

SIMATIC S7-200 SMART, Analog input SM AR02 RTD, 2x AI RTD modules

| General information | |
|---|--|
| Product type designation | SM AR02, AI RTD 2x16 bit |
| CIR - Configuration in RUN | |
| Reparameterization possible in RUN | No |
| Supply voltage | |
| Type of supply voltage | DC |
| Rated value (DC) | 24 V; -15 / +20 % |
| Input current | |
| Current consumption, typ. | 40 mA |
| from backplane bus 5 V DC, typ. | 80 mA |
| Power loss | |
| Power loss, typ. | 1.5 W |
| Analog inputs | |
| Number of analog inputs | 2; Resistance thermometer |
| permissible input voltage for voltage input (destruction limit), max. | 30 V |
| Technical unit for temperature measurement adjustable | Yes; Degrees Celsius/degrees Fahrenheit |
| Input ranges | |
| <ul style="list-style-type: none"> • Voltage • Current • Thermocouple • Resistance thermometer • Resistance | <p>No</p> <p>No</p> <p>No</p> <p>Yes; Resistance-type transmitter: Pt10, Pt50, Pt100, Pt200, Pt500, Pt1000, Ni100, Ni120, Ni200, Ni500, Ni1000, Cu10, Cu50, Cu100, LG-Ni1000</p> <p>Yes; 48 Ω, 150 Ω, 300 Ω, 600 Ω, 3 000 Ω,</p> |
| Input ranges (rated values), resistance thermometer | |
| <ul style="list-style-type: none"> • Cu 10 <ul style="list-style-type: none"> — Input resistance (Cu 10) • Ni 100 <ul style="list-style-type: none"> — Input resistance (Ni 100) • Ni 1000 <ul style="list-style-type: none"> — Input resistance (Ni 1000) • LG-Ni 1000 <ul style="list-style-type: none"> — Input resistance (LG-Ni 1000) • Ni 120 <ul style="list-style-type: none"> — Input resistance (Ni 120) • Ni 200 <ul style="list-style-type: none"> — Input resistance (Ni 200) • Ni 500 <ul style="list-style-type: none"> — Input resistance (Ni 500) • Pt 100 <ul style="list-style-type: none"> — Input resistance (Pt 100) • Pt 1000 <ul style="list-style-type: none"> — Input resistance (Pt 1000) • Pt 200 <ul style="list-style-type: none"> — Input resistance (Pt 200) • Pt 500 <ul style="list-style-type: none"> — Input resistance (Pt 500) | <p>Yes</p> <p>10 Ω</p> <p>Yes</p> <p>100 Ω</p> <p>Yes</p> <p>1 000 Ω</p> <p>Yes</p> <p>1 000 Ω</p> <p>Yes</p> <p>120 Ω</p> <p>Yes</p> <p>200 Ω</p> <p>Yes</p> <p>500 Ω</p> <p>Yes</p> <p>100 Ω</p> <p>Yes</p> <p>1 000 Ω</p> <p>Yes</p> <p>200 Ω</p> <p>Yes</p> <p>500 Ω</p> |
| Input ranges (rated values), resistors | |
| <ul style="list-style-type: none"> • 0 to 48 ohms • 0 to 150 ohms | <p>Yes</p> <p>Yes</p> |

| | |
|--|---|
| • 0 to 300 ohms | Yes |
| • 0 to 600 ohms | Yes |
| • 0 to 3000 ohms | Yes |
| Analog outputs | |
| Number of analog outputs | 0 |
| Analog value generation for the inputs | |
| Measurement principle | Sigma Delta |
| Integration and conversion time/resolution per channel | |
| • Resolution with overrange (bit including sign), max. | 15 bit; at 150, 300, 600 und 3 000 ohms; otherwise 15 bits + sign |
| • Integration time, parameterizable | Yes; 10/ 16.67/ 20/ 100 ms |
| • Interference voltage suppression for interference frequency f1 in Hz | 10 / 50 / 60 / 400 Hz |
| Smoothing of measured values | |
| • parameterizable | Yes; In four stages by means of digital filtering |
| • Step: None | Yes; 1x |
| • Step: low | Yes; 4x |
| • Step: Medium | Yes; 16x |
| • Step: High | Yes; 32x |
| Degree and class of protection | |
| IP degree of protection | IP20 |
| Standards, approvals, certificates | |
| CE mark | Yes |
| Dimensions | |
| Width | 45 mm |
| Height | 100 mm |
| Depth | 81 mm |
| Weights | |
| Weight, approx. | 148.7 g |
| Classifications | |

| | Version | Classification |
|--------|---------|----------------|
| eClass | 14 | 27-24-22-01 |
| eClass | 12 | 27-24-22-01 |
| eClass | 9.1 | 27-24-22-01 |
| eClass | 9 | 27-24-22-01 |
| eClass | 8 | 27-24-22-01 |
| eClass | 7.1 | 27-24-22-01 |
| eClass | 6 | 27-24-22-01 |
| ETIM | 10 | EC001420 |
| ETIM | 9 | EC001420 |
| ETIM | 8 | EC001420 |
| ETIM | 7 | EC001420 |
| IDEA | 4 | 3562 |
| UNSPSC | 15 | 32-15-17-05 |

Approvals / Certificates

General Product Approval



[China RoHS](#)

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