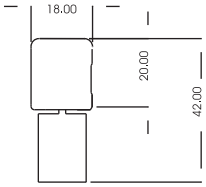
INNOVATIVE
AUTOMATION PRODUCTS

Innovative Linear Glass Encoder LE Series

LE 1820

- Cross section 18 x 20mm
- Smallest Enclosed Linear Encoder
- Slightest required space
- Slight overall length by largest measuring length
- Guided by ball bearings
- Reference marks
- Max. measuring length 520 mm

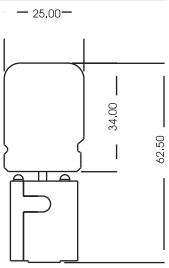


Applications :

Profile Projectors / Spark Errosion Machine / Wire Cut EDM / Lathe Cross Slide / Any application where mounting space is limited.

LE 2534

- Cross section 25 x 34mm
- Guided by ball bearings
- Reference marks
- Max. measuring length 1020 mm
- Measuring speed 60 M /min

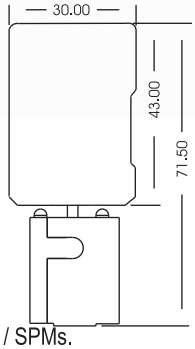


Applications :

Milling machine / Lathe machine / Surface Grinder / Cylindrical Grinder / SPMs.

LE 3043

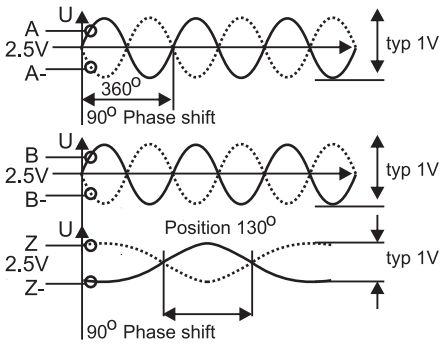
- Cross section 30 x 43mm
- Robust and heavy duty design
- Guided by ball bearings
- Reference marks
- Max. measuring length 3040 mm
- Measuring speed 60 M /min



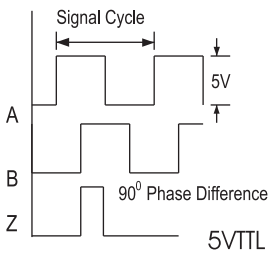
Applications :

Heavy duty Lathe machine / Horizontal boringMachine / Vertical Turret Lathe / Heavy duty Milling machine / SPMs.

Signal Output



1VPP



5VTTL

Innovative Linear Encoder

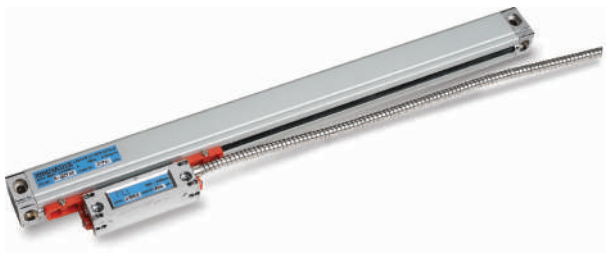
Calibrated on Laser Interferometer

The Innovative optical incremental linear encoders are designed for long life in medium to high performance applications. The compact bearing type LE-1820 offers measuring lengths up to 520mm; the bearing type LE-2534 linear encoder measures up to 1020mm; and the more robust and heavy duty bearing type LE-3043 linear encoder have a maximum measuring length of 3.0 meters. All models have a reliable internal circuitry to provide resolution as fine as 0.5µm after 4X quadrature decode in the user's circuitry.

Precision ball bearings allow the reading head to traverse the glass scale at speeds up to 1 m/s. The system is protected to IP53 by an aluminum extrusion and rubber sealing flaps.

Specifications	LE1820	LE2534	LE3043
Cross Section Size	18 X 20 mm	25 X 34 mm	30 X 43 mm
Accuracy Grade	±3 / ±5 / ±10 µM / Measuring length @ 20°C / 68°F	±3 / ±5 / ±10 µM / Measuring length @ 20°C / 68°F	±10 µM Measuring length @ 20°C / 68°F
Measuring Length ML In Mm	25-570mm	70 to 1020mm	1120 to 3040mm
Reference Marks	Every 50mm	every 50mm	every 50mm
Grating Period	20 µm	20 µm	20 µm
Signal Period	20 µm	20 µm	20 µm
Repeatability	±1counting impulse	±1counting impulse	±1counting impulse
Measuring Frequency	150khz	150khz	150-khz
Transversing Speed	40M/min	60M/min	60M/min
Output	1Vpp/5VTTL/5-24V	1Vpp/5VTTL/5-24V	1Vpp/5VTTL/5-24V
Resolution	0.5 / 1 / 5 µM *	0.5 / 1 / 5 µM *	1 / 5 µM *
Power Supply	5 V DC ± 5 %/5 V -24vDC ± 5	5 V DC ± 5 %/5 V -24vDC ± 5	5 V DC ± 5 %/5 V -24vDC ± 5
Current Consumption	180mA without load	180mA without load	180mA without load
Electrical Connection	Cable 0.5 m, 1 m, 2 m or 3 m with D-sub connector 9pin for 1VPP/5V TTL, 25pin D-sub for 5-24V signal with interface electronics in the connector	Cable 0.5 m, 1 m, 2 m or 3 m with D-sub connector 9pin for 1VPP/5V TTL, 25pin D-sub for 5-24V signal with interface electronics in the connector	Cable 0.5 m, 1 m, 2 m or 3 m with D-sub connector 9pin for 1VPP/5V TTL, 25pin D-sub for 5-24V signal with interface electronics in the connector
Cable Length	Standard 3 meters, extention additional 7 meters for 1VPP/5VTTL and 20 meters for 5-24 V	Standard 3 meters, extention additional 7 meters for 5VTTL and 20 meters for 5-24 V, standard 3 meters only for 1VPP	Standard 3 meters, extention additional 7 meters for 5VTTL and 20 meters for 5-24 V, standard 3 meters only for 1VPP
Environment Protection	IP55	IP55	IP55
Operating Temperature	0 °C to 50 °C	0 °C to 50 °C	0 °C to 50 °C

* Depending upon external subdividing electronics



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Ordering Code

LE2534	920	4	5	1	0	0	0

Model:
Le1820
Le2534
Le3043

Measuring length
70,120,170,220,270,
320,370,420,470,520,
570,620,720,820,
920,1020,1120,1240,
1340,1440,1540,1640,
1740,1840,1940,2040,
2140,2240,2340,2440,
2540,2640,2740,2840,
2940,3040mm
(refer note1)

Resolution with 4 times counting mode
0-1vpp
1-0.5 micron
2-1 micron
3-5micron

Supply voltage
5-vdc
24- (5-24) vdc (not applicable for 1vpp signal type)

Connection type:
0-Flying type
1-D sub (refer note2)
2-User specific (only available with 5V supply option)

Signal type:
0- 5VTTL Single ended
1- 5VTTL Diffrential RS422
2-1vpp
2- 5-24 diffrential square wave

Cable length:
0-standard (refer note3)
1-user specific

Cable type:
0-standard SS Flexible conduit
1-Grey pvc

Note1: Model Le1820 is available upto 570mm only. Model Le2534 available upto 1020mm and model Le3043 available from 1120mm upto 3040mm.

Note2 : If you select supply voltage as 5Vdc or 1vpp option and D sub option , the system shall come with 9 pin D sub male connector .

Whereas if you select supply voltage as 5-24VDC, system will come with 25pin D sub male connector with electronics in the connector.

User specific option is available only for 5V supply option .

Note 3: System shall come with 3 meters of cable length as standard upto length of 1020mm.

Above 1020 mm there is a 3 meters additional extention provided as standard. So you get total 6 meters.

In case of user specific cable extention , you could connect 3 meters standard + 7 meters extention , total 10 meters for options like -

Signal type – 5v single ended , 5v differential

Extentions not applicable for 1Vpp option.

For signal type 5-24v , you could go up to 30 meters in total.

Note : Due to continues R&D activities at our end,
Specifications are subject to change without prior notice.

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