Fluid Level / Temperature Indicators

Level Gauge • Type SNA

Characteristics

Visual fluid level indication in hydraulic reservoirs with maximum tank pressures not exceeding 2 bar / 29 PSI

Nominal Sizes and Designs

- 6 nominal sizes from 76 mm - 2.99 in to 305 mm - 12.00 in
- Display either undivided (SNA 076 ... 176) or subdivided by strobe into 2 (SNA 254) or 3 sections (SNA 305)

Please see page E5 for alternative nominal sizes and designs.

Media Compatibility

- Suitable for use with Mineral and Petroleum based hydraulic fluids (HL and HLP)
- Suitable for use with Bio-degradable fluids, diesel oils, gasolines, etc.) as well as special sealing materials, e.g. FPM (Viton®), and scale plate materials, e.g. Aluminium, are available on request.

Please see page E5 for alternative housing materials.

Technical Data

- IP 65 protection rating: Dust tight and protected against water jets (IP 67 on request)
- Operating temperature range:
  - -30°C / -22°F ... +80°C / +176°F
  - +10°C / +50°F

Recommended tightening torque: 8 N·m / 5.9 ft·lb

Materials

- Housing made of Steel S12, black epoxy coated
- Sight tube and plugs made of Polyamide (PA)
- Sealing made of NBR (Buna-N®)
- Scale plate made of PVC

Special sight tube materials for improved UV or chemical resistance and use with special media (such as bio-degradable fluids, diesel oils, gasolines, etc.) are available on request.

Sealing Material

- NBR (Buna-N®), FPM (Viton®)

Accessories / Options

- Red / blue capillary tube thermometers with a dual Celsius / Fahrenheit scale and a temperature display range of up to +80°C / +176°F
- Dial thermometers with probe and a Celsius or a dual Celsius / Fahrenheit scale with a temperature display range of up to +100°C / +212°F
- Thermo Switches
- Temperature Sensors

Design of Scale Plates

- Thermometer Options
- Capillary Tube Thermometers
  - with a dual Celsius / Fahrenheit scale up to +80°C / +180°F

Order Codes

- Type Level Gauge with visual fluid level indication SNA
- Nominal Size SNA 076 (nominal size of 76 mm - 2.99 in) 076
  - SNA 127 (nominal size of 127 mm - 5.00 in) 127
  - SNA 150 (nominal size of 150 mm - 5.91 in) 150
  - SNA 176 (nominal size of 176 mm - 6.93 in) 176
  - SNA 254 (nominal size of 254 mm - 10.00 in) 254
  - SNA 305 (nominal size of 305 mm - 12.00 in) 305
- Sealing Material NBR (Buna-N®) (standard option) B
- Design of Scale Plate With STAUFF logo (standard option) S
- Thermometer Option Supplied without thermometer D
- Thermometer Options
  - Standard option 0
  - Red Capillary Tube thermometer on scale plate T
  - Dial Thermometer with probe (200 mm - 7.87 in) and a Celsius scale up to +100°C / +212°F T1C
  - Dial Thermometer with probe (300 mm - 11.81 in) and a Celsius scale up to +100°C / +212°F T2C
  - Dial Thermometer with probe (200 mm - 7.87 in) and a dual scale up to +100°C / +200°F T1CF
  - Dial Thermometer with probe (300 mm - 11.81 in) and a dual scale up to +100°C / +200°F T2CF

Dimensions / Technical Data / Order Codes

- Nominal Size and Dimensions (mm/in)
- Maximum admissible tolerance for the bolt center spacing dimension L2 according to DIN ISO 2768-f ±0.20 mm ±0.008 in for all nominal sizes.

Dimensions

<table>
<thead>
<tr>
<th>Nominal Size</th>
<th>A</th>
<th>B</th>
<th>C (mm)</th>
<th>D</th>
<th>E</th>
<th>F (mm T1)</th>
<th>F (mm T2)</th>
<th>L1</th>
<th>L2</th>
<th>L3</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNA 076</td>
<td>76</td>
<td>34.5</td>
<td>8</td>
<td>27</td>
<td>76</td>
<td>6.52</td>
<td>10.45</td>
<td>4.25</td>
<td>2.99</td>
<td>1.22</td>
</tr>
<tr>
<td>SNA 127</td>
<td>76</td>
<td>34.5</td>
<td>8</td>
<td>27</td>
<td>43.5</td>
<td>100.5</td>
<td>205.5</td>
<td>137</td>
<td>76</td>
<td>34</td>
</tr>
<tr>
<td>SNA 150</td>
<td>45</td>
<td>34.5</td>
<td>8</td>
<td>27</td>
<td>76</td>
<td>6.52</td>
<td>10.45</td>
<td>6.26</td>
<td>5.00</td>
<td>2.99</td>
</tr>
<tr>
<td>SNA 176</td>
<td>45</td>
<td>34.5</td>
<td>8</td>
<td>27</td>
<td>43.5</td>
<td>100.5</td>
<td>205.5</td>
<td>192</td>
<td>130</td>
<td>99</td>
</tr>
<tr>
<td>SNA 254</td>
<td>45</td>
<td>34.5</td>
<td>8</td>
<td>27</td>
<td>43.5</td>
<td>100.5</td>
<td>205.5</td>
<td>284</td>
<td>204</td>
<td>192</td>
</tr>
<tr>
<td>SNA 305</td>
<td>45</td>
<td>34.5</td>
<td>8</td>
<td>27</td>
<td>76</td>
<td>6.52</td>
<td>10.45</td>
<td>12.23</td>
<td>12.00</td>
<td>9.61</td>
</tr>
</tbody>
</table>

Order Codes

- Type Level Gauge with visual fluid level indication SNA
- Nominal Size SNA 127 (nominal size of 127 mm - 5.00 in) 127
- Sealing Material NBR (Buna-N®) (standard option) B
- Design of Scale Plate With STAUFF logo (standard option) S
- Thermometer Option Supplied without thermometer D
- Thermometer Options
  - Standard option 0
  - Red Capillary Tube thermometer on scale plate T
  - Dial Thermometer with probe (200 mm - 7.87 in) and a Celsius scale up to +100°C / +212°F T1C
  - Dial Thermometer with probe (300 mm - 11.81 in) and a Celsius scale up to +100°C / +212°F T2C
  - Dial Thermometer with probe (200 mm - 7.87 in) and a dual scale up to +100°C / +200°F T1CF
  - Dial Thermometer with probe (300 mm - 11.81 in) and a dual scale up to +100°C / +200°F T2CF

Thermo Switch / Temperature Sensor Option

- Supplied without Thermo Switch / Temperature Sensor
- Thermo Switch Options
  - Metric ISO thread M12 (standard option) 12
  - Unified coarse thread 1/2 - 13 UNC 10
  - Unified fine thread 1/2 - 20 UNF U1
  - Unified extra-fine thread 1/2 - 28 UNEF U3

Switching Temperature

- Contact switches at +60°C / +140°F 60
- Contact switches at +70°C / +158°F 70
- Contact switches at +80°C / +176°F 80
- Contact switches at +90°C / +194°F 90

Only to be indicated when using a Thermo Switch.

Options T1/C/CF and T2/C/CF are not available for banjo bolt size M10 and not be used in conjunction with Thermo Switches or Temperature Sensors. Please see page E8 for details.

Dimensional drawings: All dimensions in mm (in).
**Characteristics**

Visual fluid level indication in hydraulic reservoirs with maximum tank pressures not exceeding 2 bar / 29 PSI; ideal for custom applications in terms of reservoir capacities and dimensions.

**Nominal Sizes**
- Special sizes beyond the normal of 305 mm / 12 in up to a maximum nominal size of 950 mm / 37.4 in – even for small and medium quantities
- High-precision manufacturing within 1 mm tolerance to customer requirements

**Design**
- Robust design thanks to one or more struts that subdivide the display into 2 or more sections
- Positioning of the strut(s) based on engineering considerations and/or according to particular customer requirements
- Precise visual indication of the fluid level by use of scale plates (only available for nominal sizes smaller than 670 mm / 26.4 in) or by use of a coloured floating element (recommended option for nominal sizes larger than 670 mm / 26.4 in)
- Plastic dampering clips to reduce vibration of the sight tube are used for nominal sizes larger than 450 mm / 17.7 in

**Materials**
- Housing made of Steel, Aluminium or Stainless Steel
- Sight tube and plugs made of Polyamide (PA)
- Sealing made of NBR (Buna-N®)
- Scale plate made of PVC
- Floating element made of Polyamide (PA)

Special sight tube materials for improved UV or chemical resistance and use with special media (such as bio-degradable fluids, diesel oils, gasolines, etc.) as well as special sealing materials, e.g. FPM (Viton®), and scale plate materials, e.g. Aluminium, are available on request.

Please also ask for our special low-temperature versions, suitable for extreme temperatures up to -40 °C / -40 °F.

**Accessories / Options**
- Capillary tube thermometers with a dual Celsius / Fahrenheit scale and a temperature display range of up to +80 °C / +180 °F
- Dial thermometers with probe and a Celsius or a dual Celsius / Fahrenheit scale with a temperature display range of up to +100 °C / +200 °F
- Thermo switches
- Temperature sensors

Please see pages E8 and E9 for details.

---

**Inquiry Checklist**

In case that you require a special property or custom-designed level gauge, please use this checklist to provide us with details. If necessary, please also include further details, like the type of fluid in use, its temperature and viscosity.

<table>
<thead>
<tr>
<th>Nominal Size</th>
<th>Bolt centre distance (in mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing Material</td>
<td>Aluminium</td>
</tr>
<tr>
<td>Housing Design</td>
<td>Regular housing design with positioning of strut(s) based on engineering considerations</td>
</tr>
<tr>
<td>Banjo Bolt Size</td>
<td>M12</td>
</tr>
<tr>
<td>Banjo Bolt Material</td>
<td>Steel</td>
</tr>
<tr>
<td>Sealing Material</td>
<td>NBR (Buna-N®)</td>
</tr>
<tr>
<td>Level Indication</td>
<td>Scale plate (only for nominal sizes smaller than 670 mm / 26.4 in)</td>
</tr>
<tr>
<td></td>
<td>Scale plate made of PVC</td>
</tr>
<tr>
<td></td>
<td>Scale plate made of Aluminium</td>
</tr>
<tr>
<td></td>
<td>Without thermometer on scale plate</td>
</tr>
<tr>
<td></td>
<td>Capillary tube thermometer with dual Celsius / Fahrenheit scale up to +80 °C / +180 °F</td>
</tr>
<tr>
<td></td>
<td>Floating element (recommended option for nominal sizes larger than 670 mm / 26.4 in)</td>
</tr>
<tr>
<td>Options</td>
<td>Dial thermometer with probe</td>
</tr>
<tr>
<td></td>
<td>Celsius scale up to +100 °C</td>
</tr>
<tr>
<td></td>
<td>Dual scale up to +100 °C / +200 °F</td>
</tr>
<tr>
<td></td>
<td>Thermo Switch TS-SNA/SNK</td>
</tr>
<tr>
<td></td>
<td>Break contact; Standard connector</td>
</tr>
<tr>
<td></td>
<td>Break contact; Connector M12</td>
</tr>
<tr>
<td></td>
<td>Make contact; Standard connector</td>
</tr>
<tr>
<td></td>
<td>Make contact; Connector M12</td>
</tr>
<tr>
<td></td>
<td>Temperature Sensor TS-SNA/SNK-PT100</td>
</tr>
<tr>
<td></td>
<td>Contact switches at +60 °C / +140 °F</td>
</tr>
<tr>
<td></td>
<td>Contact switches at +70 °C / +158 °F</td>
</tr>
<tr>
<td></td>
<td>Contact switches at +80 °C / +176 °F</td>
</tr>
<tr>
<td></td>
<td>Contact switches at +90 °C / +194 °F</td>
</tr>
</tbody>
</table>

Please provide additional details / drawing for custom housing designs.

Alternative sealing materials to be defined separately.

Other types of level indication (magnetic floats, etc.) to be defined separately.
Fluid Level / Temperature Indicators

Level Gauge • Type SNK

Characteristics

Visual / electrical fluid level indication in hydraulic reservoirs with maximum tank pressures not exceeding 1 bar / 145 PSI

Nominal Sizes and Designs

- 5 nominal sizes from 127 mm / 5.00 in to 305 mm / 12.00 in
- Display either undivided (SNK 127 ... 176) or subdivided by strips into 2 (SNK 254) or 3 sections (SNK 305)

Media Compatibility

- Suitable for use with Mineral and Petroleum based hydraulic fluids (HL and HLP)

Materials

- Housing made of Aluminium, plastic coated
- Sight tube and plugs made of Polyamide (PA)
- Float made of Polyamide (PA)
- Sealing made of FPM (Viton®)

Special sight tube materials for improved UV or chemical resistance and use with special media (such as bio-degradable fluids, diesel oils, gasolines, etc.) as well as special sealing materials are available on request.

Electrical Specifications

- Magnetic float activates switch when fluid level drops below contact level within 60 mm / 2.36 in of lower banjo bolt
- Available as a break contact (normally open) or make contact (normally close)

- Either equipped with industrial standard connector (types C / O) or five-pin circular connector M12 (types CD / OD)
- Direction of the electrical contact box sight (left) can be chosen when assembling the electrical contacts (types C / O) or is right by default (types CD / OD)
- Contact ratings: max. 10 W (types C / OD) or 5 W (types O / OD)
- Switching voltage: max. 50 VAC/DC
- Switching current: max. 0.25 A

Technical Data

- IP 65 protection rating: Dust tight and protected against water jets (IP 67 on request)
- Operating temperature range: -30 °C ... +80 °C / -22 °F ... +176 °F
- Recommended tightening torque: 8 m / 5.91 lb
- Minimum lateral distance to other magnetic components and cables: 10 mm / 0.39 in

Accessories / Options

- Dial thermometers with probe and a Celsius or a dual Celsius / Fahrenheit scale with a temperature display range of up to +100 °C / 200 °F
- Thermoswitches
- Temperature Sensors

Please see pages E8 and E9 for details.

Dimensions / Technical Data / Order Codes

Level Gauge with visual / electrical fluid level indication

SNK

Nominal Size

<table>
<thead>
<tr>
<th>Nominal Size</th>
<th>Dimensions (mm/in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNK 127</td>
<td>D 18.5, B 15.8, H 8</td>
</tr>
<tr>
<td>SNK 150</td>
<td>D 18.5, B 15.8, H 8</td>
</tr>
<tr>
<td>SNK 176</td>
<td>D 18.9, B 15.8, H 8</td>
</tr>
<tr>
<td>SNK 254</td>
<td>D 18.5, B 15.8, H 8</td>
</tr>
<tr>
<td>SNK 305</td>
<td>D 18.5, B 15.8, H 8</td>
</tr>
</tbody>
</table>

Connection Details and Electrical Functions

Types C and O: Industrial standard connector (contact gap: 11 mm / .43 in), similar to DIN EN 175301-803-B / ISO 6952

Connection Details

Connection 2 not engaged

Thermo Switch / Temperature Sensor Option

Supplied without Thermo Switch / Temperature Sensor

Thermo Switch TS-SNA/SNK: Break contact (normally closed); Equipped with standard connector

Thermo Switch TS-SNA/SNK: Break contact (normally closed); Equipped with connector M12

Thermo Switch TS-SNA/SNK: Make contact (normally open); Equipped with standard connector

Thermo Switch TS-SNA/SNK: Make contact (normally open); Equipped with connector M12

Thermo Switches / Temperature Sensors only available for banjo bolt size M10. Please see pages E8 and E9 for details.

Switching Temperature

Contact switches at +60 °C / +140 °F

Contact switches at +70 °C / +158 °F

Contact switches at +80 °C / +176 °F

Contact switches at +90 °C / +194 °F

Only to be indicated when using a Thermo Switch.

Options T1/CF and T2/CF are not available for banjo bolt size M10 and not be used in conjunction with Thermo Switches or Temperature Sensors.

Please see page E8 for details.
### Fluid Level / Temperature Indicators

#### Level Gauge (Compact Design) • Type SNKK

**Dimensions**
- Maximum admissible tolerance for the bolt center spacing (dimension L2) according to EN/ISO 2789-1: ±0.250 mm / 0.010 in. for all nominal sizes.

<table>
<thead>
<tr>
<th>Nominal Size</th>
<th>Dimensions</th>
<th>Contact Level</th>
<th>Switching Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNKK 127</td>
<td>56 ~ 34.5, ~35, 5 ~34.5, 7.88, 19.7, 26.5, 60.5, 95.5, 127</td>
<td>10 °C / 50 °F</td>
<td>–30 °C ... +80 °C / -22 °F ... +176 °F</td>
</tr>
<tr>
<td>SNKK 150</td>
<td>56 ~ 34.5, ~35, 5 ~34.5, 7.88, 19.7, 26.5, 60.5, 95.5, 127</td>
<td>10 °C / 50 °F</td>
<td>–30 °C ... +80 °C / -22 °F ... +176 °F</td>
</tr>
<tr>
<td>SNKK 176</td>
<td>56 ~ 34.5, ~35, 19.7, 26.5, 34.5, 60.5, 95.5, 127</td>
<td>10 °C / 50 °F</td>
<td>–30 °C ... +80 °C / -22 °F ... +176 °F</td>
</tr>
<tr>
<td>SNKK 254</td>
<td>56 ~ 34.5, ~35, 5 ~34.5, 7.88, 19.7, 26.5, 60.5, 95.5, 127</td>
<td>10 °C / 50 °F</td>
<td>–30 °C ... +80 °C / -22 °F ... +176 °F</td>
</tr>
<tr>
<td>SNKK 305</td>
<td>56 ~ 34.5, ~35, 19.7, 26.5, 34.5, 60.5, 95.5, 127</td>
<td>10 °C / 50 °F</td>
<td>–30 °C ... +80 °C / -22 °F ... +176 °F</td>
</tr>
</tbody>
</table>

**Order Codes**

<table>
<thead>
<tr>
<th>SNKK</th>
<th>127</th>
<th>V</th>
<th>DD</th>
<th>O</th>
<th>12</th>
<th>O</th>
<th>60</th>
</tr>
</thead>
</table>

**Connection Details and Electrical Functions**

- **Type DD**: Five-pin circular connector M12, A-coded, according to IEC 61076-2-101
- **Dimensions / Technical Data / Order Codes**
- **Consult STAUFF for alternative nominal sizes and designs.**

**Sealing Material**
- FPM (Viton®)

**Electrical Function**
- SPDT (Single Pole Double Throw) contacts, 1 contact open and 1 contact closed at contact level, Equipped with connector M12

**Thermometer Option**
- Supplied without thermometer
- Dial thermometer with probe (200 mm / 7.87 in) and a Celsius scale up to 100 °C
- Dial thermometer with probe (300 mm / 11.81 in) and a Celsius scale up to 100 °C

**Switching Temperature**
- Contact switches at +60 °C / +140 °F
- Contact switches at +70 °C / +158 °F

**Technical Data**
- **Operating temperature range**: –30 °C ... +80 °C / -22 °F ... +176 °F
- **Recommended tightening torque**: 8 N·m / 5.9 ft·lb

**Visual / Electrical Fluid Level Indication**
- Magnetic float activates switch when fluid level drops below contact level within 60 mm (2.36 in) of lower banjo bolt
- Available as a SPDT (Single Pole Double Throw) contact
- Equipped with five-pin circular connector M12
- Direction of the electrical contact box is right to top by default

**Media Compatibility**
- Suitable for use with Mineral and Petroleum based hydraulic fluids (HL and HLP)

### Materials

- Housing made of Aluminum, plastic coated
- Sight tube and plugs made of Polyamide (PA)
- Float made of Polyamide (PA)
- Seals made of FPM (Viton®)

**Special sight tube materials for improved UV or chemical resistance and use with special media (such as bio-degradable fluids, diesel oils, gazoline, etc.) as well as special sealing materials are available on request.**

**Electrical Specifications**
- Magnetic float activates switch when fluid level drops below contact level within 60 mm (2.36 in) of lower banjo bolt
- Available as a SPDT (Single Pole Double Throw) contact
- Equipped with five-pin circular connector M12
- Direction of the electrical contact box is right to top by default

**Visual / Electrical Fluid Level Indication**
- Magnetic float activates switch when fluid level drops below contact level within 60 mm (2.36 in) of lower banjo bolt
- Available as a SPDT (Single Pole Double Throw) contact
- Equipped with five-pin circular connector M12
- Direction of the electrical contact box is right to top by default

**Dimensions**
- Banjo Bolt Size
- Metric ISO thread M12 (standard option)
- Metric ISO thread M10

**Thermo Switch / Temperature Sensor Option**
- Supplied without Thermo Switch / Temperature Sensor
- Break Contact, opens at contact level (normally closed); Equipped with standard connector
- Make Contact, closes at contact level (normally open); Equipped with connector M12

**Thermometer / Temperature Sensors**
- Dial thermometers with probe and a Celsius or a dual Celsius / Fahrenheit scale with a temperature display range of up to +100 °C / +200 °F
- Thermo Switches
- Temperature Sensors

Please see pages E6 and E9 for details.
**Thermo Switch • Type TS**

**Characteristics**
Fluid temperature measurement in conjunction with STAUFF Level Gauges SNA, SNK and SNKK

**Installation**
- Replaces the lower banjo bolt of the Level Gauge
- Available for bolt size M12 only
- Clearance hole: Ø13 mm / 0.51 in

**Materials**
- Metal parts made of Steel (1.0718)
- Plastic parts made of glass-fibre reinforced Polyamide (PA)

**Electrical Specifications (General)**
- Thermo switch is activated when the fluid temperature reaches the respective switching temperature
- Available with switching temperatures of +60 °C / +140 °F, +70 °C / +158 °F, +80 °C / +176 °F or +90 °C / +194 °F (with a switching tolerance of ±3°C / ±5°F and a hysteresis of 35 °C / 63 °F)
- Available as a break contact (normally closed) or make contact (normally open)
- Either equipped with industrial standard connector (types C/O) or five-pin circular connector M12 (types CD/OD)
- Thermo switch can be rotated by 360° to its final direction

**Dimensions**

<table>
<thead>
<tr>
<th>Dimensions (mm/in)</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>In conjunction with Level Gauge SNA</td>
<td>54</td>
<td>70</td>
</tr>
<tr>
<td>In conjunction with Level Gauge SNK</td>
<td>47</td>
<td>68</td>
</tr>
<tr>
<td>In conjunction with Level Gauge SNKK</td>
<td>47</td>
<td>68</td>
</tr>
</tbody>
</table>

**Order Codes**

1. **Type**
   - Thermo Switch TS for use with Level Gauges SNA, SNK and SNKK
     - TS-SNA/SNK

2. **Electrical Function**
   - Break contact, opens at switching temperature (normally closed); Equipped with standard connector
     - CD
   - Break contact, opens at switching temperature (normally closed); Equipped with connector M12
     - OD
   - Make contact, closes at switching temperature (normally open); Equipped with standard connector
     - C
   - Make contact, closes at switching temperature (normally open); Equipped with connector M12
     - CD

3. **Switching Temperature**
   - Contact switches at +60 °C / +140 °F
     - 60
   - Contact switches at +70 °C / +158 °F
     - 70
   - Contact switches at +80 °C / +176 °F
     - 80
   - Contact switches at +90 °C / +194 °F
     - 90

**Dial Thermometer with Probe • Types T1/T2**

**Characteristics**
Visual fluid temperature measurement in conjunction with STAUFF Level Gauges SNA, SNK and SNKK

**Nominal Sizes and Designs**
- Probe lengths of 200 mm / 7.87 in or 300 mm / 11.81 in
- Scale diameter of 33 mm / 1.30 in

Please consult STAUFF for special versions.

**Scale Options**
- Celsius scale of 0°C ... +100°C
- Dual Celsius / Fahrenheit scale of up to +100 °C / +200 °F

**Materials**
- Probe made of Stainless Steel V4A (1.4571)

**Technical Data**
- IP 65 protection rating: Dust tight and protected against water jets

**Installation**
- Requires a special banjo bolt (with internal M8 port for the dial thermometer with probe) to replace the lower standard banjo bolt of the Level Gauge
- Use suitable wrench (SW 13 / Hex. 51) to tighten; turning on the body itself may damage the product

Please note that Dial Thermometers with Probe can only be ordered in conjunction with Level Gauges SNA, SNK and SNKK. Please see page E4 to E7 for details.

**Dimensional drawings:** All dimensions in mm (in).
Temperature Sensor • Type TS-SNA/SNK-PT100

**Order Codes**

- **TS-SNA/SNK-PT100**
  - Type: Temperature Sensor PT100
  - TS-SNA/SNK-PT100

**Dimensions**

- **Dimensions (mm/in)**
  - A: 43.5, 40.5
  - B: 1.71, 1.79

**Characteristics**

- Fluid temperature measurement in conjunction with STAUFF Level Gauges SNA, SNK, and SNKK: Analysis of signals with TS-SNA/SNK-PT100-D Display / Evaluation Unit, TS-SNA/SNK-PT100-C Signal Converter or system-sided amplifier or transducer

**Installation**

- Replaces the lower banjo bolt of the Level Gauge
- Available for bolt size M12 only
- Clearance hole: Ø13 mm / Ø.51 in

**Materials**

- Metal parts (including all fluid-affected parts) made of Stainless Steel V2A (1.4305)

**Electrical Specifications**

- Measuring temperature range:
  - -40°C ... +150°C / -40°F ... +302°F
- Platinum measuring element PT100 according to DIN EN 60751, class A
- Accuracy: ±0.15 K + 0.002 x |t|
- Max. contact current: 2.0 mA
- Equipped with four-pin circular connector M12 with gold-plated contacts

**Temperature Sensor with Direct Installation Set**

Type TS-SNA/SNK-PT100-T

**Order Codes**

- **TS-SNA/SNK-PT100-T**
  - Direct Adaptor
  - TS-SNA/SNK-PT100-T

**Characteristics**

- Direct fluid temperature measurement without STAUFF Level Gauges SNA, SNK, and SNKK: Analysis of signals with TS-SNA/SNK-PT100-D Display / Evaluation Unit, TS-SNA/SNK-PT100-C Signal Converter or system-sided amplifier or transducer

**Installation**

- Direct installation to the outer wall of the hydraulic reservoir or gearbox
- Compact design and easy installation
- Clearance hole: Ø13 mm / Ø.51 in

**Materials**

- Fluid-affected parts made of Stainless Steel V2A (1.4305)
- M12 screw nut made of Steel, zinc-plated
- Front ring made of Stainless Steel V2A (1.4305)
- O-ring and gasket made of NBR (Buna-N®) (standard option), FPM (Viton®), or EPDM

Please see top of this page for Technical Details and Electrical Specifications for the Temperature Sensor.

**Order Codes**

- **Sealing Material**
  - NBR (Buna-N®) (standard option)
  - FPM (Viton®)
  - EPDM

Please consult STAUFF for further information.
**Fluid Level / Temperature Indicators**

**Display / Evaluation Unit • Type TS-SNA/SNK-PT100-D**

### Features
- Connection of temperature sensor as 4-wire sensor
- Display of the current system temperature in °C or °F with 4-digit alpha-numeric display
- Measuring temperature range: -40°C ... +300°C / -40°F ... +572°F (may be limited by connected sensor)
- Generation of 2 output signals according to parameter setting:
  - Switching output - normally open / closed (programmable)
  - Analog output: 4 ... 20 mA or 0 ... 10 V (scaleable)
- Provision of process data via IO-Link 1.0 (38.4 kBaud)
- Designed for bi-directional connection

### Characteristics
- Mobile or stationary fluid temperature indication and evaluation in conjunction with STAUFF Temperature Sensor TS-SNA/SNK-PT100
- Designed for bi-directional connection

### Electrical Specifications
- Operating voltage: 18 ... 32 VDC
- Current rating: 250 mA
- Voltage drop: < 2 mA
- Response time of switching output: 130 ms
- Accuracy of switching output: ±0.3°C / ±0.54°F
- Accuracy of analog output: ±0.3°C / ±0.54°F
- Temperature coefficient (of the span per 10 K): 0.1 %
- Short-circuit protection (pulsed)
- Protection against reverse polarity and overload
- Equipped with four-pin circular connector M12 with gold-plated contacts

### Technical Data
- Temperature sensor PT100

### Order Codes
- SET-TS-SNA/SNK-PT100-D

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**Signal Converter • Type TS-SNA/SNK-PT100-C**

### Features
- Converts the measured signal into a proportional analog signal: Analog output: 4 ... 20 mA (scaleable)
- Measuring temperature range (factory setting): -50°C ... +150°C / -58°F ... +302°F
- Provision of process data via IO-Link 1.0 (38.4 kbaud)
- Designed for bi-directional connection

### Characteristics
- Signal converter for use with STAUFF Temperature Sensor TS-SNA/SNK-PT100

### Electrical Specifications
- Operating voltage: 20 ... 32 VDC
- Maximum load: 300 Ω
- Rise time analog output: 400 ms
- Temperature coefficient (of the span per 10 K): 0.1 %
- Short-circuit protection (pulsed)
- Protection against reverse polarity and overload
- Equipped with four-pin circular connector M12 with gold-plated contacts

### Technical Data
- IP 67 protection rating: Dust tight and protected against powerful water jets; even immersion (up to 1 m / 3.28 ft) in water is possible under defined conditions of pressure and time
- Operating temperature range: -25°C ... +70°C / -13°F ... +158°F

### Order Codes
- TS-SNA/SNK-PT100-C