systems.

JSC "Precizika Metrology" represents worldwide known companies and suppliers of measuring equipment, CNC centers, executes installation and services of them, trains the users, and executes upgrading of used CMM and manual cutting machine-tools.

AK50

PHOTOELECTRIC ABSOLUTE ROTARY ENCODER



Absolute single turn rotary encoder AK50 is designed to be used in rotary tool changers, it features 8 bit gray or binary code outputs with arbitrary zero position, direction and resolution selection (set via switches), diagnostic facilities (status LED). Encoder has the following features: Ability to set arbitrary reference position (accessible via switch). User selectable number of indexed positions accessible via switch (example: when used in a tool turret with different number of tools) with maximum of 256. Following diagnostic facilities are provided via two bicolour LEDs:

- Power supply failure
- Internal failure (illumination failure, parity error)
- Reference position indication



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AK50

RECOMMENDED APPLICATIONS



ROBOTICS



TOOL REVOLVER



RETROFITTING



MILLING / BORING /
DRILLING CNC MACHINES

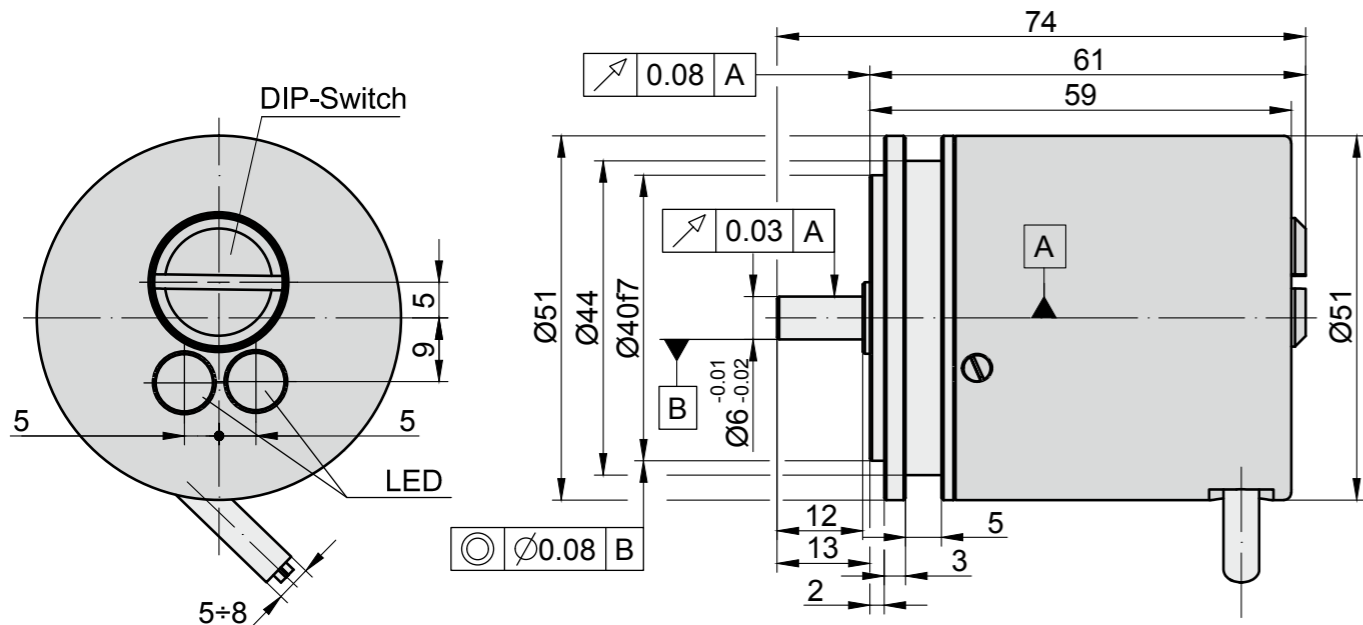


MAINTENANCE

MECHANICAL DATA

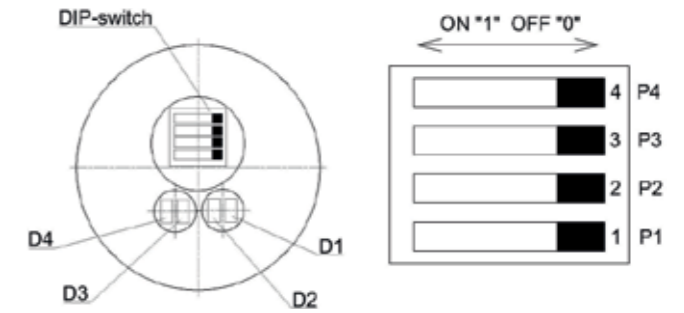
Maximum shaft speed without counting loss for 8 bit	3000 rpm
Maximum shaft load:	
- axial	80 N
- radial (at shaft end)	100 N
Starting torque at 20 °C	3 Ncm
Rotor moment of inertia	20 gcm ²
Protection (IEC 529):	
- housing	IP66
- shaft	IP65

Maximum weight without cable	0.3 kg
Operating temperature	-20...+80 °C
Storage temperature	-30...+90 °C
Maximum humidity (non-condensing)	98 %
Permissible vibration (55 to 2000 Hz)	≤ 100 m/s ²
Permissible shock (11 ms)	≤ 1000 m/s ²

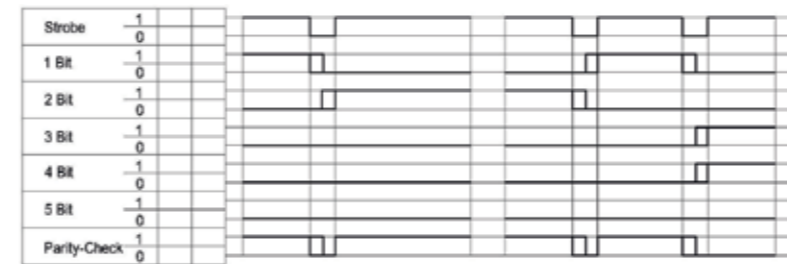


ELECTRICAL DATA

Accuracy	±120 arc. sec
Resolution	2 ⁸ (256)
Code:	Gray, Binary, Other (custom)
Output signals interface	Parallel
Light source	LED
Supply voltage:	
- standard	+24 (8...25) V± 5%
- optional	+5 V± 5%
Maximum supply current	50 mA
Output signal levels	TTL/HTL
Maximum cable length	25 m



P1, P2, P3, P4 - operating mode and first setting switches;
D1 - green LED for indication of counting origin on code disc;
D2 - yellow LED for indication of specified counting origin;
D3 - red LED for indication of encoder failure:
- incorrect supply voltage,
- counting error,
- LED failure;
D4 - green LED for indication of proper encoder operating



Encoder code full truth table (24 positions)

Tool number in tool changer	Switch P1 position	Switch P2 position
8	0	0
12	0	1
16	1	0
24	1	1

Switches position depending on tool number in tool changer

Function	Indexing position of turret																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Strobe	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1 Bit	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
2 Bit	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0
3 Bit	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0
4 Bit	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1
5 Bit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
Parity-check	1	1	0	1	0	0	1	1	0	0	1	0	1	1	0	1	0	0	1	0	1	1	0	0

ACCESSORIES

CONNECTORS FOR CABLE	B12 12-pin round connector	C9 12-pin round connector	C12 12-pin round connector	D9 9-pin flat connector	D15 15-pin flat connector	RS10 10-pin round connector	ONC 10-pin round connector
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COUPLING	SC30
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ORDER FORM

CONFIGURATION TYPE:	NUMBER OF POSITIONS:	(OR) NUMBER OF BITS:	OUTPUT CODE:	SUPPLY VOLTAGE:	CABLE LENGTH:	CONNECTOR TYPE:	COUPLING:
P - POSITION NUMBER F - BIT NUMBER	2 ... 256	1 2 ... 8	G - gray B - binary O - other	05V - +5V 24V - +(8...25)V	AR01 - 1m AR02 - 2m AR03 - 3m ...	W - without connector B12 - round, 12 pins C9 - round, 9 pins C12 - round, 12 pins D9 - flat, 9 pins D15 - flat, 15 pins RS10 - round, 10 pins ONC - round, 10 pi	0 - without 1 - with coupling

ORDER EXAMPLES:	1) AK50-P-8/12/16/24-G-24V-AR01/W-1 2) AK50-B-8-G-05V-AR02/W-0 3) AK50-P-16/32-B-05V-AR12/C12-0 4) AK50-B-5/6/8-G-24V-AR06/W-1
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