

## Sensor DUH

### Innovative and proven LVDTs up to 40% shorter



- Useful stroke up to 85% body length
- High resolution and very good linearity
- Full (symmetric) LVDT configuration
- Rugged DUH Ø16 mm for harsh applications

### Technical data

|   |   | DUH 50                 | DUH 100 | DUH 200 | DUH 300 | DUH 400 | DUH 500 |
|---|---|------------------------|---------|---------|---------|---------|---------|
| Nominal stroke                                | mm  | ±25                    | ±50     | ±100    | ±150    | ±200    | ±250    |
| Mechanical stroke                             | mm  | 55                     | 105     | 210     | 320     | 420     | 520     |
| Dimension B                                   | mm  | 100                    | 160     | 260     | 370     | 480     | 600     |
| Dimension A <small>others optional *)</small> | mm  | 55                     | 80      | 135     | 190     | 240     | 290     |
| Body diameter D                               | mm  | 16 ±0,1                |         |         |         |         |         |
| Core diameter d                               | mm  | 5,6 incl. PTFE coating |         |         |         |         |         |
| Sensor weight (approx.)                       | g   | 100                    | 150     | 240     | 340     | 450     | 560     |
| Core weight (approx.)                         | g   | 20                     | 28      | 45      | 60      | 78      | 94      |
| Nominal output @ 5 kHz **)                    | mV/V  | 107                    | 140     | 163     | 175     | 160     | 162     |
| Carrier frequency *)                          | 5 kHz   |                        |         |         |         |         |         |
| Recommended amplifier                         | MBI 46.31   |                        |         |         |         |         |         |
| Excitation voltage (eff.)                     | up to 5 VAC   |                        |         |         |         |         |         |
| Linearity *)                                  | < ±0,5% F.S.O. optional: ±0,25%; 0,1% (not DUH 50)          |                        |         |         |         |         |         |
| Temperature coefficient of zero               | < ±0,1% / 10K   |                        |         |         |         |         |         |
| Temperature coefficient of span               | < ±0,2% / 10K   |                        |         |         |         |         |         |
| Operating temperature *)                      | -40°C ... +80°C, optional: up to 120°C (not 0,1% linearity) |                        |         |         |         |         |         |
| Protection                                    | IP 64   |                        |         |         |         |         |         |

\*) Specify options on order    \*\*) indicative figures only, determined phase-independent

### Notes

1) Core PTFE coating is provided for mechanical purposes (improved sliding) without influence on sensor electrical characteristics

### Model list

Order code

| DUH    | Nnn        | NN         |                             |                            |                             |                            |   | n,n%            |       |      | /Option1 /Option2                        |                        |
|--------|------------|------------|-----------------------------|----------------------------|-----------------------------|----------------------------|---|-----------------|-------|------|--|------------------------|
| Series | Stroke     | Connection |                             |                            |                             |                            |   | Linearity (FSO) |       |      | Options                                  |                        |
|        | See spec.  | Leads      | Axial cable <sup>1)2)</sup> | Radial cable <sup>1)</sup> | Axial conn. <sup>2)3)</sup> | Radial conn. <sup>3)</sup> | Radial connector (reinforced) <sup>3)</sup> | 0,5%            | 0,25% | 0,1% | High operating temperature <sup>1)</sup> | Customised dimension A |
| DUH    | 50 ... 500 | AWG 26     | X                           | X                          | X                           | X                          | --  | X               | X     | X    | /120°C                                   | /Axx                   |
| DUH    | 50 ... 500 | AWG 26     | X                           | X                          | X                           | --                         | X   | X               | X     | X    | O  | O                      |

X = available standard model    O = option

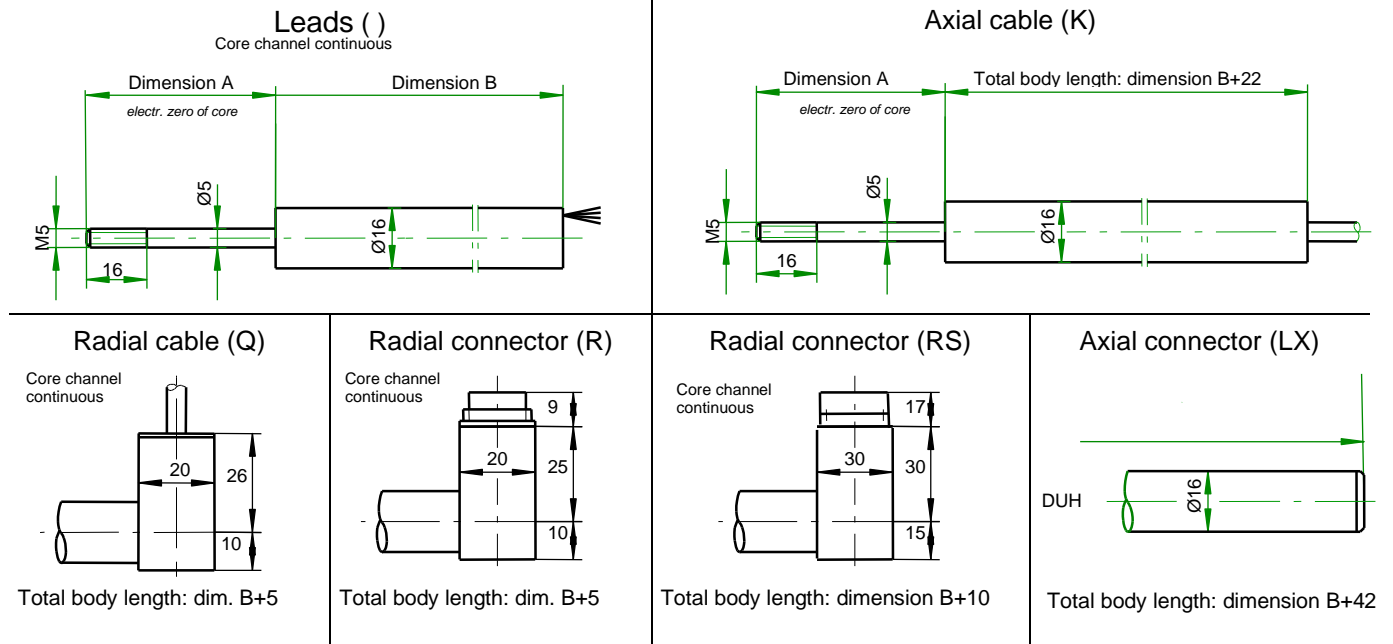
1) Standard: PE-cable, for 120°C option: PTFE-cable

2) Core channel non-continuous

3) Mating connector supplied

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### Mechanical drawings



### Connection

|                    | Leads  | K / Q  | R  | RS  | LX  |
|--------------------|--|--|--|---|---|
| Type of connection | PTFE leads 250 mm long   | PE-cable 2,5 m long<br>Option: PTFE cable                                    | Amphenol C 091 connector<br>(Mating plug supplied) | Amphenol 3101 A connector<br>(Mating plug supplied) | LEMO ERA.1S.303.CLL<br>(Mating plug supplied) |
| Pin configuration  | <p>primary winding<br/>white blue</p> <p>red black<br/>secondary winding</p> | <p>primary winding<br/>white blue</p> <p>red black<br/>sekundary winding</p> |  |   |   |
| Power supply +     | White  | White  | 2  | B   | 3   |
| Power supply -     | Blue   | Blue   | 3  | C   | 2   |
| Measuring signal - | Red  | Red  | 1  | A   | 1   |
| Measuring signal + | Black  | Black  | 4  | D   | 4   |
| Mating plug        | -  | -  | Amphenol C 091                                     | Amphenol 3106 A                                     | LEMO FFA.1S.303CLA 57                         |