



\*\*\*spare part\*\*\* SIMATIC S7, analog input SM 336, 6 AI; 15 bit; fail-safe analog inputs for SIMATIC Safety, with HART support, up to category 4 (EN 954-1)/ SIL3 (IEC61508)/PLE (ISO13849), 1x 20-pole

| Supply voltage                                                         |                                    |
|------------------------------------------------------------------------|------------------------------------|
| Rated value (DC)                                                       | 24 V                               |
| Reverse polarity protection                                            | Yes                                |
| Load voltage L+                                                        |                                    |
| • Rated value (DC)                                                     | 24 V                               |
| • Reverse polarity protection                                          | Yes                                |
| Input current                                                          |                                    |
| From power supply L+, typ.                                             | 150 mA                             |
| from backplane bus 5 V DC, max.                                        | 90 mA                              |
| Power loss                                                             |                                    |
| Power loss, typ.                                                       | 4.5 W                              |
| Analog inputs                                                          |                                    |
| Number of analog inputs                                                | 6                                  |
| permissible input current for current input (destruction limit), max.  | 40 mA                              |
| Input ranges                                                           |                                    |
| • Voltage                                                              | No                                 |
| • Current                                                              | Yes                                |
| • Thermocouple                                                         | No                                 |
| • Resistance thermometer                                               | No                                 |
| • Resistance                                                           | No                                 |
| Input ranges (rated values), currents                                  |                                    |
| • 0 to 20 mA                                                           | Yes                                |
| — Input resistance (0 to 20 mA)                                        | 150 Ω; typ. 150 ohms max. 175 ohms |
| • 4 mA to 20 mA                                                        | Yes                                |
| — Input resistance (4 mA to 20 mA)                                     | 150 Ω; typ. 150 ohms max. 175 ohms |
| Cable length                                                           |                                    |
| • shielded, max.                                                       | 1 000 m                            |
| Analog value generation for the inputs                                 |                                    |
| Integration and conversion time/resolution per channel                 |                                    |
| • Resolution with overrange (bit including sign), max.                 | 16 bit; 15 bit + sign              |
| • Integration time (ms)                                                | 20 ms @ 50 Hz, 16.7 ms @ 60 Hz     |
| • Interference voltage suppression for interference frequency f1 in Hz | f=n x (f1 ±0.5 %)                  |
| Encoder                                                                |                                    |
| Connection of signal encoders                                          |                                    |
| • for current measurement as 2-wire transducer                         | Yes                                |
| • for current measurement as 4-wire transducer                         | Yes                                |
| Errors/accuracies                                                      |                                    |

|                                                                                                                |                |         |                |
|----------------------------------------------------------------------------------------------------------------|----------------|---------|----------------|
| Operational error limit in overall temperature range                                                           |                |         |                |
| <ul style="list-style-type: none"><li>• Current, relative to input range, (+/-)</li></ul>                      | 0.2 %; 40 µA   |         |                |
| Basic error limit (operational limit at 25 °C)                                                                 |                |         |                |
| <ul style="list-style-type: none"><li>• Current, relative to input range, (+/-)</li></ul>                      | 0.1 %          |         |                |
| Interrupts/diagnostics/status information                                                                      |                |         |                |
| Diagnostics function                                                                                           | Yes            |         |                |
| Alarms                                                                                                         |                |         |                |
| <ul style="list-style-type: none"><li>• Diagnostic alarm</li></ul>                                             | Yes            |         |                |
| Diagnoses                                                                                                      |                |         |                |
| <ul style="list-style-type: none"><li>• Diagnostic information readable</li></ul>                              | Yes            |         |                |
| Diagnostics indication LED                                                                                     |                |         |                |
| <ul style="list-style-type: none"><li>• Fail-safe operation</li></ul>                                          | Yes            |         |                |
| <ul style="list-style-type: none"><li>• Group error SF (red)</li></ul>                                         | Yes            |         |                |
| <ul style="list-style-type: none"><li>• Encoder supply Vs (green)</li></ul>                                    | No             |         |                |
| Potential separation                                                                                           |                |         |                |
| Potential separation analog inputs                                                                             |                |         |                |
| <ul style="list-style-type: none"><li>• between the channels</li></ul>                                         | Yes            |         |                |
| <ul style="list-style-type: none"><li>• between the channels and backplane bus</li></ul>                       | Yes            |         |                |
| <ul style="list-style-type: none"><li>• between the channels and the power supply of the electronics</li></ul> | Yes            |         |                |
| Isolation                                                                                                      |                |         |                |
| Isolation tested with                                                                                          | 370V for 1 min |         |                |
| Standards, approvals, certificates                                                                             |                |         |                |
| Highest safety class achievable in safety mode                                                                 |                |         |                |
| <ul style="list-style-type: none"><li>• acc. to EN 954</li></ul>                                               | 4              |         |                |
| <ul style="list-style-type: none"><li>• Performance level according to ISO 13849-1</li></ul>                   | e              |         |                |
| <ul style="list-style-type: none"><li>• SIL acc. to IEC 61508</li></ul>                                        | SIL 3          |         |                |
| Connection method                                                                                              |                |         |                |
| required front connector                                                                                       | 20-pin         |         |                |
| Dimensions                                                                                                     |                |         |                |
| Width                                                                                                          | 40 mm          |         |                |
| Height                                                                                                         | 125 mm         |         |                |
| Depth                                                                                                          | 120 mm         |         |                |
| Weights                                                                                                        |                |         |                |
| Weight, approx.                                                                                                | 350 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                                                                                       |                |         |                |

Miscellaneous



Metrological Approval



|                          |     |                                |
|--------------------------|-----|--------------------------------|
| General Product Approval | EMV | For use in hazardous locations |
|--------------------------|-----|--------------------------------|



EM



|                                |                   |                      |
|--------------------------------|-------------------|----------------------|
| For use in hazardous locations | Functional Safety | Maritime application |
|--------------------------------|-------------------|----------------------|



Miscellaneous

CCC-Ex

TUEV

Type Examination Certificate



|                      |
|----------------------|
| Maritime application |
|----------------------|



NK / Nippon Kaiji Kyokai



|                      |
|----------------------|
| Maritime application |
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CCS (China Classification Society)

last modified: 4/7/2025