MAIN EXPORT COUNTRIES:





The company under the nds@"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. workforce has been involved for over fifty years in the supply of measuring technology and systems to automate factories as well as in the developm 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 ma 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 an PHOTOELECTRIC LINEAR ENCODER services of them, trains the users, and executes upgrading of used CMM and manual cutting machine-tools.







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Fax.: 370 (5) 236 3609 www. precizika.lt

The sealed linear encoder L18 is used to convert linear displacements of key machine components into electrical signals containing information about the value and direction of the displacement. The encoder consists of a glass scale installed into a rigid hollow housing and a ball-bearing-guided reading head. To be able to work in harsh environments (lubricants and chips), the encoder has sealing lips. Filtered air can be supplied into the housing of the encoder for extra protection. The photoelectric unit of the reading head generates sinusoidal micro-current or TTL square-wave (standard RS422) output signals. Three versions of output signals are available:

- L18-A Sinusoidal signals, with amplitude approx. 11 μApp, require external subdividing electronics.
- L18-AV Sinusoidal signals, with amplitude approx. 1 Vpp, require external subdividing electronics.
- L18-F Square-wave, with integrated subdividing electronics for interpolation x1, x2, x5, x10, x 25, x50.

















L18

RECOMMENDED APPLICATIONS





















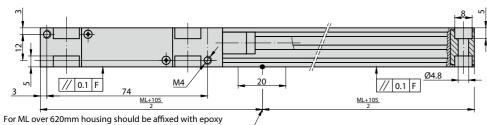
-optional

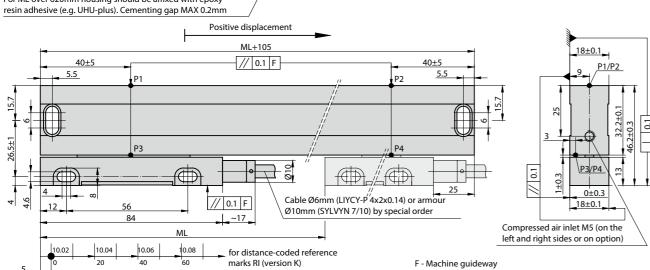
MECHANICAL DATA

70; 120; 170; 220; 270; 320; 370; 420; 520; 620; 720; 820; 920; 1020; 1140; 1240 Measuring lengths (ML), mm Accuracy grades to any metre within the ML (at 20 °C) $\pm 10; \pm 5; \pm 3 \ \mu m \ (optional)$ Grating period 20 μm; 40 μm (optional) Reference marks (RI): -standard for ML ≤ 1020 mm -standard for ML > 1140 mm 35mm from both ends of ML

45mm from both ends of ML one RI at any location, or two or more RI's separated by distances of n x 50 mm or distance-coded

Max. traversing speed:
-when interpolation factor is 1,2,5,10 1 m/s -when interpolation factor is 25 -when interpolation factor is 50 0.5 m/s 0.4 m/s Required moving force with sealing lips < 3 N Protection (IEC 529) IP53 -without compressed air -with compressed air (optional) IP64 0.4 kg + 0.8 kg/m Weight Operating temperature 0...+50 °C -20...+70 °C Storage temperature Permissible vibration (40 to 2000 Hz) \leq 30 m/s 2 Permissible shock (11 ms) \leq 100 m/s 2





ML - Measuring length P - Gauging points for alignment

ELECTRICAL DATA

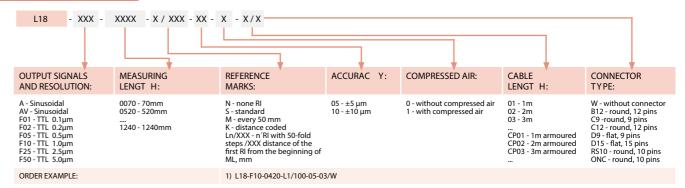
VERSION	L18-A ~11 μApp	L18-AV ~ 1 V pp	L18-F Γ⊔ πL
Power supply	+5 V ± 5% / < 90 mA	+5 V ± 5% < 120 mA	+5 V ± 5% / < 120 mA
Light source	LED	LED	LED
Resolution	Depends on external subdividing electronics	Depends on external subdividing electronics	5; 2.5; 1; 0.5; 0.2; 0.1 μm (after 4-fold dividing in subsequent electronics)
Incremental signals	Two sinusoidal I_1 and I_2 Amplitude at 1 k Ω load: - I1 = 7-16 μ A - I2 = 7-16 μ A	Differential sine +A/-A and +B/-B Amplitude at 120 Ω load: - A = 0.6-1.2 V - B = 0.6-1.2 V	Differential square-wave U1, $\overline{\text{U1}}$ and U2/ $\overline{\text{U2}}$. Signal levels at 20 mA load current: - low (logic "0") $\leq 0.5 \text{ V}$ - high (logic "1") $\geq 2.4 \text{ V}$
Reference signal	One quasi-triangular I_0 peak per revolution. Signal magnitude at 1 k Ω load: $-I_0=2-8~\mu A$ (usable component)	One quasi-triangular +R and its complementary -R per revolution. Signals magnitude at 120Ω load - R = 0.2-0.8 V (usable component)	One differential square-wave U0/U0 per revolution. Signal levels at 20 mA load current: - low (logic "0") < 0.5 V - high (logic "1") > 2.4 V
Maximum operating frequency	50 kHz	50 kHz	50xk kHz, when interpolation factor is 1, 2, 5, 10 1000 kHz when interpolation factor is 25, 50
Direction of signals	$\rm I_2 lags I_1$ at reading head displacement from left to right	B+ lags A+at reading head displacement from left to right	U2 lags U1 at reading head displacement from left to right
Standard cable length	3 m, without connector	3 m, without connector	3 m, without connector
Maximum cable length	5 m	25 m	25 m
Output signals		+A	a=0.25T±0.125T T

Note: If cable extension is used the power supply conductor section should not be smaller than 0.5 mm ².

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	
DIGITAL READOUT DEVICES	CS3000			CS5500				
EXTERNAL INTERPOLATOR				NK				

ORDER FORM





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