



Figure similar

\*\*\*spare part\*\*\* SIMATIC S7-300, analog output SM 332, isolated, 8 AO, U/I; diagnostics; resolution 11/12 bits, 40-pole, removing and inserting with active backplane bus possible

| General information                                    |                                                                                 |
|--------------------------------------------------------|---------------------------------------------------------------------------------|
| Product function                                       |                                                                                 |
| • Isochronous mode                                     | No                                                                              |
| Supply voltage                                         |                                                                                 |
| Load voltage L+                                        |                                                                                 |
| • Rated value (DC)                                     | 24 V                                                                            |
| • Reverse polarity protection                          | Yes                                                                             |
| Input current                                          |                                                                                 |
| from load voltage L+ (without load), max.              | 340 mA                                                                          |
| from backplane bus 5 V DC, max.                        | 100 mA                                                                          |
| Power loss                                             |                                                                                 |
| Power loss, typ.                                       | 6 W                                                                             |
| Analog outputs                                         |                                                                                 |
| Number of analog outputs                               | 8                                                                               |
| Voltage output, short-circuit protection               | Yes                                                                             |
| Voltage output, short-circuit current, max.            | 25 mA                                                                           |
| Current output, no-load voltage, max.                  | 18 V                                                                            |
| Output ranges, voltage                                 |                                                                                 |
| • 0 to 10 V                                            | Yes                                                                             |
| • 1 V to 5 V                                           | Yes                                                                             |
| • -10 V to +10 V                                       | Yes                                                                             |
| Output ranges, current                                 |                                                                                 |
| • 0 to 20 mA                                           | Yes                                                                             |
| • -20 mA to +20 mA                                     | Yes                                                                             |
| • 4 mA to 20 mA                                        | Yes                                                                             |
| Connection of actuators                                |                                                                                 |
| • for voltage output four-wire connection              | Yes                                                                             |
| • for current output two-wire connection               | Yes                                                                             |
| Load impedance (in rated range of output)              |                                                                                 |
| • with voltage outputs, min.                           | 1 kΩ                                                                            |
| • with voltage outputs, capacitive load, max.          | 1 μF                                                                            |
| • with current outputs, max.                           | 500 Ω                                                                           |
| • with current outputs, inductive load, max.           | 10 mH                                                                           |
| Cable length                                           |                                                                                 |
| • shielded, max.                                       | 200 m                                                                           |
| Analog value generation for the outputs                |                                                                                 |
| Integration and conversion time/resolution per channel |                                                                                 |
| • Resolution with overrange (bit including sign), max. | 12 bit; ±10 V, ±20 mA, 4 mA to 20 mA, 1 V to 5 V: 11 bit + sign; 0 V to 10 V, 0 |

|                                                                |                          |                                       |                |
|----------------------------------------------------------------|--------------------------|---------------------------------------|----------------|
| • Conversion time (per channel)                                |                          | mA to 20 mA: 12 bit                   |                |
|                                                                |                          | 0.8 ms                                |                |
| Settling time                                                  |                          |                                       |                |
| • for resistive load                                           |                          | 0.2 ms                                |                |
| • for capacitive load                                          |                          | 3.3 ms                                |                |
| • for inductive load                                           |                          | 0.5 ms; 0.5 ms (1 mH); 3.3 ms (10 mH) |                |
| Errors/accuracies                                              |                          |                                       |                |
| Operational error limit in overall temperature range           |                          |                                       |                |
| • Voltage, relative to output range, (+/-)                     |                          | 0.5 %                                 |                |
| • Current, relative to output range, (+/-)                     |                          | 0.6 %                                 |                |
| Basic error limit (operational limit at 25 °C)                 |                          |                                       |                |
| • Voltage, relative to output range, (+/-)                     |                          | 0.4 %                                 |                |
| • Current, relative to output range, (+/-)                     |                          | 0.5 %                                 |                |
| Interrupts/diagnostics/status information                      |                          |                                       |                |
| Diagnostics function                                           |                          | Yes; Parameterizable                  |                |
| Substitute values connectable                                  |                          | Yes; Parameterizable                  |                |
| Alarms                                                         |                          |                                       |                |
| • Diagnostic alarm                                             |                          | Yes; Parameterizable                  |                |
| Diagnoses                                                      |                          |                                       |                |
| • Diagnostic information readable                              |                          | Yes                                   |                |
| Diagnostics indication LED                                     |                          |                                       |                |
| • Group error SF (red)                                         |                          | Yes                                   |                |
| Potential separation                                           |                          |                                       |                |
| Potential separation analog outputs                            |                          |                                       |                |
| • between the channels                                         |                          | No                                    |                |
| • between the channels and backplane bus                       |                          | Yes                                   |                |
| • Between the channels and load voltage L+                     |                          | Yes                                   |                |
| • between the channels and the power supply of the electronics |                          | Yes                                   |                |
| Isolation                                                      |                          |                                       |                |
| Isolation tested with                                          |                          | 500 V DC                              |                |
| Connection method                                              |                          |                                       |                |
| required front connector                                       |                          | 40-pin                                |                |
| Dimensions                                                     |                          |                                       |                |
| Width                                                          |                          | 40 mm                                 |                |
| Height                                                         |                          | 125 mm                                |                |
| Depth                                                          |                          | 117 mm                                |                |
| Weights                                                        |                          |                                       |                |
| Weight, approx.                                                |                          | 272 g                                 |                |
| Classifications                                                |                          |                                       |                |
|                                                                |                          | Version                               | Classification |
|                                                                | eClass                   | 16                                    | 27-24-22-01    |
|                                                                | 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

Manufacturer Declaration

  
EG-Konf.



  
UL

Metrological Approval

General Product Approval

EMV

  
RCM

[China RoHS](#)

Manufacturer Declaration

  
EG-Konf.



  
RCM

For use in hazardous locations

  
ATEX

[FM](#)

  
UL

  
IECEx

  
ATEX

[Miscellaneous](#)

For use in hazardous locations

Maritime application

[CCC-Ex](#)

  
ABS

  
BUREAU  
VERITAS

  
DNV

  
LRS

[NK / Nippon Kaiji Kyokai](#)

Maritime application

  
PRS

  
RINA

[CCS \(China Classification Society\)](#)

last modified:

4/7/2025 