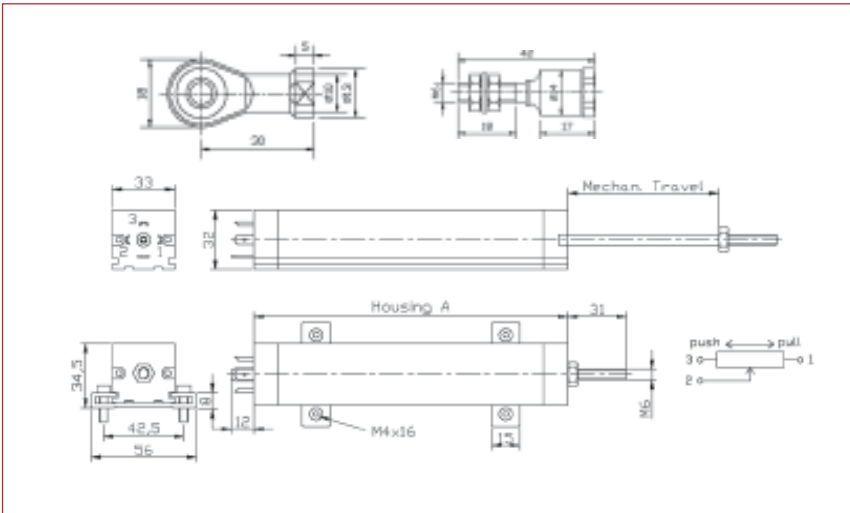


LCS, LCSB, LCSM

Potentiometric Linear Motion Sensor

The LCS is a potentiometric sensor linear motion in conductive plastic technology. A multifinger precision metal wiper and special conductive plastic resistance elements the life time is 20 Mio operations according IEC60393. A robust aluminium profile case, a stainless steel rod with sleeve bearings make the LCS most suitable for all industrial measurements and control applications where space is a premium. A available also with code B and code M intelligent interface electronics. The connector, the linkball and the mounting parts are included.



- Strokes from 50 to 900 mm
- Linearity tol. up to $\pm 0,05\%$
- High resolution - typ. $\pm 0,01$ mm
- Operating temperature: -30°C to $+100^{\circ}\text{C}$
- **LCS** without electronic
- **LCSB** with AnaFace B
- **LCSB** with SensoCont M
- Informations about integrated electronics, check link AnaFace B or SensoCont M

Dimensions mm

| LCS - Serie | 50 | 75 | 100 | 130 | 150 | 175 | 200 | 225 | 275 | 300 | 350 | 375 | 400 | 450 | 500 | 600 | 650 | 750 | 900 |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| protection class IP60/65 | 50 | 75 | 100 | 130 | 150 | 175 | 200 | 225 | 275 | 300 | 350 | 375 | 400 | 450 | 500 | 600 | 650 | 750 | 900 |
| Electrical stroke +1 | 50 | 75 | 100 | 130 | 150 | 175 | 200 | 225 | 275 | 300 | 350 | 375 | 400 | 450 | 500 | 600 | 650 | 750 | 900 |
| Mechanical stroke ± 1 | 59 | 84 | 109 | 139 | 159 | 184 | 210 | 235 | 285 | 310 | 361 | 386 | 412 | 463 | 518 | 619 | 670 | 772 | 924 |
| Housing length | 113 | 138 | 163 | 193 | 213 | 238 | 264 | 289 | 339 | 364 | 415 | 440 | 466 | 517 | 572 | 673 | 725 | 826 | 978 |

Electrical Features

| | | |
|---|---------------|------------------------------------|
| Resistance values $\pm 20\%$ | KOhm | 50-650mm:5kOhm// 750-900mm: 10KOHM |
| Independent Linearity | % | $\pm 0,05$ |
| Resolution | mm | $< 0,01$ |
| Max. power rating at 40°C | W | 3 |
| Max. Operating Voltage | V | 60 |
| Temperature coefficient | ppm/K | 400 |
| Insulation resistancs | MOhm | > 100 bei 500V DC |
| Dielectric strength | | < 500 Veff. (50 Hz) |
| Max. wiper current | mA | 1 |
| Recommended wiper current | μA | < 1 |

Mechanical Features

| | | |
|----------------------|-----|------------------------------|
| Max. Operating Speed | m/s | 2 |
| Operating Force | N | 2 |
| Material of Housing | | anodized Aluminium |
| Material of rod | | stainless steel |
| Life Time | | $> 25 \times 10^6$ movements |

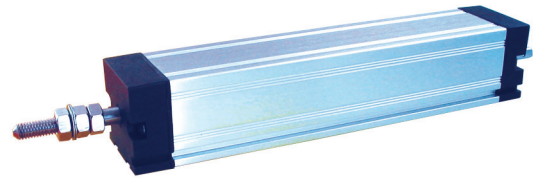
Envirement conditions

| | | |
|-----------------------|--------------------|-------------------------------|
| Operating Temperature | $^{\circ}\text{C}$ | $-30 \dots +100$ |
| Storage Temperature | $^{\circ}\text{C}$ | $-50 \dots +120$ |
| Shock | | 50g/11m/s (IEC 68-2-29:1968) |
| Vibritaion | | 5...2000Hz, (IEC 68-2-6:1982) |

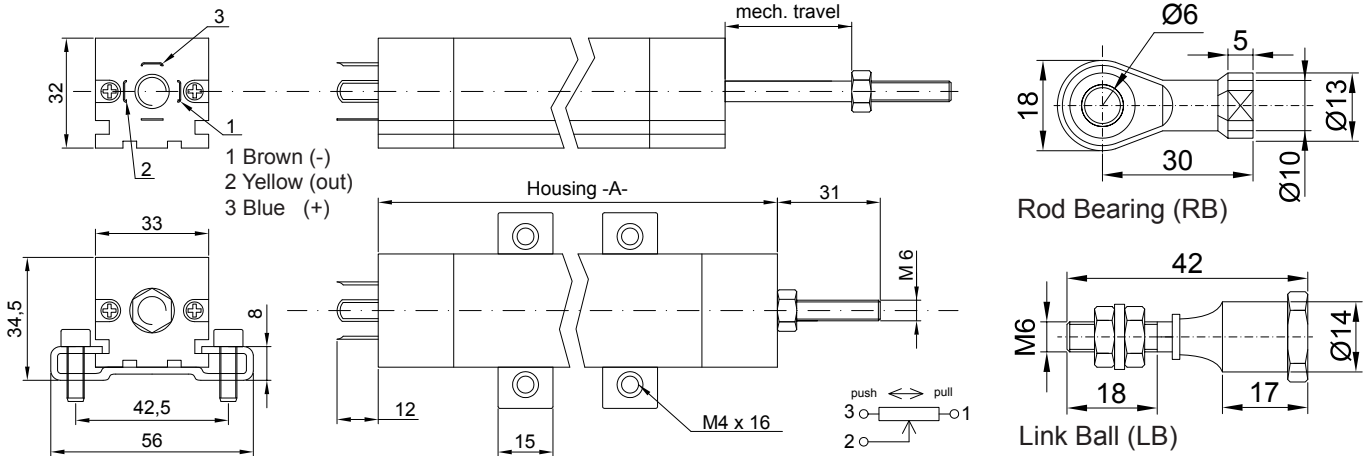
Order Code : Type Stroke Res.Value Mechn. Connection Cable (K) or Connect.(St) Type Electronics Interface 0.5VDC, RS232 ect.

Potentiometric Linear Motion Sensor, Full Stroke Ranges 50 - 900mm

- Linearity Tolerances up to $\pm 0,1\%$
- Enclosure Design
- High Life Expectancy
- Excellent Repeatability $\pm 50\mu\text{m}$



Please note: The specification and information in this datasheet cannot consider all special demands that are caused by the application. Because of this, they are no general description of the properties of the product. We does not assume any responsibility for damages due to improper application of our products. The user has to ensure by its own, that the products used are suitable for his application. We does not warrant the reproducibility of published applications.



DIMENSIONS / RESISTANCES

| Model | 50 | 75 | 100 | 130 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 350 | 375 | 400 | 450 | 500 | 600 | 650 | 700 | 750 | 800 | 900 |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Housing -A- (mm) | 114 | 139 | 164 | 195 | 215 | 241 | 266 | 291 | 316 | 341 | 367 | 417 | 444 | 469 | 520 | 570 | 672 | 726 | 776 | 825 | 879 | 900 |
| Mech. travel (mm) | 59 | 84 | 109 | 139 | 159 | 184 | 210 | 235 | 260 | 285 | 310 | 360 | 386 | 412 | 463 | 518 | 619 | 669 | 720 | 772 | 822 | 924 |
| Electr. travel (mm) | 51 | 76 | 101 | 131 | 151 | 176 | 202 | 227 | 252 | 277 | 302 | 352 | 378 | 404 | 455 | 506 | 607 | 657 | 708 | 708 | 810 | 910 |
| Resist. $\pm 20\%$ (k Ω) | 5* | 5* | 5* | 5* | 5* | 5* | 5* | 5* | 5* | 5* | 5* | 5* | 5* | 5* | 5* | 5* | 10* | 10 | 10 | 10 | 10 | 10 |

*stock item

ELECTRICAL CHARACTERISTICS

| | |
|---------------------------------|-------------------------------------|
| Resistance element | conductive plastic |
| Standard resistance values | 5kOhms $\pm 20\%$ |
| Independent linearity tolerance | (typ. IEC60393) $\pm 0,1\%$ |
| Resolution | quasi infinite |
| Repeatability | (typ. IEC60393) $\pm 50\mu\text{m}$ |
| Input voltage | 60VDC (max.) |
| Recommended wiper current | >1mA |
| Sealing | IP50 |
| Power dissipation at 40°C | 3W - 10W |
| Dielectric strength | 500 VAC |

MATERIAL

| | |
|-----------------------|--------------------|
| Housing | Anodized aluminium |
| Rod bearing/Link ball | Stainless steel |

Application: The LCS transducer has an extruded aluminium housing with a stainless steel shaft. Together with precious metal wiper and special conductive plastic resistance elements the life time is 25 mil. operations according IEC60393. Long bearings in the housing ensure a smooth operation. Screwable rod end bearing or link ball allows simple mechanical coupling. The connector DIN 43650 and the mounting parts are included in the price.

MECHANICAL CHARACTERISTICS

| | |
|-----------------------------|----------------------------------|
| Vibration (IEC 68-2-6:1982) | 10G |
| Shock (IEC 68-2-29:1968) | 40G |
| Operating force | >10N |
| Operating speed | 4m/s (max.) |
| Life (movements) | (typ. IEC60393) 25×10^6 |
| Operating temperature (°C) | -30°C to +85°C |

OPTIONS

Rod bearing(RB) or Link ball (LB)
Connector version (ST) or cable version (K)

LCSB (see datasheet „B-electronic“) with integrated or separate (box) electronics for analog signal generating, supply Voltage: 24VDC $\pm 50\%$, sensor supply: 5VDC (fix), sensor supply: (adjustable) 1-5VDC Current Supply: 1-10mA (adj), output: 0-5VDC, 0-10VDC, 4-20mA factory adjustable

LCSM (see datasheet „M-electronic“) with integrated or separate (box) electronics for analog and digital signal generating and programming of functions Voltage supply: 6VDC-36VDC, Sensor supply: 5VDC or 10VDC Analog output: (processed) 0-5VDC, 0-10VDC, 4-20mA (2 channels) Digital output: RS232, 5VTTL

ORDERING INFORMATION

Detailed information for all electronics: www.megauto.de/linosense

| | | | | | |
|------|-------|----------|-----------------|-------------------|--------|
| LCSB | 150 | 5k | RB | K | RS232 |
| Typ | Model | Ω | mech. connector | electr. connector | output |