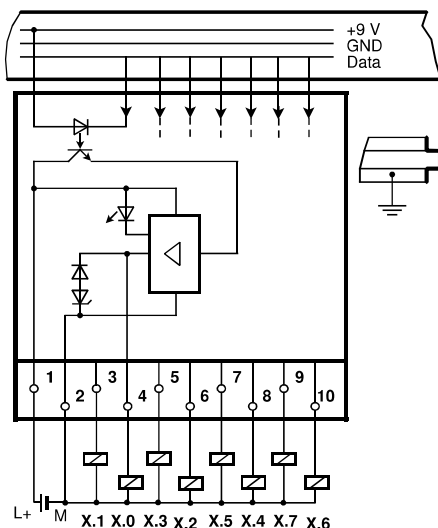
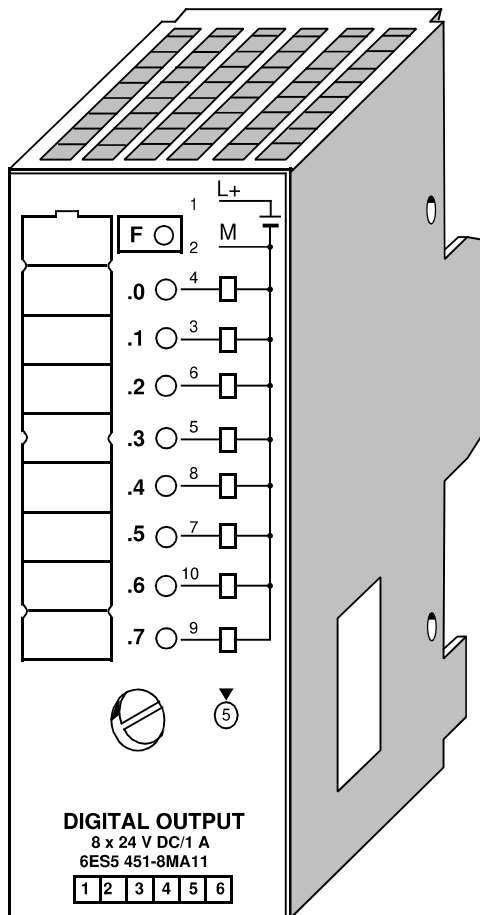


## Digital Output Module 8 x 24 V DC/1 A

(6ES5 451-8MA11)



## Technical specifications

|                                                               |                                                                                                     |
|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| Number of outputs                                             | 8                                                                                                   |
| Galvanic isolation                                            | yes (optocoupler)                                                                                   |
| - in groups of                                                | 8                                                                                                   |
| Load voltage L+                                               |                                                                                                     |
| - rated value                                                 | 24 V DC                                                                                             |
| - permissible range (including ripple)                        | 20 to 30 V                                                                                          |
| - value at $t < 0.5$ s                                        | 35 V                                                                                                |
| Output current for "1" signal                                 |                                                                                                     |
| - rated value                                                 | 1 A                                                                                                 |
| - permissible range                                           | 5 mA to 1 A                                                                                         |
| - lamp load                                                   | max. 10 W                                                                                           |
| Residual current at "0" signal                                | max. 0.5 mA                                                                                         |
| Output voltage                                                |                                                                                                     |
| - at "1" signal                                               | max. L+ (- 0.6 V)                                                                                   |
| Short-circuit protection                                      | short-circuit protected output with autom. switch on when the short-circuit does not exist any more |
| Fault LED (red)                                               | short-circuit                                                                                       |
| Voltage induced on circuit interruption (internal) limited to | -15 V                                                                                               |
| Switching frequency                                           |                                                                                                     |
| - resistive load                                              | max. 100 Hz                                                                                         |
| - inductive load                                              | max. 2 Hz                                                                                           |
| Permissible current of all outputs                            | 6 A                                                                                                 |
| Driving of digital input                                      | possible                                                                                            |
| Paralleling of 2 outputs                                      | paarweise possible                                                                                  |
| - maximum current                                             | 1.8 A                                                                                               |
| Permissible ambient temperature of module                     |                                                                                                     |
| - horizontal arrangement                                      | 0 to 60 °C (32 to 140 °F)                                                                           |
| - vertical arrangement                                        | 0 to 40 °C (32 to 104 °F)                                                                           |
| Length of cable                                               |                                                                                                     |
| - unshielded                                                  | max. 100 m (330 ft.)                                                                                |
| Insulation rating                                             | VDE 0160                                                                                            |
| Rated insulation voltage (+ 9 V to L+)                        | 24 V AC                                                                                             |
| - insulation group                                            | 2 x B                                                                                               |
| - tested with                                                 | 500 V AC                                                                                            |
| Rated insulation voltage (+ 9 V to $\perp$ )                  | 12 V AC                                                                                             |
| - insulation group                                            | 1 x B                                                                                               |
| - tested with                                                 | 500 V AC                                                                                            |
| Current consumption                                           |                                                                                                     |
| - from +9 V (CPU)                                             | typ. 35 mA                                                                                          |
| - from L+ (without load)                                      | typ. 50 mA                                                                                          |
| Power loss of the module                                      | typ. 3 W                                                                                            |
| Weight                                                        | approx. 230g (8 oz.)                                                                                |