



SIMATIC DP, fail-safe electronics module for ET200iSP, 4F-DO 17.4V/40mA Ex I, up to Category 4 (EN954-1)/ SIL3 (IEC61508)/PLE (ISO13849), Ex ib (ia Ga) IIC T4 Gb, Ex ib [ia IIC Da] IIC T4 Gb, Ex ib [ia] I Mb

| General information                       |                                                  |
|-------------------------------------------|--------------------------------------------------|
| Product type designation                  | 4F-DQ Ex(i) 17.4 V DC/40 mA                      |
| Input current                             |                                                  |
| Current consumption, typ.                 | 340 mA                                           |
| from load voltage L+ (without load), max. | 510 mA; int. Powerbus                            |
| Digital outputs                           |                                                  |
| Type of digital output                    | Transistor                                       |
| Number of digital outputs                 | 4                                                |
| Short-circuit protection                  | Yes                                              |
| • Response threshold, typ.                | Depending on the "short-circuit level" parameter |
| Controlling a digital input               | No                                               |
| No-load voltage U <sub>ao</sub> (DC)      | 17.4 V                                           |
| Internal resistor R <sub>i</sub>          | 167 Ω                                            |
| Load resistance range                     |                                                  |
| • lower limit                             | 270 Ω                                            |
| • upper limit                             | 18 kΩ                                            |
| Trend key points E                        |                                                  |
| • Voltage U <sub>e</sub> (DC)             | 10.7 V                                           |
| • Current I <sub>e</sub>                  | 40 mA                                            |
| Output voltage                            |                                                  |
| • for signal "1", max.                    | 17.4 V                                           |
| Output current                            |                                                  |
| • for signal "0" residual current, max.   | 10 μA                                            |
| Parallel switching of two outputs         |                                                  |
| • for uprating                            | Yes                                              |
| • for redundant control of a load         | No                                               |
| Switching frequency                       |                                                  |
| • with resistive load, max.               | 30 Hz                                            |
| • with inductive load, max.               | 2 Hz                                             |
| Cable length                              |                                                  |
| • shielded, max.                          | 500 m                                            |
| • unshielded, max.                        | 500 m                                            |
| Interrupts/diagnostics/status information |                                                  |
| Substitute values connectable             | Yes                                              |
| Alarms                                    |                                                  |
| • Diagnostic alarm                        | Yes; Parameterizable                             |
| Diagnoses                                 |                                                  |
| • Diagnostic information readable         | Yes                                              |
| • Wire-break                              | Yes                                              |
| • Short-circuit                           | Yes                                              |

|                                                |                 |
|------------------------------------------------|-----------------|
| Diagnostics indication LED                     |                 |
| • Group error SF (red)                         | Yes             |
| • Status indicator digital output (green)      | Yes             |
| Potential separation                           |                 |
| Potential separation digital outputs           |                 |
| • between the channels                         | No              |
| • between the channels and backplane bus       | Yes             |
| • Between the channels and load voltage L+     | Yes             |
| Permissible potential difference               |                 |
| between different circuits                     | 60 V DC/30 V AC |
| Isolation                                      |                 |
| Isolation tested with                          | 370V for 1 min  |
| Standards, approvals, certificates             |                 |
| CE mark                                        | Yes             |
| Highest safety class achievable in safety mode |                 |
| • Performance level according to ISO 13849-1   | PLe             |
| • SIL acc. to IEC 61508                        | SIL 3           |
| Dimensions                                     |                 |
| Width                                          | 30 mm           |
| Height                                         | 129 mm          |
| Depth                                          | 136.5 mm        |
| Weights                                        |                 |
| Weight, approx.                                | 285 g           |

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