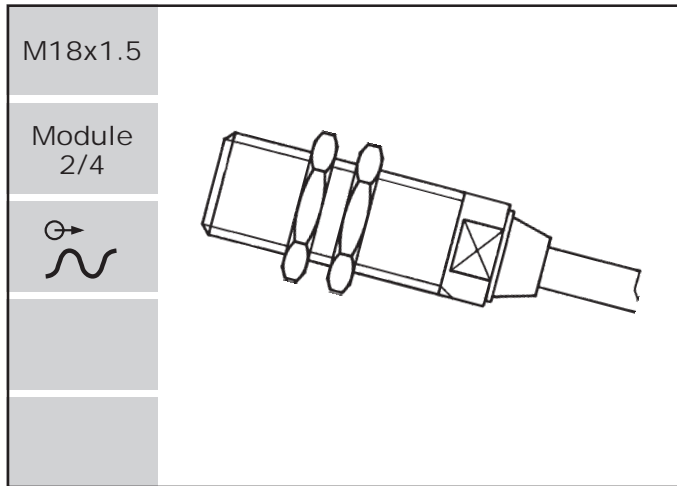


## DSH 1820/1840 S.N

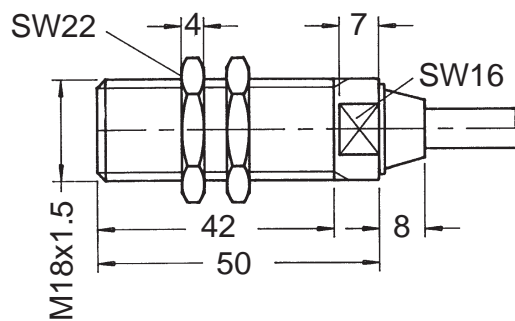


### Features

- Without amplifier
- Static characteristic
- Sensing of any metallic pole wheel
- No residual magnetic field

## Dimensions

Version S



## Model overview

| Type                   | Part nr.   | Connection  | Housing thread | Weight [g] | Operating temperature [°C] | Notes                 |
|------------------------|------------|-------------|----------------|------------|----------------------------|-----------------------|
| <b>DSH 1820.00 STZ</b> | 304Z-03172 | Cable 1.5 m | M18x1.5        | 140        | -25...+75                  | previously FTG 292    |
| <b>DSH 1840.00 STZ</b> | 304Z-03173 | Cable 1.5 m | M18x1.5        | 145        | -25...+75                  | previously FTG 294    |
| <b>DSH 1840.00 SHZ</b> | 304Z-03467 | Cable 1.5 m | M18x1.5        | 145        | -25...+125                 | previously FTG 294S74 |

# HF Sensor (inductive) without amplifier

Type DSH 1820/1840

Version S.N

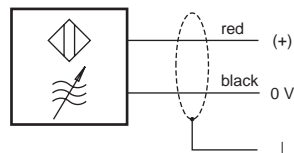
## Technical Data

|              |  |
|--------------|--|
| Supply       |  |
| Power supply | <u>Power supply:</u> 12 V $\pm$ 20% via 820 $\Omega$ .<br><u>Current consumption:</u> max. 8 mA. |

|                 |   |
|-----------------|---|
| Input           |   |
| Frequency range | 0 Hz...20 kHz   |
| Noise immunity  | Cable shield connected to the supply negative pole. Noise generator between housing and electronics.<br>1.5 kV/1.5 ms/max. 5 Hz (source resistance 500 $\Omega$ ),<br>2.0 kV/HF-Bursts (level 4 in accordance with IEC 801-4),<br>2.5 kV/1 MHz damped resonance (class III in accordance with IEC 255-4). |
| Pole wheel      | Toothed wheel (involute gear form), wheel with holes, impeller wheel, slotted wheel or equal made of metallic material. Width $\geq$ 6 mm, eccentricity $<$ 0.2 mm.<br><u>Pole wheel-sensor gap at</u><br>Module $\geq$ 2: 0.5...1.0 mm at DSH 1820.XX<br>Module $\geq$ 4: 1.0...2.2 mm at DSH 1840.XX    |

| Output        |  |             |                    |        |           |        |     |      |     |     |     |
|---------------|--|-------------|--------------------|--------|-----------|--------|-----|------|-----|-----|-----|
| Signal output | Signal current $i$ depends on pole wheel and pole wheel-sensor gap.<br><u>Current consumption</u> 5...8 mA not damped, 1...3 mA damped, via pull-up resistance 820 $\Omega$ connected to D.C. voltage. The change in voltage across the resistor is the output signal.<br>Pole wheel's material affects the damping characteristic.<br>For the working distance, note the reduction factor for each material as follows: |             |                    |        |           |        |     |      |     |     |     |
|               | <table border="1"> <thead> <tr> <th>Steel St 37</th> <th>Chrom-Nickel-Steel</th> <th>Brass</th> <th>Aluminium</th> <th>Copper</th> </tr> </thead> <tbody> <tr> <td>1.0</td> <td>0.85</td> <td>0.5</td> <td>0.4</td> <td>0.3</td> </tr> </tbody> </table>   | Steel St 37 | Chrom-Nickel-Steel | Brass  | Aluminium | Copper | 1.0 | 0.85 | 0.5 | 0.4 | 0.3 |
| Steel St 37   | Chrom-Nickel-Steel   | Brass       | Aluminium          | Copper |           |        |     |      |     |     |     |
| 1.0           | 0.85   | 0.5         | 0.4                | 0.3    |           |        |     |      |     |     |     |

### Connection



Shield to be connected to 0 V of power supply.

|                        |  |
|------------------------|--|
| Mechanical             |  |
| Protection class       | IP67 (head), IP67 (cable connection).  |
| Vibration immunity     | 5 $g_n$ in the range 5...2000 Hz.  |
| Shock immunity         | 50 $g_n$ during 20 ms, half sine wave.   |
| Insulation             | Housing, cable shield and electronics galvanically isolated. (500 V/50 Hz/ 1 min.)   |
| Housing                | Aluminium alloy AlMgSiPbF28, 3.0615 black anodized, front side sealed, electronic components potted in a chemical- and age-proof synthetic resin. Dimensions acc. to model overview and dimensional drawing. |
| Weight                 | Acc. to model overview.  |
| Operating instructions | 304E-63952   |

### Versions

|            |  |
|------------|--|
| Version ST | <u>PVC-cable:</u> Part nr. 824L-30894, 2wire, 2 x 0.75 mm <sup>2</sup> , stranded wire (metal net, insulated from housing), grey. Outer $\varnothing$ max. 6.7 mm, bending radius min. 60 mm, weight 70 g/m.         |
| Version SH | <u>Teflon-wire:</u> Part nr. 824L-33024, 3wire, 3 x 0.21 mm <sup>2</sup> (AWG 24), stranded wire (metal net, insulated from housing), green. Outer $\varnothing$ max. 4 mm, bending radius min 60 mm, weight 32 g/m. |

DSH  
...N/Z