

## Technical Data

# 6

**General data for basic device** 6DR50xx  
6DR51xx  
6DR52xx  
6DR53xx

(see following pages)

**Technical specifications**

**SIPART PS2 (all versions)**

**General data**

|   |  |
|---|--|
| Travel range (linear actuators)   | 3 ... 130 mm (0.12 ... 5.12 inch)<br>(angle of feedback shaft 16 ... 90°)  |
| Angle of rotation (part-turn actuators)                                       | 30 ... 100°  |
| Installation  |  |
| • On linear actuators   | Using attachment set 6DR4004-8V and where necessary with an additional lever arm 6DR4004-8L on actuators according to IEC 534-6 (NAMUR) with ribs, bars or flat face   |
| • On part-turn actuators  | Using attachment set 6DR4004-8D on actuators with mounting plane according to VDI/VDE 3845 and DIN 3337: The required mounting console has to be provided on the actuator side; shaft with groove and female thread M6 |
| Controller  |  |
| • Five-point switch   | Self-adjusting   |
| • Dead zone   |  |
| - dEbA = Auto   | Self-adjusting or can be set as fixed value  |
| - dEbA = 0.1 ... 10%  | Self-adjusting or can be set as fixed value  |
| A/D converter   |  |
| • Scan time   | 10 ms  |
| • Resolution  | ≤ 0.05%  |
| • Transmission error  | ≤ 0.2%   |
| • Temperature effect  | ≤ 0.1%/10 K (≤ 0.1%/18 °F)   |
| Cycle time  |  |
| • 20 mA/HART device   | 20 ms  |
| • PA device   | 60 ms  |
| • FF device   | 60 ms (min. loop time)   |
| Binary input BE1 (terminals 9/10; electrically connected to the basic device) | Suitable only for floating contact; max. contact load < 5 mA with 3 V  |
| Degree of protection <sup>1)</sup>  | IP66 to EN 60 529/NEMA 4x  |
| Mounting position   | Any; pneumatic connections and exhaust opening not facing up in wet environment  |
| CE marking  | Conformity as regards EMC Directive 89/336 EC in accordance with the following standards   |
| EMC requirements  | EN 61326/A1 Appendix A.1 and NAMUR NE21 August 98  |
| Material  |  |
| • Housing   |  |
| - 6DR5..0-... (plastic)   | Glass-fiber-reinforced Macrolon  |
| - 6DR5..1-... (metal)   | GD AISi12  |
| - 6DR5..2-... (stainless steel)   | Austenitic stainless steel mat. No. 1.4581   |
| - 6DR5..5-... (metal, pressure-proof)   | GK AISi12  |
| • Pressure gauge block  | Aluminium AlMgSi, anodized   |
| Vibration resistance  |  |
| • Harmonic oscillations (sine-wave) according to DIN EN 60062-2-6/05.96       | 3.5 mm (0.14 inch), 2 ... 27 Hz<br>3 cycles/axis<br>98.1 m/s <sup>2</sup> (321.84 ft/s <sup>2</sup> ),<br>27 ... 300 Hz, 3 cycles/axis   |

|   |   |
|---|---|
| • Bumping (half-sine) to DIN EN 60068-2-29/03.95            | 150 m/s <sup>2</sup> (492 ft/s <sup>2</sup> ), 6 ms, 1000 shocks/axis   |
| • Noise (digitally controlled) to DIN EN 60068-2-64/08.95   | 10 ... 200 Hz; 1 (m/s <sup>2</sup> )/Hz (3.28 (ft/s <sup>2</sup> )/Hz)<br>200 ... 500 Hz; 0.3 (m/s <sup>2</sup> )/Hz (0.98 (ft/s <sup>2</sup> )/Hz)<br>4 hours/axis |
| • Recommended continuous duty range of the complete fitting | ≤ 30 m/s <sup>2</sup> (≤ 98.4 ft/s <sup>2</sup> ) without resonance sharpness   |
| Weight, basic device  |   |
| • Plastic casing  | Approx. 0.9 kg (0.90 kg)  |
| • Metal casing, aluminium                                   | Approx. 1.3 kg (1.30 kg)  |
| • Metal casing, stainless steel                             | Approx. 3.9 kg (3.90 kg)  |
| • Metal casing EEx d version                                | Approx. 5.2 kg (11.46 lb)   |
| Dimensions  | See Dimensional drawings  |
| Climate class 4   | To DIN EN 60721-3-4   |
| • Storage <sup>2)</sup>                                     | 1K5, but -40 ... +80 °C (1K5, but -40 ... +176 °F)  |
| • Transport <sup>2)</sup>                                   | 2K4, but -40 ... +80 °C (2K4, but -40 ... +176 °F)  |
| • Operation <sup>3)</sup>                                   | 4K3, but -30 ... +80 °C (4K3, but -22 ... +176 °F)  |

**Certificate and approvals**

|  |   |
|--|---|
| Classification according to pressure equipment directive (DRGL 97/23/EC) | For gases of fluid group 1, complies with requirements of article 3, paragraph 3 (sound engineering practice SEP) |
|--|---|

**Pneumatic data**

|   |  |
|---|--|
| Power supply (inlet air)                              |  |
| • Pressure  | 1.4 ... 7 bar (20.3 ... 101.5 psi); Sufficiently greater than max. drive pressure (actuating pressure) |
| Air quality to ISO 8573-1                             |  |
| • Solid particle size and density                     | Class 2  |
| • Pressure dew point                                  | Class 2 (min. 20 K (36 °F) below ambient temperature)  |
| • Oil content   | Class 2  |
| Unthrottled flow                                      |  |
| • Inlet air valve (ventilate actuator) <sup>4)</sup>  |  |
| - 2 bar (29 psi)                                      | 4.1 Nm <sup>3</sup> /h (18.1 USgpm)  |
| - 4 bar (58 psi)                                      | 7.1 Nm <sup>3</sup> /h (31.3 USgpm)  |
| - 6 bar (87 psi)                                      | 9.8 Nm <sup>3</sup> /h (43.1 USgpm)  |
| • Outlet air valve (ventilate actuator) <sup>4)</sup> |  |
| - 2 bar (29 psi)                                      | 8.2 Nm <sup>3</sup> /h (36.1 USgpm)  |
| - 4 bar (58 psi)                                      | 13.7 Nm <sup>3</sup> /h (60.3 USgpm)   |
| - 6 bar (87 psi)                                      | 19.2 Nm <sup>3</sup> /h (84.5 USgpm)   |
| Valve leakage   | < 6·10 <sup>-4</sup> Nm <sup>3</sup> /h (0.0026 USgpm)   |
| Throttle ratio  | Adjustable up to ∞ : 1   |
| Power consumption in the controlled state             | < 3.6·10 <sup>-2</sup> Nm <sup>3</sup> /h (0.158 USgpm)  |
| Types of actuators                                    |  |
| • In plastic casing                                   | Single-action and double-action  |
| • In aluminium casing                                 | Single-action  |
| • In flameproof casing                                | Single-action and double-action  |
| • In stainless steel casing                           | Single-action and double-action  |

<sup>1)</sup> Impact energy max. 1 Joule for plastic/aluminium casing.  
<sup>2)</sup> During commissioning at ≤ 0 °C (≤ 32 °F) make sure that the valves are flushed long enough with the dry medium.  
<sup>3)</sup> At ≤ -10 °C (14 °F) the display refresh rate of the LCD is limited. Only T4 is permissible when using I<sub>y</sub> module.  
<sup>4)</sup> With EEx d version (6DR5..5-...) the values are reduced by approx. 20%

**Technical specifications**

| SIPART PS2  | Basic device without Ex protection  | Basic device with EEx-d protection (flameproof casing) | Basic device with EEx ia/ib protection   | Basic device with EEx n protection   |
|---|-------------------------------------|--|--|--------------------------------------|
| Explosion protection to EN 50014, EN 50020 and EN 50021   | Without                             | EEx d<br>II 2 G EEx d II C T6                          | EEx ia/ib<br>II 2 G EEx ia/ib II C T6  | EEx n<br>II 3 G EEx nA L [L] II C T6 |
| Mounting location   |                                     | Zone 1   | Zone 1   | Zone 2                               |
| Permissible ambient temperature for operation   | -30 ... +80 °C<br>(-22 ... +176 °F) |  | T4: -30 ... +80 °C (-22 ... +176 °F)<br>T5: -30 ... +65 °C (-22 ... +149 °F)<br>T6: -30 ... +50 °C (-22 ... +122 °F) |                                      |
| At ≤ -10 °C (+14 °F) the display refresh rate of the LCD is limited.<br>(for basic devices with EEX ia/ib and EEX n protection the following applies: Only T4 is permissible when using I <sub>y</sub> module.) |                                     |  |  |                                      |

**Electrical data**

Input

2-wire connection (terminals 6/8)

|   |                               |                               |  |   |
|---|-------------------------------|-------------------------------|--|---|
| Rated signal range  | 4 ... 20 mA                   | 4 ... 20 mA                   | 4 ... 20 mA  | 4 ... 20 mA   |
| Current to maintain the power supply                                | ≥ 3.6 mA                      | ≥ 3.6 mA                      | ≥ 3.6 mA   | ≥ 3.6 mA  |
| Required load voltage<br>U <sub>B</sub> (corresponds to Ω at 20 mA) |                               |                               |  |   |
| • Without HART (6DR50..)  |                               |                               |  |   |
| - Typical   | 6.36 V (corresponds to 318 Ω) | 6.36 V (corresponds to 318 Ω) | 7.8 V (corresponds to 390 Ω)   | 7.8 V (corresponds to 390 Ω)                        |
| - Max.  | 6.48 V (corresponds to 324 Ω) | 6.48 V (corresponds to 324 Ω) | 8.3 V (corresponds to 415 Ω)   | 8.3 V (corresponds to 415 Ω)                        |
| • Without HART (6DR53..)  |                               |                               |  |   |
| - Typical   | 7.9 V (corresponds to 395 Ω)  | –                             | –  | –   |
| - Max.  | 8.4 V (corresponds to 420 Ω)  | –                             | –  | –   |
| • With HART (6DR51..)   |                               |                               |  |   |
| - Typical   | 6.6 V (corresponds to 330 Ω)  | 6.6 V (corresponds to 330 Ω)  | –  | –   |
| - Max.  | 6.72 V (corresponds to 336 Ω) | 6.72 V (corresponds to 336 Ω) | –  | –   |
| • With HART (6DR52..)   |                               |                               |  |   |
| - Typical   | –                             | 8.4 V (corresponds to 420 Ω)  | 8.4 V (corresponds to 420 Ω)   | 8.4 V (corresponds to 420 Ω)                        |
| - Max.  | –                             | 8.8 V (corresponds to 440 Ω)  | 8.8 V (corresponds to 440 Ω)   | 8.8 V (corresponds to 440 Ω)                        |
| • Static destruction limit  | ± 40 mA                       |                               | –  | –   |
| Internal capacitance C <sub>i</sub>                                 |                               |                               |  |   |
| • Without HART  | –                             | –                             | ≤ 22 nF  | –   |
| • With HART   | –                             | –                             | ≤ 7 nF   | –   |
| Internal inductance L <sub>i</sub>                                  |                               |                               |  |   |
| • Without HART  | –                             | –                             | ≤ 0.12 mH  | –   |
| • With HART   | –                             | –                             | ≤ 0.24 mH  | –   |
| For connection to power circuits with                               | –                             | –                             | intrinsically safe<br>U <sub>o</sub> ≤ 30 V DC<br>I <sub>k</sub> ≤ 100 mA<br>P ≤ 1 W | U <sub>i</sub> ≤ 30 V DC<br>I <sub>i</sub> ≤ 100 mA |

| SIPART PS2  | Basic device without Ex protection                                  | Basic device with EEx-d protection (flameproof casing)   | Basic device with EEx ia/ib protection  | Basic device with EEx n protection                                  |
|---|---|--|---|---|
| <u>3-/4-wire device (terminals 2/4 and 6/8) (6DR52.. and 6DR53..)</u> |   |  |   |   |
| • Power supply $U_H$  | 18 ... 35 V DC  | 18 ... 35 V DC   | 18 ... 30 V DC  | 18 ... 30 V DC  |
| • Current consumption $I_H$   | $(U_H - 7.5 \text{ V})/2.4 \text{ k}\Omega$ [mA]                    | $(U_H - 7.5 \text{ V})/2.4 \text{ k}\Omega$ [mA]   | $(U_H - 7.5 \text{ V})/2.4 \text{ k}\Omega$ [mA]  | $(U_H - 7.5 \text{ V})/2.4 \text{ k}\Omega$ [mA]                    |
| • Internal capacitance $C_i$  | –   | –  | $\leq 22 \text{ nF}$  | –   |
| • Internal inductance $L_i$   | –   | –  | $\leq 0.12 \text{ mH}$  | –   |
| • For connection to power circuits with                               | –   | –  | intrinsically safe<br>$U_o \leq 30 \text{ V DC}$<br>$I_k \leq 100 \text{ mA}$<br>$P \leq 1 \text{ W}$ | $U_i \leq 30 \text{ V DC}$<br>$I_i \leq 100 \text{ mA}$             |
| Current input $I_W$   |   |  |   |   |
| Rated signal range  | 0/4 ... 20 mA   | 0/4 ... 20 mA  | 0/4 ... 20 mA   | 0/4 ... 20 mA   |
| Load voltage at 20 mA   | $\leq 0.2 \text{ V}$ (corresponds to $10 \Omega$ )                  | $\leq 0.2 \text{ V}$ (corresponds to $10 \Omega$ )   | $\leq 1 \text{ V}$ (corresponds to $50 \Omega$ )  | $\leq 1 \text{ V}$ (corresponds to $50 \Omega$ )                    |
| Internal capacitance $C_i$  | –   | –  | $\leq 22 \text{ nF}$  | –   |
| Internal inductance ( $L_i$ )   | –   | –  | $\leq 0.12 \text{ mH}$  | –   |
| For connection to power circuits with                                 | –   | –  | intrinsically safe<br>$U_o \leq 30 \text{ V DC}$<br>$I_k \leq 100 \text{ mA}$<br>$P \leq 1 \text{ W}$ | $U_i \leq 30 \text{ V DC}$<br>$I_i \leq 100 \text{ mA}$             |
| Electrical isolation  | between $U_H$ and $I_W$   | between $U_H$ and $I_W$  | between $U_H$ and $I_W$<br>(2 intrinsically safe circuits)  | between $U_H$ and $I_W$   |
| Test voltage  | 840 V DC (1 s)  | 840 V DC (1 s)   | 840 V DC (1 s)  | 840 V DC (1 s)  |
| <b>Connections</b>  |   |  |   |   |
| • Electric  | Screw terminals 2.5 AWG28-12<br>Cable gland M20 x 1.5 or 1/2-14 NPT | Screw terminals 2.5 AWG28-12<br>EEx d certified cable gland M20 x 1.5, 1/2-14 NPT or M25 x 1.5 | Screw terminals 2.5 AWG28-12<br>Cable gland M20 x 1.5 or 1/2-14 NPT                                   | Screw terminals 2.5 AWG28-12<br>Cable gland M20 x 1.5 or 1/2-14 NPT |
| • Pneumatic   | Female thread G1/4 DIN 45141 or 1/4-18 NPT                          | Female thread G1/4 DIN 45141 or 1/4-18 NPT   | Female thread G1/4 DIN 45141 or 1/4-18 NPT  | Female thread G1/4 DIN 45141 or 1/4-18 NPT                          |
| External position sensor (potentiometer or NCS; as option)            |   |  |   |   |
| • $U_o$   | –   | –  | $< 5 \text{ V}$   | $< 5 \text{ V}$   |
| • $I_o$   | –   | –  | $< 75 \text{ mA}$   | $< 75 \text{ mA}$   |
| • $I_s$   | –   | –  | $< 160 \text{ mA}$  | $< 160 \text{ mA}$  |
| • $P_o$   | –   | –  | $< 120 \text{ mW}$  | $< 120 \text{ mW}$  |
| Maximum permissible external capacitance $C_o$                        | –   | –  | $< 1 \mu\text{F}$   | $< 1 \mu\text{F}$   |
| Maximum permissible external inductance $L_o$                         | –   | –  | $< 1 \text{ mH}$  | $< 1 \text{ mH}$  |

**Technical specifications**

| Option modules   | Without Ex protection (EEx d also)  | With Ex protection EEx ia/ib   | With Ex protection EEx n  |
|--|---|--|---|
| Ex protection to EN 50014, EN 50020 and EN 50021   | –   | II 2G EEx ia/ib II C T4/T5/T6  | II 3G EEx nA L [L] II C T6  |
| Mounting location  | –   | Zone 1   | Zone 2  |
| Permissible ambient temperature for operation<br>(For devices with Ex protection: Only in conjunction with the basic device 6DR5...-E.... Only T4 is permissible when using I <sub>y</sub> module) | -30 ... +80 °C (-22 ... +176 °F)  | T4: -30 ... +80 °C (-22 ... +176 °F) <sup>1)</sup><br>T5: -30 ... +65 °C (-22 ... +149 °F) <sup>1)</sup><br>T6: -30 ... +50 °C (-22 ... +122 °F) <sup>1)</sup> |   |
| <b>Alarm module</b>  | 6DR4004-8A (without Ex protection)  | 6DR4004-6A (with Ex protection)  | 6DR4004-6A (with Ex protection)   |
| Binary alarm outputs A1, A2 and alarm output   |   |  |   |
| Signal status High (not responded)   | Active, R = 1 kΩ, +3/-1%*   | ≥ 2.1 mA   | ≥ 2.1 mA  |
| Signal status Low* (responded)   | Disabled, I <sub>R</sub> < 60 μA  | ≤ 1.2 mA   | ≤ 1.2 mA  |
| (* Low is also the status when the basic device is faulty or has not electric power supply)  | (* When used in the flameproof casing the current consumption is limited to 10 mA per output.)                      | (Switching threshold with supply to EN 60947-5-6: U <sub>H</sub> = 8.2 V, R <sub>i</sub> = 1kΩ)  | (Switching threshold with supply to EN 60947-5-6: U <sub>H</sub> = 8.2 V, R <sub>i</sub> = 1kΩ) |
| Internal capacitance C <sub>i</sub>  | –   | ≤ 5.2 nF   | –   |
| Internal inductance L <sub>i</sub>   | –   | Negligible   | –   |
| Power supply U <sub>H</sub>  | ≤ 35 V  | –  | –   |
| Connection to power circuits with  | –   | intrinsically safe switching amplifier EN 60947-5-6<br>U <sub>o</sub> ≤ 15.5 V DC<br>I <sub>k</sub> ≤ 25 mA, P ≤ 64 mW   | U <sub>i</sub> ≤ 15.5 V DC  |
| Binary input BE2   |   |  |   |
| • Electrically connected to the basic device   |   |  |   |
| - Signal status 0  | Floating contact, open  | Floating contact, open   | Floating contact, open  |
| - Signal status 1  | Floating contact, closed  | Floating contact, closed   | Floating contact, closed  |
| - Contact load   | 3 V, 5 μA   | 3 V, 5 μA  | 3 V, 5 μA   |
| • Electrically isolated from the basic device  |   |  |   |
| - Signal status 0  | ≤ 4.5 V or open   | ≤ 4.5 V or open  | ≤ 4.5 V or open   |
| - Signal status 1  | ≥ 13 V  | ≥ 13 V   | ≥ 13 V  |
| - Natural resistance   | ≥ 25 kΩ   | ≥ 25 kΩ  | ≥ 25 kΩ   |
| Static destruction limit   | ± 35 V  | –  | –   |
| Internal inductance and capacitance  | –   | Negligible   | –   |
| Connection to power circuits   | –   | Intrinsically safe U <sub>i</sub> ≤ 25.2 V   | U <sub>i</sub> ≤ 25.2 V DC  |
| Electrical isolation   | The 3 outputs, the input BE2 and the basic device are electrically isolated from each other                         |  |   |
| Test voltage   | 840 V DC, 1 s   | 840 V DC, 1 s  | 840 V DC, 1 s   |
| <b>SIA module (not for EEx d version)</b>  | 6DR4004-8G (without Ex protection)  | 6DR4004-6G (with Ex protection)  | 6DR4004-6G (with Ex protection)   |
| Limit transmitter with slot-type initiators and alarm output   | 2-wire connection   |  |   |
| Ex protection  | Without   | II 2 G EEx ia/ib IIC T6  | II 3 G EEx nA L [L] IIC T6  |
| Connection   | 2-wire system to EN 60947-5-6 (NAMUR), for switching amplifier to be connected on load side                         |  |   |
| 2 slot-type initiators   | Type SJ2-SN   | Type SJ2-SN  | Type SJ2-SN   |
| Function   | NC (normally closed)  | NC (normally closed)   | NC (normally closed)  |
| Connection to power circuits with  | nominal voltage 8 V<br>Current consumption:<br>≥ 3 mA (limit value not responded)<br>≤ 1 mA (limit value responded) | Intrinsically safe switching amplifier EN 60947-5-6<br>U <sub>i</sub> ≤ 15.5 V DC<br>I <sub>i</sub> ≤ 25 mA, P <sub>i</sub> ≤ 64 mW                            | U <sub>i</sub> ≤ 15.5 V DC<br>P <sub>i</sub> ≤ 64 mW  |
| Internal capacitance   | –   | ≤ 41 nF  | –   |
| Internal inductance  | –   | ≤ 100 mH   | –   |
| Electrical isolation   |   | The 3 outputs are electrically isolated from the basic device  |   |
| Test voltage   | 840 V DC, 1 s   | 840 V DC, 1 s  | 840 V DC, 1 s   |
| Alarm output   | See Alarm module  | See Alarm module   | See Alarm module  |

<sup>1)</sup> Only in conjunction with the basic device 6DR5...-E.... With I<sub>y</sub> module only T4 permitted.

| Accessory modules  | Without Ex protection (EEx d also)   | With Ex protection EEx ia/ib   | With Ex protection EEx n  |
|--|--|--|---|
| <b>Limit value contact module</b><br>Limit transmitter with mechanical ground contact and alarm output<br>Ex protection<br>Max. switching current AC/DC<br><br>Max. switching voltage AC/DC<br>Internal capacitance $C_i$<br>Internal inductance $L_i$<br>Electrical isolation<br>Test voltage<br>Alarm module   | 6DR4004-8K<br><br>without<br>4 A<br><br>250 V / 24 V<br>–<br>–<br><br>3150 V DC, 2s<br>See Alarm module  | 6DR4004-6K<br><br>II 2 G EEx ia/ib IIC T6<br>Connection to intrinsically safe power circuits:<br>$U_o \leq 30$ V<br>$I_k \leq 100$ mA,<br>$P_i \leq 750$ mW<br>30 V DC<br>Negligible<br>Negligible<br><br>3150 V DC, 2 s<br>See Alarm module   | 6DR4004-6K<br><br>II 3 G EEx nA L [L] IIC T6<br>Connection to intrinsically safe power circuits:<br>$U_o \leq 30$ V<br>$I_k \leq 100$ mA,<br>$P_i \leq 750$ mW<br>30 V DC<br>–<br>–<br><br>3150 V DC, 2 s<br>See Alarm module   |
| The 3 outputs are electrically isolated from the basic device  |  |  |   |
| <b>I<sub>y</sub> module</b><br><br>DC output for position feedback<br>Nominal signal range $i$<br>Total operating range<br>Power supply $U_H$<br>External load $R_B$ [kW]<br>Transmission error<br>Temperature effect<br>Resolution<br>Residual ripple<br>Internal capacitance $C_i$<br>Internal inductance $L_i$<br>For connection to power circuits with<br><br>Electrical isolation<br>Test voltage | 6DR4004-8J (without Ex protection)<br><br>2-wire connection<br>4 ... 20 mA, short-circuit-proof<br>3.6 ... 20.5 mA<br>+12 ... +35 V<br>$\leq (U_H [V] - 12 V) / i$ [mA]<br>$\leq 0.3\%$<br>$\leq 0.1\%/10$ K ( $\leq 0.1\%/18$ °F)<br>$\leq 0.1\%$<br>$\leq 1\%$<br>–<br>–<br><br>Electrically isolated from the basic device<br>840 V DC, 1 s | 6DR4004-6J (with Ex protection)<br><br>2-wire connection<br>4 ... 20 mA, short-circuit-proof<br>3.6 ... 20.5 mA<br>+12 ... +30 V<br>$\leq (U_H [V] - 12 V) / i$ [mA]<br>$\leq 0.3\%$<br>$\leq 0.1\%/10$ K ( $\leq 0.1\%/18$ °F)<br>$\leq 0.1\%$<br>$\leq 1\%$<br>$\leq 11$ nF<br>Negligible<br>Intrinsically safe: $U_i \leq 30$ V DC<br>$I_i \leq 100$ mA; $P_i \leq 1$ W (only T4)<br>Electrically isolated from the basic device<br>840 V DC, 1 s | 6DR4004-6J (with Ex protection)<br><br>2-wire connection<br>4 ... 20 mA, short-circuit-proof<br>3.6 ... 20.5 mA<br>+12 ... +30 V<br>$\leq (U_H [V] - 12 V) / i$ [mA]<br>$\leq 0.3\%$<br>$\leq 0.1\%/10$ K ( $\leq 0.1\%/18$ °F)<br>$\leq 0.1\%$<br>$\leq 1\%$<br>–<br>–<br><br>Electrically isolated from the basic device<br>840 V DC, 1 s |
| <b>NCS sensor</b><br>(not for EEx d version)<br>Position range<br>• Linear actuator<br>• Part-turn actuator<br>Linearity (after correction by SIPART PS2)<br>• Linear actuator<br>• Part-turn actuator<br>Hysteresis<br>Continuous working temperature<br><br>Degree of protection of casing   | <br><br>3 ... 130 mm (0.12 ... 5.12 inch), to 200 mm (7.87 inch) on request<br>30° ... 100°<br><br>$\pm 1\%$<br>$\pm 1\%$<br>$\pm 0.2\%$<br>–40 ... +85 °C (–40 ... +185 °F), extended temperature range on request<br>IP68/NEMA 4X  | <br><br>3 ... 130 mm (0.12 ... 5.12 inch), to 200 mm (7.87 inch) on request<br>30° ... 100°<br><br>$\pm 1\%$<br>$\pm 1\%$<br>$\pm 0.2\%$<br>–40 ... +85 °C (–40 ... +185 °F), extended temperature range on request<br>IP68/NEMA 4X  | <br><br>3 ... 130 mm (0.12 ... 5.12 inch), to 200 mm (7.87 inch) on request<br>30° ... 100°<br><br>$\pm 1\%$<br>$\pm 1\%$<br>$\pm 0.2\%$<br>–40 ... +85 °C (–40 ... +185 °F), extended temperature range on request<br>IP68/NEMA 4X   |