



## ELECTRICAL DATA

VERSION	L18-A $\sim$ 11 $\mu$ App	L18-AV $\sim$ 1 Vpp	L18-F $\square$ TTL
Power supply	+5 V $\pm$ 5% / < 90 mA	+5 V $\pm$ 5% < 120 mA	+5 V $\pm$ 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 $\mu$ m (after 4-fold dividing in subsequent electronics)
Incremental signals	Two sinusoidal I <sub>1</sub> and I <sub>2</sub> Amplitude at 1 k $\Omega$ load: - I <sub>1</sub> = 7-16 $\mu$ A - I <sub>2</sub> = 7-16 $\mu$ A	Differential sine +A/-A and +B/-B Amplitude at 120 $\Omega$ load: - A = 0.6-1.2 V - B = 0.6-1.2 V	Differential square-wave U1/ $\bar{U}1$ and U2/ $\bar{U}2$ . Signal levels at 20 mA load current: - low (logic "0") $\leq$ 0.5 V - high (logic "1") $\geq$ 2.4 V
Reference signal	One quasi-triangular I <sub>0</sub> peak per revolution. Signal magnitude at 1 k $\Omega$ load: - I <sub>0</sub> = 2-8 $\mu$ A (usable component)	One quasi-triangular +R and its complementary -R per revolution. Signals magnitude at 120 $\Omega$ load - R = 0.2-0.8 V (usable component)	One differential square-wave U0/ $\bar{U}0$ 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	I <sub>2</sub> lags I <sub>1</sub> 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			

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

## ACCESSORIES

<b>CONNECTORS FOR CABLE</b>	B12 12-pin round connector	C9 9-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	HR25 8-pins round mini connector
<b>DIGITAL READOUT DEVICES</b>	CS3000				CS5000			
<b>EXTERNAL INTERPOLATOR</b>	NK							

## ORDER FORM

OUTPUT SIGNALS AND RESOLUTION:	MEASURING LENGTH:	REFERENCE MARKS:	ACCURACY:	COMPRESSED AIR:	CABLE OR CONNECTOR OUTLET:	CABLE LENGTH:	CONNECTOR TYPE:
A - Sinusoidal AV - Sinusoidal F01 - TTL 0.1 $\mu$ m F02 - TTL 0.2 $\mu$ m F05 - TTL 0.5 $\mu$ m F10 - TTL 1.0 $\mu$ m F25 - TTL 2.5 $\mu$ m F50 - TTL 5.0 $\mu$ m	0070 - 70mm 0520 - 520mm ... 1240 - 1240mm	N - none RI S - standard M - every 50 mm K - distance coded Ln/XXX - nRI with 50-fold steps /XXX distance of the first RI from the beginning of ML, mm	05 - $\pm$ 5 $\mu$ m 10 - $\pm$ 10 $\mu$ m	0 - without compressed air 1 - with compressed air	S - version S (cable outlet) C - version C (connector outlet)	01 - 1m 02 - 2m 03 - 3m ... CP01 - 1m armoured CP02 - 2m armoured CP03 - 3m armoured ...	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 pins
ORDER EXAMPLE:	1) L18-F10-0420-L1/100-05-0-S-03/W						