



Figure similar

\*\*\* Spare part \*\*\* SIMATIC DP, Electronics module for ET 200S, 2 AI Standard U 15 mm width, +/-10V; 13 bit+sign +/-5 V; 12 bit+sign, 1..5 V; 12-bit Cycle time 65 ms/channel with SF LED (group fault)

| General information                                                    |                                                                      |
|------------------------------------------------------------------------|----------------------------------------------------------------------|
| Product function                                                       |                                                                      |
| • Isochronous mode                                                     | No                                                                   |
| Supply voltage                                                         |                                                                      |
| Load voltage L+                                                        |                                                                      |
| • Rated value (DC)                                                     | 24 V; From power module                                              |
| • Reverse polarity protection                                          | Yes                                                                  |
| Input current                                                          |                                                                      |
| from load voltage L+ (without load), max.                              | 30 mA                                                                |
| from backplane bus 3.3 V DC, max.                                      | 10 mA                                                                |
| Power loss                                                             |                                                                      |
| Power loss, typ.                                                       | 0.6 W                                                                |
| Address area                                                           |                                                                      |
| Address space per module                                               |                                                                      |
| • Address space per module, max.                                       | 4 byte                                                               |
| Analog inputs                                                          |                                                                      |
| Number of analog inputs                                                | 2                                                                    |
| permissible input voltage for voltage input (destruction limit), max.  | 35 V; 35 V continuous; 75 V for max. 1 ms (mark to space ratio 1:20) |
| Cycle time (all channels) max.                                         | Number of active channels per module x basic conversion time         |
| Input ranges (rated values), voltages                                  |                                                                      |
| • 1 V to 5 V                                                           | Yes                                                                  |
| • -10 V to +10 V                                                       | Yes                                                                  |
| • -5 V to +5 V                                                         | Yes                                                                  |
| Cable length                                                           |                                                                      |
| • shielded, max.                                                       | 200 m                                                                |
| Analog value generation for the inputs                                 |                                                                      |
| Measurement principle                                                  | integrating                                                          |
| Integration and conversion time/resolution per channel                 |                                                                      |
| • Resolution with overrange (bit including sign), max.                 | 14 bit; ±10 V: 13 bit + sign, ±5 V: 13 bit + sign; 1 to 5 V: 13 bit  |
| • Integration time, parameterizable                                    | Yes                                                                  |
| • Integration time (ms)                                                | 16,7 / 20 ms                                                         |
| • Interference voltage suppression for interference frequency f1 in Hz | 50 / 60 Hz                                                           |
| • Conversion time (per channel)                                        | 65 ms; 55 / 65 ms                                                    |
| Smoothing of measured values                                           |                                                                      |
| • parameterizable                                                      | Yes; In four stages by means of digital filtering                    |
| • Step: None                                                           | Yes; 1x cycle time                                                   |
| • Step: low                                                            | Yes; 4x cycle time                                                   |

| <ul style="list-style-type: none"><li>• Step: Medium</li><li>• Step: High</li></ul>                                                                                        |                                                                                                 | Yes; 32x cycle time                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------|----------------|--------|----|-------------|--------|----|-------------|--------|-----|-------------|--------|---|-------------|--------|---|-------------|--------|-----|-------------|--------|---|-------------|------|---|----------|------|---|----------|------|---|----------|------|---|------|--------|----|-------------|
|                                                                                                                                                                            |                                                                                                 | Yes; 64x cycle time                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| Errors/accuracies                                                                                                                                                          |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| Operational error limit in overall temperature range                                                                                                                       |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| <ul style="list-style-type: none"><li>• Voltage, relative to input range, (+/-)</li></ul>                                                                                  | 0.6 %                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| Basic error limit (operational limit at 25 °C)                                                                                                                             |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| <ul style="list-style-type: none"><li>• Voltage, relative to input range, (+/-)</li></ul>                                                                                  | 0.4 %                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| Interrupts/diagnostics/status information                                                                                                                                  |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| Diagnoses                                                                                                                                                                  |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| <ul style="list-style-type: none"><li>• Wire-break</li><li>• Group error</li><li>• Overflow/underflow</li></ul>                                                            | Yes; Measuring range 1 to 5 V only<br>Yes<br>Yes                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| Diagnostics indication LED                                                                                                                                                 |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| <ul style="list-style-type: none"><li>• Group error SF (red)</li></ul>                                                                                                     | Yes                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| Parameter                                                                                                                                                                  |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| Remark                                                                                                                                                                     | 4 byte                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| Diagnostics wire break                                                                                                                                                     | Disable / enable (only in measuring range 1 to 5 V)                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| Group diagnostics                                                                                                                                                          | Disable / enable                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| Overflow/underflow                                                                                                                                                         | Disable / enable                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| Potential separation                                                                                                                                                       |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| Potential separation analog inputs                                                                                                                                         |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| <ul style="list-style-type: none"><li>• between the channels</li><li>• between the channels and backplane bus</li><li>• Between the channels and load voltage L+</li></ul> | No<br>Yes<br>Yes                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| Isolation                                                                                                                                                                  |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| Isolation tested with                                                                                                                                                      | 500 V DC                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| Dimensions                                                                                                                                                                 |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| Width                                                                                                                                                                      | 15 mm                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| Height                                                                                                                                                                     | 81 mm                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| Depth                                                                                                                                                                      | 52 mm                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| Weights                                                                                                                                                                    |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| Weight, approx.                                                                                                                                                            | 40 g                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| Classifications                                                                                                                                                            |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
|                                                                                                                                                                            |                                                                                                 | <table><tr><th></th><th>Version</th><th>Classification</th></tr><tr><td>eClass</td><td>14</td><td>27-24-26-01</td></tr><tr><td>eClass</td><td>12</td><td>27-24-26-01</td></tr><tr><td>eClass</td><td>9.1</td><td>27-24-26-01</td></tr><tr><td>eClass</td><td>9</td><td>27-24-26-01</td></tr><tr><td>eClass</td><td>8</td><td>27-24-26-01</td></tr><tr><td>eClass</td><td>7.1</td><td>27-24-26-01</td></tr><tr><td>eClass</td><td>6</td><td>27-24-26-01</td></tr><tr><td>ETIM</td><td>9</td><td>EC001596</td></tr><tr><td>ETIM</td><td>8</td><td>EC001596</td></tr><tr><td>ETIM</td><td>7</td><td>EC001596</td></tr><tr><td>IDEA</td><td>4</td><td>3562</td></tr><tr><td>UNSPSC</td><td>15</td><td>32-15-17-05</td></tr></table> |  | Version | Classification | eClass | 14 | 27-24-26-01 | eClass | 12 | 27-24-26-01 | eClass | 9.1 | 27-24-26-01 | eClass | 9 | 27-24-26-01 | eClass | 8 | 27-24-26-01 | eClass | 7.1 | 27-24-26-01 | eClass | 6 | 27-24-26-01 | ETIM | 9 | EC001596 | ETIM | 8 | EC001596 | ETIM | 7 | EC001596 | IDEA | 4 | 3562 | UNSPSC | 15 | 32-15-17-05 |
|                                                                                                                                                                            | Version                                                                                         | Classification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| eClass                                                                                                                                                                     | 14                                                                                              | 27-24-26-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| eClass                                                                                                                                                                     | 12                                                                                              | 27-24-26-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| eClass                                                                                                                                                                     | 9.1                                                                                             | 27-24-26-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| eClass                                                                                                                                                                     | 9                                                                                               | 27-24-26-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| eClass                                                                                                                                                                     | 8                                                                                               | 27-24-26-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| eClass                                                                                                                                                                     | 7.1                                                                                             | 27-24-26-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| eClass                                                                                                                                                                     | 6                                                                                               | 27-24-26-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| ETIM                                                                                                                                                                       | 9                                                                                               | EC001596                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| ETIM                                                                                                                                                                       | 8                                                                                               | EC001596                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| ETIM                                                                                                                                                                       | 7                                                                                               | EC001596                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| IDEA                                                                                                                                                                       | 4                                                                                               | 3562                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| UNSPSC                                                                                                                                                                     | 15                                                                                              | 32-15-17-05                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| Approvals / Certificates                                                                                                                                                   |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| General Product Approval                                                                                                                                                   |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| <a href="#">Manufacturer Declaration</a>                                                                                                                                   | <br>EG-Konf. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
|                                                                                                                                                                            | <br>UL     | <a href="#">Miscellaneous</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
|                                                                                                                                                                            |                                                                                                 | <a href="#">Metrological Approval</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |
| General Product Approval                                                                                                                                                   | EMV                                                                                             | For use in hazardous locations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |         |                |        |    |             |        |    |             |        |     |             |        |   |             |        |   |             |        |     |             |        |   |             |      |   |          |      |   |          |      |   |          |      |   |      |        |    |             |



RCM



RCM



ATEX

[FM](#)



ATEX



UL

For use in hazardous locations

Marine / Shipping

[Miscellaneous](#)



ATEX



IECEX

[CCC-Ex](#)



ABS



BUREAU  
VERITAS

Marine / Shipping



DNV



LRS

[NK / Nippon Kaiji Ky-  
okai](#)



PRS



RINA

[CCS \(China Classifica-  
tion Society\)](#)

last modified:

5/22/2024