

DRAW WIRE SENSOR

Links to further documents for this series:

[Installation guide](#)

[Catalogue](#)



LX SERIES

Key-Features:

- Low cost series for use in dry environments
- Measurement ranges: 50 to 1250 mm
- Linearity up to ± 0.1 % of full scale
- Output signal: Potentiometer or optical Incremental-Encoder (TTL)
- Low weight: 85 g
- Thermoplastic body
- Compact size
- Wire rope: nylon jacketed stainless steel
- Easy installation

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TECHNICAL DATA

		LX-PA	LX-EP2
Measurement range MR	[mm]	50 to 1250 (see table below)	250 to 1250 (see table below)
Linearity	[%]	MR up to 120: ±1 MR up to 625: ±0.5 MR up to 1250: ±0.25	±0.1
Repeatability	[%]	±0.03	±0.015
Resolution		depends on the signal quality of the reference voltage	up to 4.46 pulses/mm (see table below) ¹⁾
Sensor element		Potentiometer	Incremental Encoder
Output signal		0...1 kΩ ±15 % (optional: 5 kΩ or 10 kΩ)	A/B signal, TTL compatible (not differential)
Power supply	[VDC]	max. 30	5 ±0.25
Current consumption	[mA]	-	max. 30
Connection		3 solder terminals	Molex Connector 4 pins on 1.25 mm centers
Protection class		IP40	
Operating temperature	[°C]	-25...+75	-20...+75
Shock resistance		50 g, max. 0.1 ms	
Vibration resistance		15 g, max. 0.1 ms	5 g, max. 0.1 ms
Life cycle		MR up to 120: 1,000,000 full stroke cycles MR up to 625: 250,000 full stroke cycles MR up to 1250: 125,000 full stroke cycles	MR up to 625: 2,000,000 full stroke cycles MR up to 1250: 1,000,000 full stroke cycles
Housing		thermoplastic	
Draw wire		nylon jacketed stainless steel, Ø 0.46 mm / optional: stainless steel, Ø 0.41 mm	
Weight	[g]	85	

Model LX-PA-...		...-2	...-2,8	...-3,8	...-4,7	...-10	...-15	...-20	...-25	...-30	...-40	...-50
Measurement range	[mm]	50	70	96	120	250	380	500	625	750	1000	1250
Output	[mV/V/mm] ²⁾	18.5	13.4	10.1	8.1	3.5	2.5	1.9	1.5	1.3	1	0.8
Extraction force	[N]	4.4	3.9	3.1	2.2	4.4	3.9	3.1	2.2	3.9	3.1	2.2

Model LX-EP2-...		...-10	...-15	...-20	...-25	...-30	...-40	...-50
Measurement range	[mm]	250	380	500	625	750	1000	1250
Resolution	[Pulses/mm] ¹⁾	4.46	3.25	2.45	1.98	3.25	2.45	1.98
Extraction force	[N]	4.4	2.8	2.2	1.7	2.8	2.2	1.7

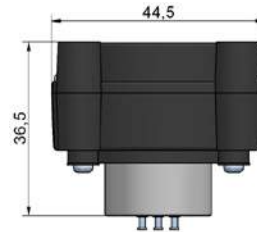
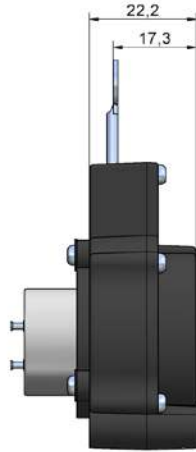
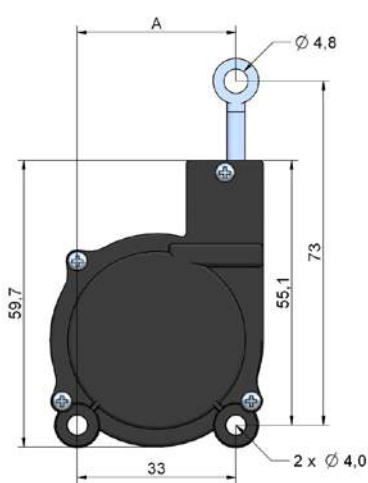
¹⁾ Resolution may be increased by a factor of four with interface electronics capable of quadrature times 4 counting mode.

²⁾ At 1 VDC excitation voltage. To calculate nominal output voltage in application, multiply nominal output shown by excitation voltage of application.

TECHNICAL DRAWING

LX-PA

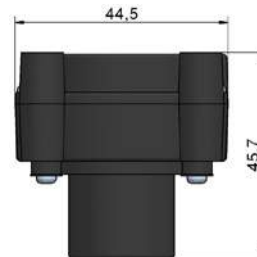
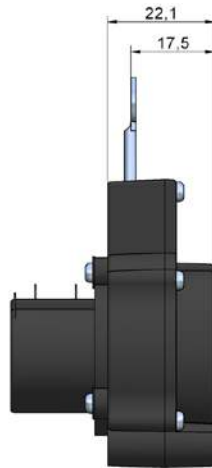
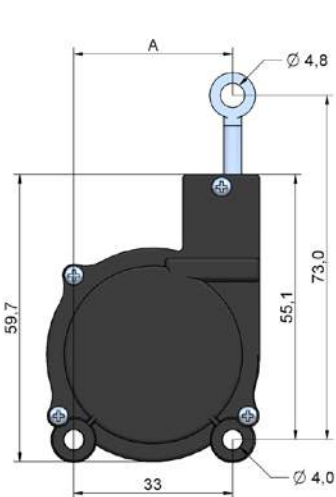
Measurement range up to 120 mm



Measurement range [mm]	A [mm]
50	25.7
70	29
96	33
120	37.1

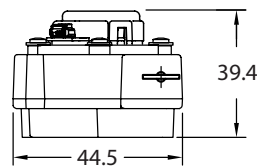
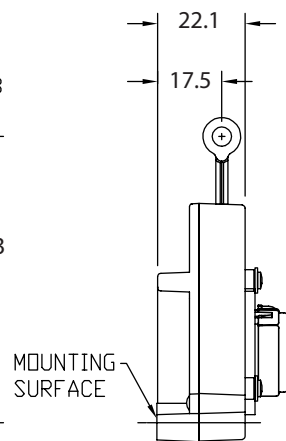
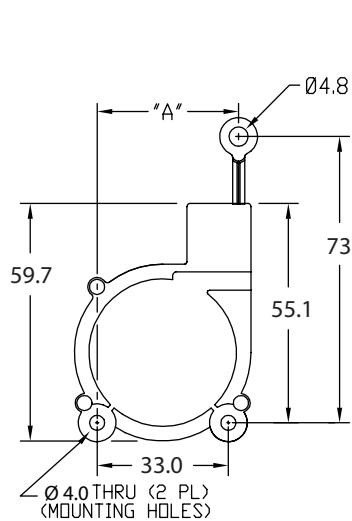
LX-PA

Measurement range from 250 mm



Measurement range [mm]	A [mm]
250	25.7
380 / 750	29
500 / 1000	33
625 / 1250	37.1

LX-EP2

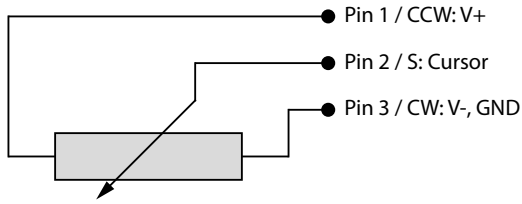


Measurement range [mm]	A [mm]
250	25.7
380 / 750	29
500 / 1000	33
625 / 1250	37.1

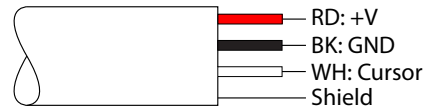
ELECTRICAL CONNECTION

LX-PA

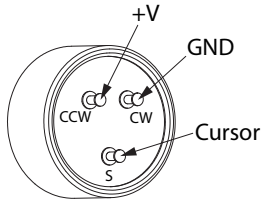
circuit diagram



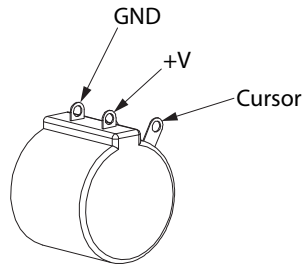
cable output



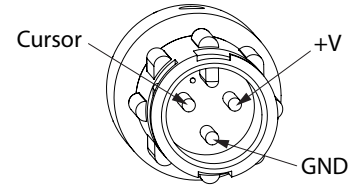
solder terminals
measurement ranges up to 120 mm



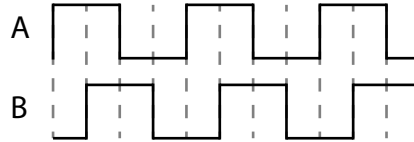
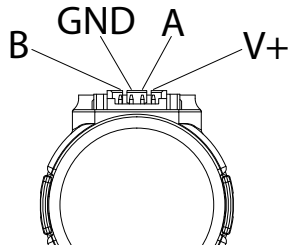
solder terminals
measurement ranges from 250 mm



connector at cable

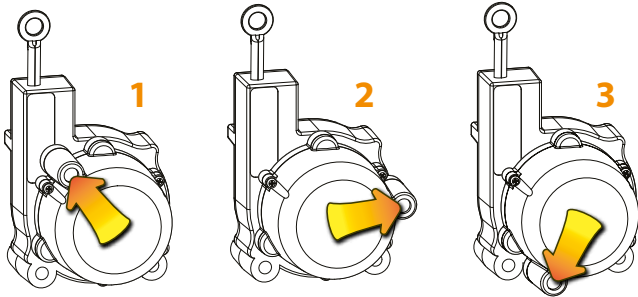


LX-EP2

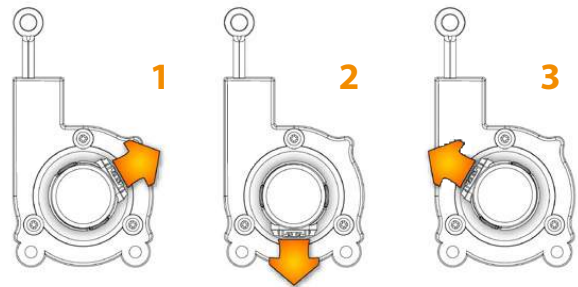


OPTIONS

LX-PA Electrical connection location 1, 2, 3



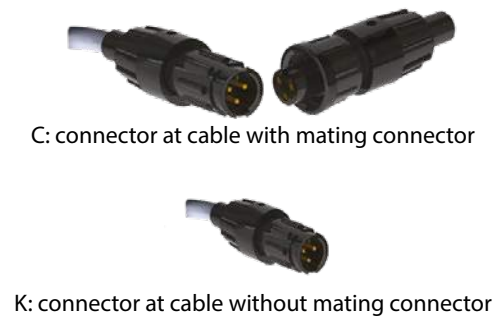
LX-EP2 Electrical connection location 1, 2, 3



LX-PA Electrical cable



LX-PA Connector



LX-EP2 Electrical cable



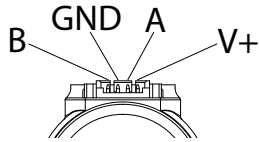
B: Compatibility Adapter: LX-EP2 to connect with LX-EP application

ACCESSORIES

Accessory connection cable LX-EP2

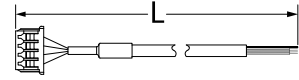


Pins



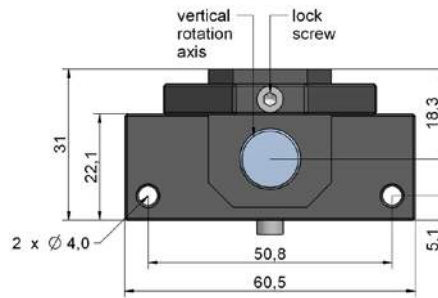
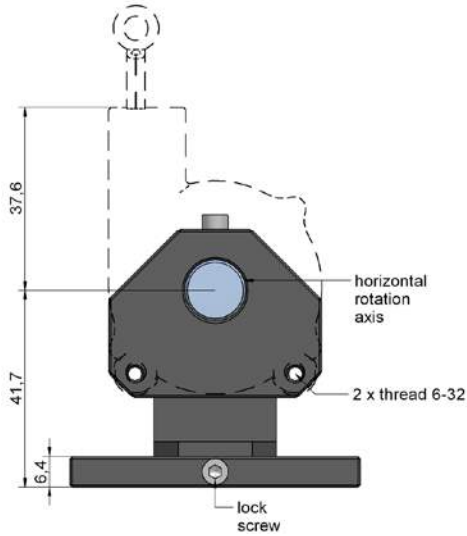
Function	Cable colour
GND	BK
Channel A	WH
+V	RD
Channel B	GN

Order code	Cable length
10517-1M	1 m
10517-2M	2 m
10517-3M	3 m
10517-4M	4 m
10517-5M	5 m



Accessory: connection cable with mating connector

LX-Mount



ORDER CODE

LX-PA - [] - [] [] N - [] [] []

Measurement range See „Technical Data“	[]
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Draw wire material Nylon jacketed stainless steel, Ø 0.46 mm Stainless steel, Ø 0.41 mm	N S
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Potentiometer resistance 1 kΩ 5 kΩ 10 kΩ	1 3 4
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N C K	Connector type (see below) No connector Connector at cable with mating connector Con. at cable without mating connector
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N P 1 2 3 4 5	Connection type Solder terminals Cable output (0.15 m) Cable output (1 m) Cable output (2 m) Cable output (3 m) Cable output (4 m) Cable output (5 m)
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N 1 2 3	Electrical Connection Location No Cover Connector location north/west Connector location north/east Connector location south/east
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ORDER CODE

LX-EP2 - [] - [] 2N - [] [] N

Measurement range
See „[Technical Data](#)“

Draw wire material
Nylon jacketed stainless steel Ø 0.46 mm
Stainless steel, Ø 0.41 mm

N
S

Connection type
N Compatibility adapter omitted
B Compatibility adapter included

Electrical Connection Location
1 Connector location north/east
2 Connector location south
3 Connector location north/west

ACCESSORIES

Mounting kit

LX-Mount Sensor mounting, adjustable in 2 dimensions

Connection cable for LX-EP2

10517-1M 1 m, with mating connector

10517-2M 2 m, with mating connector

10517-3M 3 m, with mating connector

10517-4M 4 m, with mating connector

10517-5M 5 m, with mating connector

Digital displays for sensors with analog output LX-PA, 2 channel

WAY-AX-S touch screen, supply: 18...30 VDC

WAY-AX-AC touch screen, supply: 115...230 VAC

For more information and options please refer to the [WAY-AX data sheet](#).

Digital displays for sensors with incremental output LX-EP2, 2 channel

WAY-DXM-S touch screen, supply: 18...30 VDC

WAY-DXM-AC touch screen, supply: 115...230 VAC

For more information and options please refer to the [WAY-DXM data sheet](#).

Subject to change without prior notice.

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