

AS SPARE PART ONLY! SIMATIC S7-300, FUNCTION MODULE  
FM 357-2 (M80486 CPU) FOR POSITIONING AND PATH  
CONTROL OF STEPPER AND SERVO MOTORS (4 MEASURING  
CIRCUITS)



Figure similar

| Supply voltage                  |        |
|---------------------------------|--------|
| Rated value (DC)                |        |
| • 24 V DC                       | Yes    |
| Input current                   |        |
| from backplane bus 5 V DC, max. | 100 mA |
| Encoder supply                  |        |
| 5 V encoder supply              |        |
| • 5 V                           | Yes    |
| • Output current, max.          | 210 mA |
| • Cable length, max.            | 35 m   |
| 24 V encoder supply             |        |
| • 24 V                          | Yes    |
| • Output current, max.          | 300 mA |
| • Cable length, max.            | 100 m  |
| Power loss                      |        |
| Power loss, typ.                | 15 W   |

|                                                           |                                      |
|-----------------------------------------------------------|--------------------------------------|
| <b>Memory</b>                                             |                                      |
| Type of memory                                            | NC program memory                    |
| Memory size                                               | 750 kbyte                            |
| <b>Digital inputs</b>                                     |                                      |
| Number of digital inputs                                  | 18                                   |
| Functions                                                 | 4 BERO, 2 probes, 12 for any use     |
| <b>Input voltage</b>                                      |                                      |
| • Rated value (DC)                                        | 24 V                                 |
| • for signal "0"                                          | -3 to +5V                            |
| • for signal "1"                                          | +11 to +30V                          |
| <b>Input current</b>                                      |                                      |
| • for signal "0", max. (permissible quiescent current)    | 2 mA                                 |
| • for signal "1", typ.                                    | 6 mA; 6 to 30 mA                     |
| <b>Digital outputs</b>                                    |                                      |
| Number of digital outputs                                 | 8                                    |
| Functions                                                 | 8 for any purpose                    |
| <b>Output voltage</b>                                     |                                      |
| • Rated value (DC)                                        | 24 V                                 |
| • for signal "1", min.                                    | UP -3 V                              |
| <b>Output current</b>                                     |                                      |
| • for signal "1" permissible range for 0 to 55 °C, max.   | 0.5 A; with UPmax                    |
| • for signal "0" residual current, max.                   | 2 mA                                 |
| <b>Encoder</b>                                            |                                      |
| <b>Connectable encoders</b>                               |                                      |
| • Incremental encoder (symmetrical)                       | Yes                                  |
| • Absolute encoder (SSI)                                  | Yes                                  |
| <b>Encoder signals, incremental encoder (symmetrical)</b> |                                      |
| • Trace mark signals                                      | A, notA, B, notB                     |
| • Zero mark signal                                        | N, notN                              |
| • Input voltage                                           | 5 V difference signal (phys. RS 422) |
| • Input frequency, max.                                   | 1 MHz                                |
| <b>Encoder signals, absolute encoder (SSI)</b>            |                                      |
| • Input signal                                            | 5 V difference signal (phys. RS 422) |
| • Data signal                                             | DATA, notDATA                        |
| • Clock signal                                            | CL, notCL                            |
| • Telegram length, parameterizable                        | 13, 21 or 25 bit                     |
| • Clock frequency, max.                                   | 1.5 Mbit/s                           |
| • Cable length, shielded, max.                            | 250 m; At max. 187.5 kbit/s          |

## Integrated Functions

### controlled positioning

- Programmable traverse speed, max. 1 000 m/min

## Drive interface

### Analog drive

#### Setpoint signal

- Rated voltage range -10 to +10V
- Output current -3 to +3 mA
- Cable length, max. 35 m

#### Output controller enable

- Switching voltage, max. 50 V
- Switching current, max. 1 A
- Switching capacity, max. 30 V·A

### Stepper drive

- Differential output voltage, min. 2 V;  $R_L = 100\ \Omega$
- Differential output voltage for signal "0", max. 1 V;  $I_o = 20\ \text{mA}$
- Differential output voltage for signal "1", min. 3.7 V;  $I_o = -20\ \text{mA}$
- Pulse frequency 750 kHz
- Cable length, shielded, max. 50 m; 35 m in hybrid mode with servo axes

## Potential separation

### Potential separation digital inputs

- Potential separation digital inputs Yes

### Potential separation digital outputs

- Potential separation digital outputs Yes

## Degree and class of protection

### Degree of protection acc. to EN 60529

- IP20 Yes

## Connection method

- required front connector 1x 40-pin

## Dimensions

- Width 200 mm
- Height 125 mm
- Depth 118 mm

## Weights

- Weight, approx. 1 200 g

**last modified:** 04/06/2018