

PHOTOELECTRIC LINEAR ENCODER

LK18T



Absolute Encoder



Analog output signals



Photoelectric absolute linear encoder LK18T has measuring length of up to 2 040 mm depending on customer demand, uses SSI, BiSS or FANUC® ai serial interface and produces up to ±3 µm accuracy. The encoder can have an additional 1Vpp (20 µm) incremental output.

MECHANICAL DATA

Measuring lengths (ML), mm	70, 120, 170, 220, 270, 320, 370, 420, 470, 520, 570, 620, 720, 770, 820, 920, 1020, 1140, 1240, 1340, 1440, 1540, 1640, 1740, 1840, 2040.	Operating temperature	0...+50°C
Accuracy grades to any metre within the ML (at 20°C)	± 5 µm	Storage temperature	-20...+70°C
Max. traversing speed:	2 m/s	Permissible humidity (non condensed)	20...80 %
Max. acceleration	30 m/s	Permissible vibration (55...2000 Hz)	≤ 100 m/s ²
Required moving force	≤ 5 N	Permissible shock (11 ms)	≤ 150 m/s ²
Protection (EN 60529)		Weight	0.4 kg +0.8 kg/m
-without compressed air	IP54		
-with compressed air	IP64		

ELECTRICAL DATA

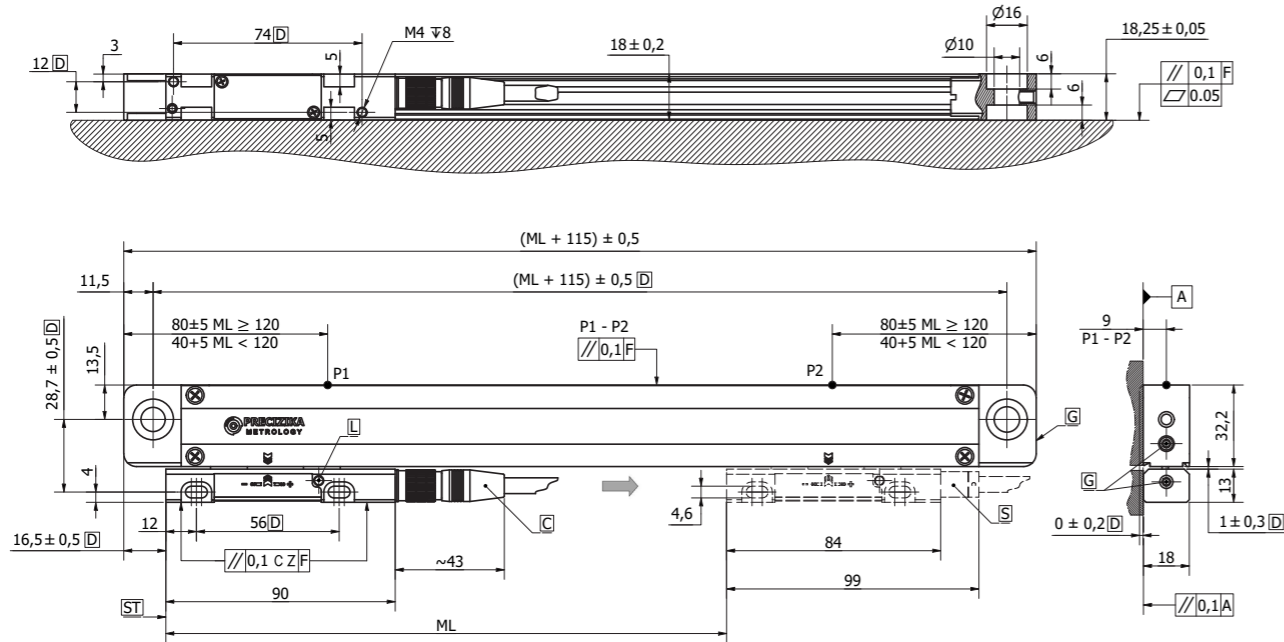


Version ¹⁾	SSI	BISS-C	FANUC® ai
Power supply	+5 V ± 5%	+5 V ± 5%	+5 V ± 5%
Current consumption	max 250 mA	max 250 mA	max 250 mA
Measuring step ¹⁾	0.1 / 0.05 µm	0.1 / 0.05 µm	1 / 0.1 / 0.05 µm
Clock frequency	0.1...2 MHz	0.5...10 MHz	-
Incremental signals ¹⁾	1 Vpp (20 µm)	optional	-
Cutoff frequency -3 dB	≤ 150 kHz	≤ 150 kHz	-
Maximum cable length ²⁾	25 m	25 m	25 m

1) select when ordering.

2) for other lengths, please contact the manufacturer.

Note: If cable extension is used the power supply conductor section should not be smaller than 0.5 mm².



- F = Machine guideway/axis datum
- P = Gauging points for alignment
- ML = Measuring length
- [D] = Required mounting dimensions
- G = Compressed air inlet
- L = LED illumination
- E = Mounting plates for encoder fixing on the mounting spar (attached with M4 screws)
- S = Detachable mini connector HR25 outlet (version C)
- C = Cable outlet (standard version S)
- ST = Beginning of measuring length ML (=20mm)
- ➔ = Direction of motion for ascending position values

ACCESSORIES

CONNECTORS FOR CABLE	B12	C9	C12	D9	D15	F20
	12-pin round connector	9-pin round connector	12-pin round connector	9-pin flat connector	15-pin flat connector	20-pin half pitch interface connector

ORDER FORM

LK18T - X1 - X2 - X3 - X4 - X5/X6

Resolution (X1):	Measuring length (X2):	Output signals (X3):	Incremental signals (X4):	Cable length (X5):	Connector type (X6):
F005 - 0.05 µm (only for SSI / BiSS interface)	0070 - 70 mm 0520 - 520 mm	S1 - SSI binary S2 - SSI binary+error+warning S3 - SSI Gray	W - without incremental signals V - 1Vpp (only for SSI / BiSS interface)	01 - 1m 02 - 2m 03 - 3m ...	W - without connector B12 - round, 12 pins C12 - round, 12 pins C9 - round, 9 pins D9 - flat, 9 pins D15 - flat, 15 pins F20 - half pitch, 20 pins
F01 - 0.1 µm F10 - 1.0 µm (only for Fanuc interface)	2040 - 2040 mm	B1 - BiSS binary F1 - Fanuc binary ai			

ORDER EXAMPLE: 1) LK18T-F01-0070-S1-W-01/W