



SIMATIC S7-400,  
FM 452 ELECTRONIC CAM CONTROLLER INCL. CONFIG.  
PACKAGE ON CD

|                            |                                                                                                                        |
|----------------------------|------------------------------------------------------------------------------------------------------------------------|
| <b>Supply voltage</b>      |                                                                                                                        |
| 24 V DC                    | Yes                                                                                                                    |
| <b>Input current</b>       |                                                                                                                        |
| Current consumption, max.  | 500 mA                                                                                                                 |
| <b>Encoder supply</b>      |                                                                                                                        |
| <b>5 V encoder supply</b>  |                                                                                                                        |
| 5 V                        | Yes                                                                                                                    |
| Output current, max.       | 300 mA                                                                                                                 |
| Cable length, max.         | 32 m                                                                                                                   |
| <b>24 V encoder supply</b> |                                                                                                                        |
| 24 V                       | Yes                                                                                                                    |
| Output current, max.       | 300 mA                                                                                                                 |
| Cable length, max.         | 100 m                                                                                                                  |
| <b>Digital inputs</b>      |                                                                                                                        |
| Number of digital inputs   | 11                                                                                                                     |
| Functions                  | Reference point switch, flying actual value setting/length measurement, brake release, enable track output no. 3 to 10 |
| <b>Input voltage</b>       |                                                                                                                        |
| Rated value (DC)           | 24 V                                                                                                                   |

|                                                            |                                                                      |
|------------------------------------------------------------|----------------------------------------------------------------------|
| for signal "0"                                             | -28,8 ... +5 V                                                       |
| <b>Input current</b>                                       |                                                                      |
| for signal "0", max. (permissible quiescent current)       | 2 mA                                                                 |
| <b>for 2-wire sensor</b>                                   |                                                                      |
| for signal "1", typ.                                       | 9 mA                                                                 |
| <b>Digital outputs</b>                                     |                                                                      |
| Number of digital outputs                                  | 16                                                                   |
| Functions                                                  | Cam track                                                            |
| short-circuit protection                                   | Yes                                                                  |
| <b>Output voltage</b>                                      |                                                                      |
| Rated value (DC)                                           | 24 V                                                                 |
| for signal "1", min.                                       | UP - 0.8 V                                                           |
| <b>Output current</b>                                      |                                                                      |
| for signal "1" permissible range for 0 to 55 °C, max.      | 600 mA ; with UPmax                                                  |
| for signal "0" residual current, max.                      | 0.5 mA                                                               |
| <b>Encoder</b>                                             |                                                                      |
| <b>Connectable encoders</b>                                |                                                                      |
| Incremental encoder (symmetrical)                          | Yes                                                                  |
| Incremental encoder (asymmetrical)                         | Yes                                                                  |
| Absolute encoder (SSI)                                     | Yes                                                                  |
| 2-wire sensor                                              | Yes                                                                  |
| <b>Encoder signals, incremental encoder (symmetrical)</b>  |                                                                      |
| Trace mark signals                                         | A, notA, B, notB                                                     |
| Zero mark signal                                           | N, notN                                                              |
| Input signal                                               | 5 V difference signal (phys. RS 422)                                 |
| Input frequency, max.                                      | 1 MHz                                                                |
| <b>Encoder signals, incremental encoder (asymmetrical)</b> |                                                                      |
| Trace mark signals                                         | A, B                                                                 |
| Zero mark signal                                           | N                                                                    |
| Input voltage                                              | 24 V                                                                 |
| Input frequency, max.                                      | 50 kHz ; 50 kHz for 25 m cable length; 25 kHz for 100 m cable length |
| <b>Encoder signals, absolute encoder (SSI)</b>             |                                                                      |
| Input signal                                               | 5 V difference signal (phys. RS 422)                                 |
| Data signal                                                | DATA, notDATA                                                        |
| Clock signal                                               | CL, notCL                                                            |
| Message frame length, parameterizable                      | 13 or 25 bit serial                                                  |
| Clock frequency, max.                                      | 1 MHz                                                                |
| Gray code                                                  | 1                                                                    |

|                                           |                         |
|-------------------------------------------|-------------------------|
| <b>Cable length, shielded, max.</b>       | 300 m ; at max. 125 kHz |
| <b>Galvanic isolation</b>                 |                         |
| <b>Galvanic isolation digital inputs</b>  |                         |
| <b>Galvanic isolation digital inputs</b>  | No                      |
| <b>Galvanic isolation digital outputs</b> |                         |
| <b>Galvanic isolation digital outputs</b> | No                      |
| <b>Degree and class of protection</b>     |                         |
| <b>IP20</b>                               | Yes                     |
| <b>Ambient conditions</b>                 |                         |
| <b>Ambient temperature in operation</b>   |                         |
| <b>max.</b>                               | 55 °C                   |
| <b>Storage/transport temperature</b>      |                         |
| <b>Min.</b>                               | -40 °C                  |
| <b>max.</b>                               | 70 °C                   |
| <b>Relative humidity</b>                  |                         |
| <b>Humidity class F</b>                   | Yes                     |
| <b>Connection method</b>                  |                         |
| <b>required front connector</b>           | 1x 48-pin               |
| <b>Dimensions</b>                         |                         |
| <b>Width</b>                              | 25 mm                   |
| <b>Height</b>                             | 290 mm                  |
| <b>Depth</b>                              | 210 mm                  |
| <b>Weights</b>                            |                         |
| <b>Weight, approx.</b>                    | 650 g                   |
| Status                                    | Dec 4, 2014             |