## **SIEMENS**

## **Data sheet**

## 6ES7531-7NF00-0AB0

SIMATIC S7-1500 analog input module AI 8xU/I HF, up to 24 bit resolution, accuracy 0.1%, 8 channels in groups of 1; common mode voltage: 30 V AC/60 V DC, Diagnostics; Hardware interrupts Measured values scalable, measuring range adjustment, Calibrate in RUN; Delivery including infeed element, shield bracket and shield terminal: Front connector (screw terminals or push-in) to be ordered separately

| Product type designation  All 8xU/I HF  HW functional status From FS01 Firmware version  FW update possible From S01 Firmware version  FW update possible From FS01 Firmware version  FW update possible From S01 Firmware version  FW update possible From FS01 Firmware version  FW update possible  From FS01 Firmware version  FW update possible  From FS01 Firmware version  FR update data  From FS01 Firmware version  FR update possible  From FS01 Firmware version  FR update startup  FR upd | General information   | terminals of push-in) to be ordered separately |
|--|---|--|
| HW functional status From FS01 Firmware version V1.1.0  • FW update possible Yes Product function  • I&M data Yes; I&M0 to I&M3  • Isochronous mode No  • Prioritized startup Yes • Measuring range scalable No  • Scalable measured values Yes • Adjustment of measuring range Engineering with  • STEP 7 TIA Portal configurable/integrated from version • STEP 7 Ton fungurable/integrated from version • STEP 7 Ton fungurable/integrated from version • PROFINED from GSD version/GSD revision • PR |   | ALOVEN UE                                      |
| Firmware version V1.1.0 FIV update possible Yes FV Update possible No FV Update Poss |   |  |
| FW update possible Product function  I AM data I Sochronous mode Prioritized startup Prioritized startup Prioritized startup Scalable measured values Adjustment of measuring range Adjustment of measuring range Production STEP 7 TIA Portal configurable/integrated from version STEP 7 TIA Portal configurable/integrated from version STEP 7 Ton figurable/integrated from version STEP 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision V3.3 /-  Operating mode Oversampling No MSI Pres Calibration in RUN Reparameterization possible in RUN Yes Calibration possible in RUN Yes Calibration possible in RUN Yes Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Power Power loss Power loss Power loss Power loss Power loss, typ. Analog inputs For voltage measurement For voltage input voltage for voltage input (destruction limit), max.  Input ranges (rated values), voltages On + 50 to +5 V No No No  |   |  |
| Product function  I BM data I slochtronous mode Prioritized startup Yes Measuring range scalable No Adjustment of measuring range STEP 7 TIA Portal configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision PROFIBUS from SSD version/GSD version/GSD revision PROFIBUS from SSD version/GSD version/GS |   |  |
| IsM data   Yes; IsM0 to IsM3     Isochronous mode   Prioritized startup   Yes     Measuring range scalable   No     Scalable measured values   Yes     Adjustment of measuring range   Yes     Adjustment of No     Adjustment     |   | Tes  |
| I sochronous mode Prioritized startup Prioritized startup Prioritized startup Scalable measured values Scalable measured values Scalable measured values Adjustment of measuring range Pres Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 TIA Portal configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision PROFINET from GSD version/GSD revision PROFINET from GSD version/GSD revision Press Prover mode Oversampling No MSI Pes  CIR - Configuration in RUN Reparameterization possible in RUN Pres Calibration possible in RUN Pres   |   | Voc: 18M0 to 18M2                              |
| Prioritized startup  Measuring range scalable Scalable measured values Adjustment of measuring range  Engineering with STEP 7 TIAP Portal configurable/integrated from version STEP 7 TIAP Portal configurable/integrated from version STEP 7 Configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFIBUS from GSD   |   |  |
| Measuring range scalable Scalable measured values Scalable measured values Adjustment of measuring range Pes  Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 TOP top transport of the provision PROFIBUS from GSD version/GSD revision Properting Mo No No No NSI Pes CIR-Configuration in RUN Reparameterization possible in RUN Pes Calibration possible in RUN Pes Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Pes Sa 8 V Reverse polarity protection Properting Current Consumption, max. So mA; with 24 V DC supply Power Power available from the backplane bus Power loss, typ. Analog inputs Number of analog inputs Power loss, typ. Analog inputs Power of the provided provided input (destruction limit), max. Permissible input current for current input (destruction limit), max.  Permissible input current for current input (destruction limit), max.  Input ranges (rated values), voltages  • 0 to +5 V  • 0 to +10 V  No   |   |  |
| Scalable measured values Adjustment of measuring range Engineering with  STEP 7 TIA Portal configurable/integrated from version STEP 7 configuration in RUN STEP 7 configuration in R  | •   |  |
| Engineering with   |   |  |
| Engineering with  STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision V2.3 /-  Operating mode Oversampling MSI Pyes  CIR - Configuration in RUN Reparameterization possible in RUN Yes Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Power loss Power available from the backplane bus Power available from the backplane bus Power loss Power loss Power loss Power for analog inputs For current measurement For voltage measurement Semisble input current for current input (destruction limit), max.  Input ranges (rated values), voltages O to to 5 V O to 5 to 5 to 5 V O to 5 to 5 V O to 5 to 5 to 5 to 5 V O to 5 to 5 to 5 to 5 V O to 5 to                       |   |  |
| STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version STEP 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision  No STEP 7 configuration in GSD version/GSD revision PROFINET from GSD version/GSD revision V2.3 /-  Operating mode Oversampling No MSI STEP 7 configuration in RUN Pes  CIR - Configuration in RUN Reparameterization possible in RUN Yes  Calibration possible in RUN Yes  Supply voltage Rated value (DC) Permissible range, lower limit (DC) 19.2 V Permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes  Input current Current consumption, max. 50 mA; with 24 V DC supply  Power Power available from the backplane bus O.85 W  Power loss Power loss, typ. 1.9 W  Analog inputs Number of analog inputs For current measurement For voltage measurement For outlage measurement Semissible input voltage for voltage input (destruction limit), max.  Input ranges (rated values), voltages O to +5 V  |   | 1 65   |
| PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision V2.3 / -  Operating mode  Oversampling MSI Pes  CIR- Configuration in RUN  Reparameterization possible in RUN Reparameterization possible in RUN  Reparameterization possible in RUN  Reparameterization possible in RUN  Reparameterization possible in RUN  Supply voltage  Rated value (DC) Permissible range, lower limit (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Pess Vese polarity protection Ves  Input current  Current consumption, max.  50 mA; with 24 V DC supply  Power  Power available from the backplane bus  Power loss, typ.  Analog inputs  Number of analog inputs  For current measurement  For voltage measurement  For voltage measurement  Enyemissible input voltage for voltage input (destruction limit), max.  Input ranges (rated values), voltages  • 0 to +5 V  • 0 to +5 V  • 0 to +10 V  No  | STEP 7 TIA Portal configurable/integrated from                  | V14 / -  |
| PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision V2.3 / -  Operating mode  Oversampling MSI Pes  CIR- Configuration in RUN  Reparameterization possible in RUN Reparameterization possible in RUN  Reparameterization possible in RUN  Reparameterization possible in RUN  Reparameterization possible in RUN  Supply voltage  Rated value (DC) Permissible range, lower limit (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Pess Vese polarity protection Ves  Input current  Current consumption, max.  50 mA; with 24 V DC supply  Power  Power available from the backplane bus  Power loss, typ.  Analog inputs  Number of analog inputs  For current measurement  For voltage measurement  For voltage measurement  Enyemissible input voltage for voltage input (destruction limit), max.  Input ranges (rated values), voltages  • 0 to +5 V  • 0 to +5 V  • 0 to +10 V  No  | <ul> <li>STEP 7 configurable/integrated from version</li> </ul> | V5.5 SP3 / -                                   |
| Operating mode  Oversampling  MSI  MSI  Yes  CIR - Configuration in RUN  Reparameterization possible in RUN  Calibration possible in RUN  Supply voltage  Rated value (DC)  permissible range, upper limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Yes  Input current  Current consumption, max.  For maximation and so from the backplane bus  Power loss  Power loss, typ.  Analog inputs  Number of analog inputs  For current measurement  For voltage measurement  Permissible input voltage for voltage input (destruction limit), max.  permissible input current for current input (destruction limit), max.  Input ranges (rated values), voltages  O to +5 V  O to +5 V  O to +5 V  O to +10 V  No   |   | V1.0 / V5.1                                    |
| Oversampling     MSI     Yes  CIR - Configuration in RUN  Reparameterization possible in RUN  Reparameterization possible in RUN  Yes  Calibration possible in RUN  Yes  Supply voltage  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Input current  Current consumption, max.  50 mA; with 24 V DC supply  Power  Power loss  Power loss, typ.  1.9 W  Analog inputs  Number of analog inputs  For current measurement  For ovoltage measurement  Permissible input voltage for voltage input (destruction limit), max.  Permissible input current for current input (destruction limit), max.  Input ranges (rated values), voltages  0 to +5 V  0 to +10 V  No  | <ul> <li>PROFINET from GSD version/GSD revision</li> </ul>      | V2.3 / -                                       |
| MSI  CIR - Configuration in RUN  Reparameterization possible in RUN  Reparameterization possible in RUN  Yes  Calibration possible in RUN  Yes  Supply voltage  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Yes  Input current  Current consumption, max.  50 mA; with 24 V DC supply  Power  Power available from the backplane bus  0.85 W  Power loss  Power loss, typ.  1.9 W  Analog inputs  Number of analog inputs  For current measurement  For outlage measurement  For voltage measurement  Permissible input voltage for voltage input (destruction limit), max.  permissible input current for current input (destruction limit), max.  Input ranges (rated values), voltages  O to +5 V  O to +10 V  No   | Operating mode  |  |
| CiR - Configuration in RUN  Reparameterization possible in RUN  Calibration possible in RUN  Supply voltage  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Yes  Input current  Current consumption, max.  50 mA; with 24 V DC supply  Power  Power loss  Power loss  Power loss, typ.  Analog inputs  Number of analog inputs  For current measurement  For voltage measurement  Permissible input voltage for voltage input (destruction limit), max.  permissible input current for current input (destruction limit), max.  Input ranges (rated values), voltages  • 0 to +5 V  • 0 to +10 V  No  | Oversampling  | No   |
| Reparameterization possible in RUN Calibration possible in RUN Yes Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Yes Input current Current consumption, max. 50 mA; with 24 V DC supply Power Power loss Power loss Power loss Por current measurement  • For current measurement • For voltage measurement permissible input voltage for voltage input (destruction limit), max.  permissible input current for current input (destruction limit), max.  Input ranges (rated values), voltages • 0 to +5 V • 0 to +10 V  No   | • MSI   | Yes  |
| Calibration possible in RUN  Supply voltage  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Current consumption, max.  Current consumption, max.  Fower loss  Power loss  Power loss, typ.  Analog inputs  Number of analog inputs  • For voltage measurement  • For voltage measurement  permissible input voltage for voltage input (destruction limit), max.  permissible input current for current input (destruction limit), max.  Input ranges (rated values), voltages  • 0 to +5 V  • 0 to +10 V  No   | CiR - Configuration in RUN                                      |  |
| Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Yes  Input current  Current consumption, max.  50 mA; with 24 V DC supply  Power  Power available from the backplane bus  0.85 W  Power loss  Power loss  Power loss, typ.  1.9 W  Analog inputs  Number of analog inputs  • For current measurement  • For voltage measurement  permissible input voltage for voltage input (destruction limit), max.  permissible input current for current input (destruction limit), max.  Input ranges (rated values), voltages  • 0 to +5 V  • 0 to +5 V  • 0 to +10 V  No   | Reparameterization possible in RUN                              | Yes  |
| Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Yes  Input current  Current consumption, max.  50 mA; with 24 V DC supply  Power  Power loss  Power loss, typ.  Analog inputs  Number of analog inputs  For current measurement  For voltage measurement  permissible input voltage for voltage input (destruction limit), max.  permissible input current for current input (destruction limit), max.  Input ranges (rated values), voltages  • 0 to +5 V  • 0 to +10 V  No  | Calibration possible in RUN                                     | Yes  |
| permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Yes  Input current Current consumption, max.  Power Power available from the backplane bus  Power loss Power loss, typ.  Analog inputs  Number of analog inputs  • For current measurement • For voltage measurement permissible input voltage for voltage input (destruction limit), max.  Input ranges (rated values), voltages  • 0 to +5 V • 0 to +10 V  No  Poss  19.2 V 28.8 V  19.3 V  19.4 V  19.5 V  19 | Supply voltage  |  |
| permissible range, upper limit (DC) Reverse polarity protection Yes  Input current  Current consumption, max. 50 mA; with 24 V DC supply  Power  Power available from the backplane bus 0.85 W  Power loss  Power loss, typ. 1.9 W  Analog inputs  Number of analog inputs  • For current measurement • For voltage measurement permissible input voltage for voltage input (destruction limit), max.  Input ranges (rated values), voltages • 0 to +5 V • 0 to +10 V  No  | Rated value (DC)  | 24 V   |
| Reverse polarity protection  Input current  Current consumption, max.  50 mA; with 24 V DC supply  Power  Power available from the backplane bus  0.85 W  Power loss  Power loss, typ.  1.9 W  Analog inputs  Number of analog inputs  • For current measurement • For voltage measurement permissible input voltage for voltage input (destruction limit), max.  permissible input current for current input (destruction limit), max.  Input ranges (rated values), voltages  • 0 to +5 V • 0 to +10 V  No   | permissible range, lower limit (DC)                             | 19.2 V   |
| Input current  Current consumption, max.  50 mA; with 24 V DC supply  Power  Power available from the backplane bus  0.85 W  Power loss  Power loss, typ.  1.9 W  Analog inputs  Number of analog inputs  • For current measurement • For voltage measurement  permissible input voltage for voltage input (destruction limit), max.  permissible input current for current input (destruction limit), max.  Input ranges (rated values), voltages  • 0 to +5 V • 0 to +10 V  No   | permissible range, upper limit (DC)                             | 28.8 V   |
| Current consumption, max.  50 mA; with 24 V DC supply  Power  Power available from the backplane bus  0.85 W  Power loss  Power loss, typ.  1.9 W  Analog inputs  Number of analog inputs  For current measurement  For voltage measurement  For voltage measurement  permissible input voltage for voltage input (destruction limit), max.  permissible input current for current input (destruction limit), max.  Input ranges (rated values), voltages  0 to +5 V  0 to +10 V  No   | Reverse polarity protection                                     | Yes  |
| Power available from the backplane bus  Power loss  Power loss, typ.  1.9 W  Analog inputs  Number of analog inputs  For current measurement  For voltage measurement  For voltage measurement  permissible input voltage for voltage input (destruction limit), max.  permissible input current for current input (destruction limit), max.  Input ranges (rated values), voltages  O to +5 V  O to +10 V  No   | Input current   |  |
| Power loss Power loss, typ.  1.9 W  Analog inputs  Number of analog inputs  For current measurement  For voltage measurement  permissible input voltage for voltage input (destruction limit), max.  permissible input current for current input (destruction limit), max.  Input ranges (rated values), voltages  0 to +5 V  0 to +10 V  No   | Current consumption, max.                                       | 50 mA; with 24 V DC supply                     |
| Power loss, typ. 1.9 W  Analog inputs  Number of analog inputs 8  • For current measurement 8  • For voltage measurement 8  permissible input voltage for voltage input (destruction limit), max.  permissible input current for current input (destruction limit), max.  Input ranges (rated values), voltages  • 0 to +5 V No  • 0 to +10 V No   | Power   |  |
| Power loss, typ.  Analog inputs  Number of analog inputs  For current measurement  For voltage measurement  permissible input voltage for voltage input (destruction limit), max.  permissible input current for current input (destruction limit), max.  Input ranges (rated values), voltages  O to +5 V  O to +10 V  No   | Power available from the backplane bus                          | 0.85 W   |
| Analog inputs  Number of analog inputs  For current measurement  For voltage measurement  Permissible input voltage for voltage input (destruction limit), max.  permissible input current for current input (destruction limit), max.  Input ranges (rated values), voltages  O to +5 V  O to +10 V  No   | Power loss  |  |
| Analog inputs  Number of analog inputs  For current measurement  For voltage measurement  Permissible input voltage for voltage input (destruction limit), max.  permissible input current for current input (destruction limit), max.  Input ranges (rated values), voltages  O to +5 V  O to +10 V  No   | Power loss, typ.  | 1.9 W  |
| Number of analog inputs  • For current measurement  • For voltage measurement  permissible input voltage for voltage input (destruction limit), max.  permissible input current for current input (destruction limit), max.  Input ranges (rated values), voltages  • 0 to +5 V  • 0 to +10 V  No  |   |  |
| <ul> <li>For current measurement</li> <li>For voltage measurement</li> <li>permissible input voltage for voltage input (destruction limit), max.</li> <li>permissible input current for current input (destruction limit), max.</li> <li>Input ranges (rated values), voltages</li> <li>0 to +5 V</li> <li>0 to +10 V</li> <li>No</li> </ul>   |   | 8  |
| ● For voltage measurement  permissible input voltage for voltage input (destruction limit), max.  permissible input current for current input (destruction limit), max.  Input ranges (rated values), voltages  ● 0 to +5 V No ● 0 to +10 V No   |   |  |
| permissible input voltage for voltage input (destruction limit), max.  permissible input current for current input (destruction limit), max.  Input ranges (rated values), voltages  • 0 to +5 V  • 0 to +10 V  No   | For voltage measurement   |  |
| limit), max.  Input ranges (rated values), voltages  • 0 to +5 V  • 0 to +10 V  No   | permissible input voltage for voltage input (destruction        | 28.8 V   |
| ● 0 to +5 V No<br>● 0 to +10 V No  |   | 40 mA  |
| • 0 to +10 V   | Input ranges (rated values), voltages                           |  |
|  | • 0 to +5 V   | No   |
| • 1 V to 5 V   | • 0 to +10 V  | No   |
|  | • 1 V to 5 V  | Yes  |

| - Imput resistance (1 V to 5 V) - Input resistance (2 T V to 2 S V) - Imput resistance (2 S V to 2 S V) - Imput resistance (2 S V to 2 S V) - Imput resistance (2 S V to 2 S V) - Imput resistance (5 V to 5 V V) - Imput resistance (5 V to 5 V V) - Imput resistance (5 V to 5 V V V V V V V V V V V V V V V V V V  | Input registence (1 \/ to F \/)               | 100 kΩ   |
|---|---|--|
| - Input resistance (-1.0 V to +10 V)  |   |  |
| - 2.5 V to 12.5 V Y Yes   — Input resistance (2.5 V to 12.5 V) 100 KΩ   - 28 mV to 125 mV   - 250 mV to 1250 mV   - 30 mV to 150 mV   - 50 mV to 150 mV   - 50 mV to 150 mV   - 500 mV to 500 mV   - 5          |   |  |
| — Input resistance (2.5 V to +2.5 V)  | ,       |  |
|   |   |  |
| 250 mV to -250 mV     5V to +5 V     Imput resistance (-5 V to +5 V)     Imput resistance (-5 V to +5 V)     50 mV to -50 mV     80 mV to -50 mV     10 put resistance (0 to 20 mA)     10 put resistance (0 to 20 mA)     10 put resistance (-20 mA to +20 mA)     10 put resistance (-20 mA to -20 mA)     10 put resistance (-20 mA)     10  | , , ,   |  |
| 5 V to +5 V Yes   |   |  |
| Input resistance (-5 V to +5 V)  50 mV to +50 mV  No  80 mV to +50 mV  No  80 mV to +50 mV  No  80 mV to +50 mV  10 to 20 mA  Input resistance (0 to 20 mA)  Input resistance (-20 mA to +20 mA)  Input resistance (-4 mA to 20 mA)  Input resistance (-4 mA to +20 mA)  Input resist  |   |  |
| 50 mV to +50 mV - 50 mV to +80 mV50 mV to +80 mV - 80 mV to +80 mV - 80 mV - 8                  |   |  |
| - 500 mV to +500 mV     - 600 mV     - 600 mV to +500 mV     - 600 mV     - 600 mV to +500 mV     - 600                | , , ,   |  |
|   |   |  |
| Input ranges (rated values), currents   0 to 20 mA  |   |  |
| - 0 to 20 mA  |   | No   |
| - Input resistance (0 to 20 mA)  • -20 mA to +20 mA  - Input resistance (20 mA to +20 mA)  4 mA to 20 mA  - Input resistance (4 mA to 20 mA)  • 25 Ω: Plus approx. 42 ohms for overvoltage protection by PTC  Yes  - Input resistance (4 mA to 20 mA)  - Input resistance (5 mA)  - Input resistance (6 mA)  - Input resistance (7 mA)  - Input resistance (7 mA)  - Input resistance (8 mA)  - Input resistance (9 mA)  - Input resitan            |   | V  |
|   |   |  |
| - Input resistance (-20 mA to +20 mA) 4 mA to 20 mA - Input resistance (4 mA to 20 mA) 25 Ω; Plus approx. 42 ohms for overvoltage protection by PTC  Yes - Input ranges (rated values), thermocouples  • Type C • No • Type C • No • Type C • No • Type I • No • Type I • No • Type I • No • Type N • No • Type N • No • Type N • Type N • No • Type S • No • Type S • No • Type T • Type T • No • Type T • No • Type T • No • No • Type T • No  |   |  |
| 4 mA to 20 mA   |   |  |
| Input ranges (rated values), thermocouples  |   |  |
| Type B  |   |  |
| Type B     Type E     No     Type E     No     Type J     No     Type J     No     Type L     No     Type L     No     Type L     No     Type N     No     Type N     No     Type N     No     Type S     No     Type TXK/TXK(L) to GOST     No     Cu 10 according to GOST     No     Cu 10 according to GOST     No     Cu 100 according to GOST     No     Ni 10     Ni 10 according to GOST     Ni 100     Ni 100 according to GOST     No     Ni 100 according to GOST     No     Ni 1000 according to GOST     No     Ni 120 according to GOST     No     Ni 1000 according to GOST     No     Ni 500 according to GOST     No     Pt 100 according to GOST     No     Pt 1000 according to GOST  |   | 25 Ω; Plus approx. 42 onms for overvoltage protection by PTC |
| Type C     Type J     No     Type J     No     Type J     No     Type K     No     Type N     No     Type N     No     Type N     No     Type R     No     Type R     No     Type S     No     Type T     No     Type T     No     Type TXK/TXK(L) to GOST     No     Type TXK/TXK(L) to GOST     No     No     Type TXK/TXK(L) to GOST     No     No     Cu 10 according to GOST     No     Cu 10 according to GOST     No     Cu 50     Cu 50     Cu 50     Cu 50     Cu 50     Cu 100 according to GOST     No     Cu 100 according to GOST     No     Ni 10 according to GOST     No     Ni 10 according to GOST     No     Ni 100     Ni 100 according to GOST     No     Ni 100 No     Ni 1000 according to GOST     No     Ni 1100 No     Ni 1100 No     Ni 120 according to GOST     No     Ni 1120 No     Ni 120 No     Ni 120 No     Ni 120 according to GOST     No     Ni 120 No     Ni 120 according to GOST     No     Ni 1000 No     Ni 120 according to GOST     No     Ni 1000                 | ,       | No   |
| Type F     Type I     Type K     Type L     Type N     Type N     Type R     No     Type R     No     Type R     No     Type R     No     Type S     No     Type TW/TXK(L) to GOST     No  Input ranges (rated values), resistance thermometer      Cu 10     Cu 10 according to GOST     No     Cu 50 according to GOST     No     Cu 100     Cu 100     Cu 100     Cu 100     No     Cu 100     No     Cu 100     No                   |   |  |
| • Type J • Type K • Type L • Type L • Type N • Type N • Type N • Type N • Type S • No • Type S • No • Type T • Type TX/T/TX(L) to GOST • No  Input ranges (rated values), resistance thermometer • Cu 10 • Cu 10 according to GOST • No • Cu 50 according to GOST • No • Cu 50 according to GOST • No • Cu 100 • Cu 100 according to GOST • No • Ni 10 • Ni 10 according to GOST • No • Ni 100 according to GOST • Ni 100 • Ni 1000 according to GOST • No • Ni 1000 according to GOST • No • Ni 1000 according to GOST • No • Ni 1200 according to GOST • No • Ni 120 according to GOST • No • Ni 1500 according to GOST • No • Ni 1500 according to GOST • No • Pt 101 • Pt 102 • Pt 103 according to GOST • No • Pt 100 • Pt 1000 according to GOST • No • Pt 1000 • Pt 1000 according to GOST   |   |  |
| Type K     Type L     No     Type N     No     Type R     No     Type R     No     Type S     No     Type T     No     Type T     No     Type T     No     Type TXK/TXK(L) to GOST     No  Input ranges (rated values), resistance thermometer     Cu 10     Cu 10 according to GOST     No     Cu 50 according to GOST     No     Cu 50 according to GOST     No     Cu 100     No     Cu 100 according to GOST     No     Ni 10 according to GOST     No     Ni 10 according to GOST     No     Ni 100 No     Ni 100 according to GOST     No     Ni 1000     Ni 1000 according to GOST     No     Ni 1000     Ni 1000 according to GOST     No     Ni 1000     Ni 120     No     Ni 120     No     Ni 120 according to GOST     No     Ni 1500 according to GOST     No     Ni 1500 according to GOST     No     Pl 10     Pl 10     Pl 10     Pl 10     Pl 10     Pl 100     Pl 100     Pl 100 according to GOST     No     Pl 100     Pl 100 according to GOST     No     Pl 1000     Pl 1000 according to GOST     No   |   |  |
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| • Type T  • Type TXK/TXK(L) to GOST  No  Input ranges (rated values), resistance thermometer  • Cu 10  • Cu 10 according to GOST  • Cu 50  • Cu 50  • Cu 50  • Cu 100  • Cu 100 according to GOST  No  • Cu 100  • Cu 100 according to GOST  No  • Ni 10  • Ni 10  • Ni 10  • Ni 10  • Ni 100  • Ni 100 according to GOST  No  • Ni 100 No  • Ni 1000 according to GOST  No  • Ni 1000 No  • Ni 1000 according to GOST  No  • Ni 1000 No  • Ni 120 according to GOST  No  • Ni 1000  • Ni 1000 according to GOST  No  • Ni 1000  • Ni 1000 according to GOST  No  • Ni 1000  • Ni 1000 according to GOST  No  • Ni 1000 No  • Ni 1000 according to GOST  No  • Ni 1000 No  • Ni 500 according to GOST  No  • Ni 500 according to GOST  No  • Pt 100 according to GOST  No  • Pt 50 according to GOST  No  • Pt 50 according to GOST  No  • Pt 1000 No  • Pt 1000 according to GOST  No  • Pt 1000  • Pt 1000 according to GOST  No  • Pt 1000  • Pt 1000 according to GOST  |   |  |
| Type TXK/TXK(L) to GOST   |   |  |
| Input ranges (rated values), resistance thermometer   |   |  |
| <ul> <li>Cu 10</li> <li>Cu 10 according to GOST</li> <li>Cu 50</li> <li>Cu 50</li> <li>Cu 50 according to GOST</li> <li>No</li> <li>Cu 100</li> <li>No</li> <li>Cu 100 according to GOST</li> <li>No</li> <li>Ni 10 according to GOST</li> <li>No</li> <li>Ni 100 according to GOST</li> <li>No</li> <li>Ni 100 according to GOST</li> <li>No</li> <li>Ni 1000 according to GOST</li> <li>No</li> <li>Ni 1200</li> <li>No</li> <li>Ni 120</li> <li>No</li> <li>Ni 120 according to GOST</li> <li>No</li> <li>Ni 120 according to GOST</li> <li>No</li> <li>Ni 120 according to GOST</li> <li>No</li> <li>Ni 100 according to GOST</li> <li>No</li> <li>Ni 100 according to GOST</li> <li>No</li> <li>Pi 100 according to GOST</li> <li>No</li> <li>Pt 50 according to GOST</li> <li>No</li> <li>Pt 50 according to GOST</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000 No</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000 No</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000 No</li> </ul>   |   | No   |
| <ul> <li>Cu 10 according to GOST</li> <li>Cu 50</li> <li>Cu 50 according to GOST</li> <li>No</li> <li>Cu 100</li> <li>Cu 100 according to GOST</li> <li>No</li> <li>Ni 10</li> <li>No</li> <li>Ni 10 according to GOST</li> <li>No</li> <li>Ni 100</li> <li>No in 100 according to GOST</li> <li>No</li> <li>Ni 1000</li> <li>Ni 1000</li> <li>No</li> <li>Ni 1000</li> <li>No</li> <li>Ni 1000 according to GOST</li> <li>No</li> <li>Ni 1000</li> <li>No</li> <li>Ni 1200</li> <li>No</li> <li>Ni 120</li> <li>No</li> <li>Ni 120</li> <li>No</li> <li>Ni 120 according to GOST</li> <li>No</li> <li>Ni 120 according to GOST</li> <li>No</li> <li>Ni 1200</li> <li>No</li> <li>Ni 500</li> <li>No</li> <li>Ni 500 according to GOST</li> <li>No</li> <li>Pt 10</li> <li>Pt 10</li> <li>Pt 10 according to GOST</li> <li>No</li> <li>Pt 50 according to GOST</li> <li>No</li> <li>Pt 50 according to GOST</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 1000</li> <li>Pt 1000</li> <li>Pt 1000</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> </ul>   |   | N-   |
| <ul> <li>Cu 50</li> <li>Cu 50 according to GOST</li> <li>No</li> <li>Cu 100</li> <li>Cu 100 according to GOST</li> <li>Ni 10</li> <li>Ni 10 according to GOST</li> <li>No</li> <li>Ni 100</li> <li>No</li> <li>Ni 100 according to GOST</li> <li>No</li> <li>Ni 1000 according to GOST</li> <li>No</li> <li>Ni 1000 according to GOST</li> <li>No</li> <li>Ni 1000 according to GOST</li> <li>No</li> <li>Ni 1200</li> <li>No</li> <li>Ni 120 according to GOST</li> <li>No</li> <li>Ni 120 according to GOST</li> <li>No</li> <li>Ni 200</li> <li>No</li> <li>Ni 500 according to GOST</li> <li>Pt 10</li> <li>Pt 10 according to GOST</li> <li>No</li> <li>Pt 50 according to GOST</li> <li>No</li> <li>Pt 50 according to GOST</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> </ul>  |   |  |
| <ul> <li>Cu 50 according to GOST</li> <li>Cu 100</li> <li>Cu 100 according to GOST</li> <li>No</li> <li>Ni 10</li> <li>No</li> <li>Ni 10 according to GOST</li> <li>No</li> <li>Ni 100</li> <li>Ni 100 according to GOST</li> <li>No</li> <li>Ni 1000</li> <li>No</li> <li>Ni 1000 according to GOST</li> <li>No</li> <li>Ni 1000 according to GOST</li> <li>No</li> <li>LG-Ni 1000</li> <li>No</li> <li>Ni 120</li> <li>No</li> <li>Ni 120</li> <li>No</li> <li>Ni 120 according to GOST</li> <li>No</li> <li>Ni 200</li> <li>No</li> <li>Ni 200 according to GOST</li> <li>No</li> <li>Ni 500 according to GOST</li> <li>No</li> <li>Pt 10</li> <li>Pt 10 according to GOST</li> <li>No</li> <li>Pt 50</li> <li>Pt 50</li> <li>Pt 50 according to GOST</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 1000</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000</li> <li>Pt 1000 according to GOST</li> <li>No</li> </ul>   |   |  |
| <ul> <li>Cu 100</li> <li>Cu 100 according to GOST</li> <li>No</li> <li>Ni 10</li> <li>Ni 10</li> <li>Ni 10 according to GOST</li> <li>No</li> <li>Ni 100 according to GOST</li> <li>No</li> <li>Ni 1000</li> <li>No in 1000</li> <li>No</li> <li>Ni 1000 according to GOST</li> <li>No</li> <li>Ni 1000 according to GOST</li> <li>No</li> <li>Ni 1000 according to GOST</li> <li>No</li> <li>Ni 120</li> <li>No</li> <li>Ni 120</li> <li>No</li> <li>Ni 120 according to GOST</li> <li>No</li> <li>Ni 200 according to GOST</li> <li>No</li> <li>Ni 500</li> <li>No i500 according to GOST</li> <li>No</li> <li>Pt 10</li> <li>Pt 10 according to GOST</li> <li>No</li> <li>Pt 50 according to GOST</li> <li>No</li> <li>Pt 50 according to GOST</li> <li>No</li> <li>Pt 100</li> <li>Pt 100</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> </ul>   |   |  |
| <ul> <li>Cu 100 according to GOST</li> <li>Ni 10</li> <li>Ni 10 according to GOST</li> <li>Ni 100</li> <li>Ni 100</li> <li>No</li> <li>Ni 100</li> <li>No</li> <li>Ni 1000</li> <li>No</li> <li>Ni 1000</li> <li>No</li> <li>Ni 1000 according to GOST</li> <li>No</li> <li>Ni 1000 according to GOST</li> <li>No</li> <li>LG-Ni 1000</li> <li>No</li> <li>Ni 120</li> <li>No</li> <li>Ni 120</li> <li>No</li> <li>Ni 120 according to GOST</li> <li>No</li> <li>Ni 200</li> <li>No</li> <li>Ni 500</li> <li>No</li> <li>Ni 500</li> <li>No</li> <li>Ni 500 according to GOST</li> <li>No</li> <li>Pt 10</li> <li>Pt 50</li> <li>Pt 50</li> <li>Pt 50 according to GOST</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> </ul>   |   |  |
| <ul> <li>Ni 10</li> <li>Ni 10 according to GOST</li> <li>No</li> <li>Ni 100</li> <li>No</li> <li>Ni 100 according to GOST</li> <li>No</li> <li>Ni 1000</li> <li>No</li> <li>Ni 1000 according to GOST</li> <li>No</li> <li>Ni 1000 according to GOST</li> <li>No</li> <li>Ni 12000</li> <li>No</li> <li>Ni 120 according to GOST</li> <li>No</li> <li>Ni 120 according to GOST</li> <li>No</li> <li>Ni 200 according to GOST</li> <li>No</li> <li>Ni 500</li> <li>No</li> <li>Ni 500 according to GOST</li> <li>Pt 10</li> <li>Pt 10 according to GOST</li> <li>No</li> <li>Pt 50 according to GOST</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> </ul>  |   |  |
| <ul> <li>Ni 10 according to GOST</li> <li>Ni 100</li> <li>Ni 100 according to GOST</li> <li>No</li> <li>Ni 1000</li> <li>No</li> <li>Ni 1000 according to GOST</li> <li>No</li> <li>LG-Ni 1000</li> <li>No</li> <li>Ni 120</li> <li>No</li> <li>Ni 120 according to GOST</li> <li>No</li> <li>Ni 200</li> <li>No</li> <li>Ni 200 according to GOST</li> <li>No</li> <li>Ni 500 according to GOST</li> <li>No</li> <li>Ni 500 according to GOST</li> <li>Pt 10</li> <li>Pt 10 according to GOST</li> <li>No</li> <li>Pt 50 according to GOST</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> </ul>  | _   |  |
| <ul> <li>Ni 100</li> <li>Ni 100 according to GOST</li> <li>Ni 1000</li> <li>Ni 1000 according to GOST</li> <li>No</li> <li>Ni 1000 according to GOST</li> <li>No</li> <li>LG-Ni 1000</li> <li>No</li> <li>Ni 120</li> <li>No</li> <li>Ni 120 according to GOST</li> <li>No</li> <li>Ni 200</li> <li>No</li> <li>Ni 200 according to GOST</li> <li>No</li> <li>Ni 500 according to GOST</li> <li>No</li> <li>Ni 500 according to GOST</li> <li>No</li> <li>Pt 10</li> <li>Pt 10 according to GOST</li> <li>No</li> <li>Pt 50 according to GOST</li> <li>No</li> <li>Pt 50 according to GOST</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> </ul>  |   |  |
| <ul> <li>Ni 100 according to GOST</li> <li>Ni 1000</li> <li>Ni 1000 according to GOST</li> <li>LG-Ni 1000</li> <li>Ni 120</li> <li>Ni 120</li> <li>Ni 120 according to GOST</li> <li>Ni 200</li> <li>Ni 200 according to GOST</li> <li>Ni 200 according to GOST</li> <li>Ni 500</li> <li>Ni 500 according to GOST</li> <li>No</li> <li>Ni 500 according to GOST</li> <li>Pt 10</li> <li>Pt 10 according to GOST</li> <li>No</li> <li>Pt 50 according to GOST</li> <li>No</li> <li>Pt 100</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000 No</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> </ul>  | _   |  |
| <ul> <li>Ni 1000</li> <li>Ni 1000 according to GOST</li> <li>LG-Ni 1000</li> <li>Ni 120</li> <li>Ni 120</li> <li>Ni 120 according to GOST</li> <li>Ni 200</li> <li>Ni 200 according to GOST</li> <li>Ni 500</li> <li>Ni 500</li> <li>Ni 500 according to GOST</li> <li>Pt 10</li> <li>Pt 10 according to GOST</li> <li>No</li> <li>Pt 50 according to GOST</li> <li>Pt 100</li> <li>Pt 100</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 100</li> <li>Pt 100</li> <li>Pt 100</li> <li>Pt 100</li> <li>Pt 100</li> <li>Pt 100</li> <li>Pt 1000</li> <li>Pt</li></ul> |   |  |
| <ul> <li>Ni 1000 according to GOST</li> <li>LG-Ni 1000</li> <li>No</li> <li>Ni 120</li> <li>No</li> <li>Ni 120 according to GOST</li> <li>No</li> <li>Ni 200</li> <li>Ni 200 according to GOST</li> <li>No</li> <li>Ni 500</li> <li>No i 500 according to GOST</li> <li>No</li> <li>Pt 10</li> <li>Pt 10</li> <li>Pt 10 according to GOST</li> <li>No</li> <li>Pt 50 according to GOST</li> <li>No</li> <li>Pt 50 according to GOST</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> </ul>   | •   |  |
| <ul> <li>LG-Ni 1000</li> <li>Ni 120</li> <li>Ni 120 according to GOST</li> <li>Ni 200</li> <li>Ni 200 according to GOST</li> <li>Ni 500</li> <li>Ni 500 according to GOST</li> <li>Pt 10</li> <li>Pt 10 according to GOST</li> <li>Pt 50</li> <li>Pt 50 according to GOST</li> <li>Pt 50 according to GOST</li> <li>Pt 100</li> <li>Pt 100 according to GOST</li> <li>Pt 100</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000</li> <li>No</li> <li>Pt 1000</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> </ul>   |   |  |
| <ul> <li>Ni 120</li> <li>Ni 120 according to GOST</li> <li>Ni 200</li> <li>Ni 200 according to GOST</li> <li>Ni 500</li> <li>Ni 500 according to GOST</li> <li>No</li> <li>Pt 10</li> <li>Pt 10 according to GOST</li> <li>Pt 50</li> <li>Pt 50 according to GOST</li> <li>Pt 100</li> <li>Pt 100 according to GOST</li> <li>Pt 100</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> </ul>  | _   |  |
| <ul> <li>Ni 120 according to GOST</li> <li>Ni 200</li> <li>Ni 200 according to GOST</li> <li>No</li> <li>Ni 500</li> <li>Ni 500 according to GOST</li> <li>No</li> <li>Pt 10</li> <li>No</li> <li>Pt 10 according to GOST</li> <li>No</li> <li>Pt 50</li> <li>Pt 50 according to GOST</li> <li>Pt 100</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 100 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> </ul>  |   |  |
| <ul> <li>Ni 200</li> <li>Ni 200 according to GOST</li> <li>Ni 500</li> <li>Ni 500 according to GOST</li> <li>Pt 10</li> <li>Pt 10 according to GOST</li> <li>Pt 50</li> <li>Pt 50 according to GOST</li> <li>Pt 100</li> <li>Pt 100</li> <li>Pt 100 according to GOST</li> <li>Pt 100 according to GOST</li> <li>Pt 100 according to GOST</li> <li>Pt 1000 according to GOST</li> <li>Pt 1000 No</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000 No</li> <li>Pt 1000 according to GOST</li> <li>No</li> </ul>   |   |  |
| <ul> <li>Ni 200 according to GOST</li> <li>Ni 500</li> <li>Ni 500 according to GOST</li> <li>No</li> <li>Pt 10</li> <li>Pt 10 according to GOST</li> <li>Pt 50</li> <li>Pt 50 according to GOST</li> <li>Pt 100</li> <li>Pt 100</li> <li>Pt 100 according to GOST</li> <li>Pt 100 according to GOST</li> <li>Pt 100 according to GOST</li> <li>Pt 1000 according to GOST</li> <li>Pt 1000 No</li> <li>Pt 1000 No</li> <li>Pt 1000 according to GOST</li> <li>No</li> </ul>  |   |  |
| <ul> <li>Ni 500</li> <li>Ni 500 according to GOST</li> <li>Pt 10</li> <li>No</li> <li>Pt 10 according to GOST</li> <li>Pt 50</li> <li>Pt 50 according to GOST</li> <li>Pt 100</li> <li>Pt 100</li> <li>Pt 100 according to GOST</li> <li>Pt 100 according to GOST</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000 No</li> <li>Pt 1000 No</li> <li>Pt 1000 according to GOST</li> <li>No</li> </ul>  |   |  |
| <ul> <li>Ni 500 according to GOST</li> <li>Pt 10</li> <li>Pt 10 according to GOST</li> <li>Pt 50</li> <li>Pt 50 according to GOST</li> <li>Pt 100</li> <li>Pt 100</li> <li>Pt 100 according to GOST</li> <li>Pt 100 according to GOST</li> <li>Pt 1000 according to GOST</li> <li>Pt 1000 No</li> <li>Pt 1000 No</li> <li>Pt 1000 according to GOST</li> <li>No</li> </ul>  | _   |  |
| <ul> <li>Pt 10</li> <li>Pt 10 according to GOST</li> <li>Pt 50</li> <li>Pt 50 according to GOST</li> <li>Pt 100</li> <li>Pt 100</li> <li>Pt 100 according to GOST</li> <li>Pt 1000 according to GOST</li> <li>Pt 1000 No</li> <li>Pt 1000 No</li> <li>Pt 1000 No</li> </ul>   |   |  |
| <ul> <li>Pt 10 according to GOST</li> <li>Pt 50</li> <li>Pt 50 according to GOST</li> <li>Pt 100</li> <li>Pt 100 according to GOST</li> <li>Pt 100 according to GOST</li> <li>Pt 1000 No</li> <li>Pt 1000 No</li> <li>Pt 1000 No</li> <li>Pt 1000 according to GOST</li> <li>No</li> </ul>  | _   |  |
| <ul> <li>Pt 50</li> <li>Pt 50 according to GOST</li> <li>Pt 100</li> <li>Pt 100 according to GOST</li> <li>Pt 1000</li> <li>Pt 1000</li> <li>Pt 1000 according to GOST</li> <li>No</li> </ul>   |   |  |
| <ul> <li>Pt 50 according to GOST</li> <li>Pt 100</li> <li>Pt 100 according to GOST</li> <li>Pt 1000</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>Pt 1000 according to GOST</li> <li>No</li> </ul>  | -   |  |
| <ul> <li>Pt 100</li> <li>Pt 100 according to GOST</li> <li>Pt 1000</li> <li>Pt 1000 according to GOST</li> <li>No</li> </ul>  |   |  |
| <ul> <li>Pt 100 according to GOST</li> <li>Pt 1000</li> <li>Pt 1000 according to GOST</li> <li>No</li> <li>No</li> </ul>  | _   |  |
| <ul> <li>Pt 1000</li> <li>Pt 1000 according to GOST</li> <li>No</li> </ul>  | • Pt 100                                      |  |
| Pt 1000 according to GOST     No  | <ul> <li>Pt 100 according to GOST</li> </ul>  | No   |
|   | • Pt 1000                                     | No   |
| • Pt 200 No   | <ul> <li>Pt 1000 according to GOST</li> </ul> | No   |
|   | • Pt 200                                      | No   |

| <ul> <li>Pt 200 according to GOST</li> </ul>   | No  |
|--|---|
| • Pt 500   | No  |
| Pt 500 according to GOST   | No  |
| Input ranges (rated values), resistors   |   |
| • 0 to 150 ohms  | No  |
| • 0 to 300 ohms  | No  |
| • 0 to 600 ohms  | No  |
| • 0 to 3000 ohms   | No  |
| • 0 to 6000 ohms   | No  |
| PTC  Cable length  | No  |
| Cable length  • shielded, max.   | 800 m   |
| Analog value generation for the inputs   | 600 III   |
|  |   |
| Integration and conversion time/resolution per channel  Resolution with overrange (bit including sign), max.   | 24 bit; When using the function "Scaling of the measured values" or                                 |
|  | "Measuring range adaptation" (32 bit REAL format); 16 bit when using the S7 format (16 bit INTEGER) |
| Integration time, parameterizable  | Yes   |
| <ul><li>Integration time (ms)</li></ul>  | Fast mode: 2.5 / 16.67 / 20 / 100 ms, standard mode: 7.5 / 50 / 60 / 300 ms                         |
| <ul> <li>Basic conversion time, including integration time<br/>(ms)</li> </ul>   | Fast mode: 4 / 18 / 22 / 102 ms; Standard mode: 9 / 52 / 62 / 302 ms                                |
| <ul> <li>Interference voltage suppression for interference<br/>frequency f1 in Hz</li> </ul>   | 400 / 60 / 50 / 10 Hz   |
| Basic execution time of the module (all channels released)   | Corresponds to the channel with the highest basic conversion time                                   |
| Smoothing of measured values   |   |
| <ul> <li>parameterizable</li> </ul>  | Yes   |
| • Step: None   | Yes   |
| • Step: low  | Yes   |
| Step: Medium   | Yes   |
| Step: High   | Yes   |
| Encoder  |   |
| Connection of signal encoders  | v   |
| for voltage measurement  | Yes   |
| • for current measurement as 2-wire transducer   | Yes; with external transmitter supply   |
| for current measurement as 4-wire transducer     for registeres measurement with two wire  | Yes<br>No   |
| for resistance measurement with two-wire connection  |   |
| for resistance measurement with three-wire connection  | No  |
| for resistance measurement with four-wire connection   | No  |
| Errors/accuracies  |   |
| Linearity error (relative to input range), (+/-)   | 0.02 %  |
| Temperature error (relative to input range), (+/-)   | 0.005 %/K   |
| Crosstalk between the inputs, max.   | -80 dB  |
| Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)  | 0.02 %  |
| note regarding accuracy  | at temperatures below 0 °C, the figures for operating error and temperature error are doubled       |
| Operational error limit in overall temperature range   | 0.4.04  |
| Voltage, relative to input range, (+/-)  | 0.1 %   |
| Current, relative to input range, (+/-)  Pagin agraphic for agraphic and light at 25 °C)   | 0.1 %   |
| Basic error limit (operational limit at 25 °C)   | 0.05 %  |
| <ul> <li>Voltage, relative to input range, (+/-)</li> </ul>  | 0.05 %<br>0.05 %  |
| <ul> <li>Current, relative to input range, (+/-)</li> <li>Interference voltage suppression for f = n x (f1 +/- 1 %), f1 =</li> </ul>                 |   |
| Series mode interference (peak value of  | 80 dB; in the Standard operating mode, 40 dB in the Fast operating                                  |
| <ul> <li>Series fridde interference (peak value of interference &lt; rated value of input range), min.</li> <li>Common mode voltage, max.</li> </ul> | mode  60 V DC/30 V AC   |
| Common mode voltage, max.     Common mode interference, min.   | 80 dB   |
| ♥ COMMON MONE INCHENCENCE, HIIII.  | OU GE   |

| Diagnostics function  | Yes   |
|---|---|
| - C   | res   |
| Alarms  | Von   |
| Diagnostic alarm     Limit value plane.   | Yes   |
| Limit value alarm   | Yes; two upper and two lower limit values in each case  |
| Diagnoses   | V   |
| Monitoring the supply voltage   | Yes   |
| Wire-break     Out of a control of a co | Yes; only for 1 5 V and 4 20 mA   |
| Overflow/underflow  | Yes   |
| Diagnostics indication LED  • RUN LED   | Voc. green LED  |
|   | Yes; green LED  |
| ERROR LED      Manifesting of the country welters (DWD LED)   | Yes; red LED  |
| Monitoring of the supply voltage (PWR-LED)  | Yes; green LED  |
| <ul><li>Channel status display</li><li>for channel diagnostics</li></ul>  | Yes; green LED  |
|   | Yes; red LED  |
| for module diagnostics  | Yes; red LED  |
| Potential separation  |   |
| Potential separation channels   |   |
| between the channels  | Yes   |
| between the channels, in groups of  | 1   |
| between the channels and backplane bus  | Yes   |
| <ul> <li>between the channels and the power supply of the electronics</li> </ul>  | Yes   |
| Permissible potential difference  |   |
| between different circuits  | 60 V DC/30 V AC; insulation rated for 120 V AC basic insulation: between the channels and the supply voltage L+; between the channels and the backplane bus; between the channels   |
| solation  |   |
| Isolation tested with   | 2 000 V DC between the channels and the supply voltage L+; 2 000 V DC between the channels and the backplane bus; 2 000 V DC between the channels; 707 V DC (type test) between the supply voltage L+ and the backplane bus |
| Ambient conditions  |   |
| Ambient temperature during operation  |   |
| horizontal installation, min.   | -30 °C; From FS02   |
| <ul> <li>horizontal installation, max.</li> </ul>   | 60 °C   |
| <ul> <li>vertical installation, min.</li> </ul>   | -30 °C; From FS02   |
| <ul> <li>vertical installation, max.</li> </ul>   | 40 °C   |
| Dimensions  |   |
| Width   | 35 mm   |
| Height  | 147 mm  |
| Depth   | 129 mm  |
| Veights   |   |
| Weight, approx.   | 280 g   |
|   | 4/11/2022 🗗   |