

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.



PHOTOELECTRIC LINEAR ENCODER

The sealed absolute photoelectric encoder LK24 is used to convert linear displacements of key machine components into electrical signals containing information about components absolute position. The encoder consists of a glass scale installed into a rigid hol-low housing and a ball-bearing guided reading head. To be able to work in harsh environments (lubricants and chips), the encoder has double level sealing lips. Filtered air can be supplied into the housing of the encoder for extra protection. The encoder has two versions of serial interface SSI or BiSS C. On option third encoder version is available: with 2 analog sinusoidal signals with phase shift 90 o and amplitude approx. 1Vpp .



Žirmūnų str. 139, LT-09120 Vilnius, Lithuania sales@precizika.lt Tel.: +370 (5) 236 3683 Fax.: 370 (5) 236 3609 www.precizika.lt









RECOMMENDED APPLICATIONS













MECHANICAL DATA

Measuring lengths (ML), mm	70, 120, 170, 220, 270, 320, 370, 420, 470, 520, 570, 620, 720, 770, 820, 920, 1024, 1140, 1240, 1340, 1440, 1540, 1640, 1740, 1840, 2040, 2240, 2440, 2640, 2840, 3040, 3240
Incremental signal	sine wave 1 Vpp (optional)
Resolution 1Vpp	up to 0.1µm (depending on CNC division factor)
Serial interface	SSI or BiSS
Resolution absolute measure	1 μm, 0.1 μm
Accuracy grades to any metre within the ML (at 20°C) - standard version - high accuracy version	± 3 μm ± 1 μm
Grating period (T)	20 mm
Max. traversing speed:	120 m/min
Max. acceleration	30 m/s
Required moving force	<4N; ≤2.5N on request

Power supply	+5V ± 5%
Current consumption with load	max 180 mA (with R=120W)
Protection (EN 60529) -without compressed air -with compressed air	IP54 IP64
Weight	0.4 kg + 2.8 kg/m
Operating temperature	0+50°C
Storage temperature	-20+70°C
Permissible humidity (non condensed)	2080 %
Permissible vibration (552000 Hz)	$\leq 100 \text{ m/s}^2$
Permissible shock (11 ms)	$\leq 150 \text{ m/s}^2$
Weight	0.42 kg +1,32kg/m
Standard cable length/max. cable length	2.0/25.0 (100 m if power supply is min. 5V)
Electrical protections	from inversion of power supply polarity; from short circuit on output port



(*) Add holes at 40mm from cut ends, when the first hole at constant step is at a distance X>175mm.

OUTPUT SIGNALS



Intendoe	oor binary – oray	Intenace
Signals level	EIA RS 485	Signals level
Clock frequency	0.1 ø 1.2 MHz	Clock frequence
n	Position bit	n
T _c	10 ø 20 µs	Tc

CABLE

Serial output S CK 0 00 *\$ \$ × DV-

Encoder is supplied with flexible cable, which is consisted of shielded twisted pairs of wires (for informational signals SSI-BiSS).

٠

٠

Cable for serial output:

- 6-wire shielded cable, Ø=7 mm, PVC external sheath, with low friction coefficient, oil-resistant, suitable for continuous movements
- conductors section: power supply 0.25 mm2, signals 0.25 mm2
- cable's bending radius should not be lower than 35 mm. ٠

In case of cable extension, it is necessary to guarantee:

- electrical connection between the body of the connectors • and the cables shield;
- minimum power supply voltage of 5 V to the head. •

ACCESSORIES





Analog output + Serial output

m 12 /		11 > sm
cos 😞		1 000
ox → + + + + + + + + + + + + + + + + + +	[] mmmmmmm]	
• 🗟	[mmmmm]	
-07		-tw
1	/ /	2-1960

Cable for analog output + serial output:

10-wire shielded cable, Ø=7.1 mm, PUR external sheath.

conductors section: power supply 0.35 mm2, signals 0.10 mm2

• cable's bending radius should not be lower than 45 mm.