

# Servo drive

## CMMT-AS-C7-11A-P3-MP-S3

Part number: 8151396

FESTO



## Data sheet

| Feature                                 | Value                                                                                                                                              |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Type of mounting                        | Mounting plate, attached with screws                                                                                                               |
| Mounting position                       | Free convection<br>Vertical                                                                                                                        |
| Product weight                          | 4100 g                                                                                                                                             |
| Display                                 | Green/yellow/red LED                                                                                                                               |
| Operator controls                       | Optional: CDSB operator unit                                                                                                                       |
| Conforms to standard                    | EN 61800-3<br>EN 61800-5-1<br>EN 61800-5-2<br>EN ISO 13849-1                                                                                       |
| Based on standard                       | EN 50581<br>EN 60204-1<br>EN 61508-1<br>EN 61508-2<br>EN 61508-3<br>EN 61508-4<br>EN 61508-5<br>EN 61508-6<br>EN 61508-7<br>EN 61800-2<br>EN 62061 |
| Approval                                | RCM trademark<br>German Technical Control Board (TÜV)<br>UL listed (OL)                                                                            |
| CE mark (see declaration of conformity) | To EU EMC Directive<br>To EC Machinery Directive<br>In accordance with EU RoHS Directive                                                           |
| Storage temperature                     | -25 °C...55 °C                                                                                                                                     |
| Ambient temperature                     | 0 °C...50 °C                                                                                                                                       |
| Note on ambient temperature             | Power must be reduced by 3% per °C at ambient temperatures above 40°C.                                                                             |
| Relative air humidity                   | 5 - 90%<br>Non-condensing                                                                                                                          |
| Max. installation height                | 2000 m                                                                                                                                             |
| Note on max. installation height        | From 1000 m: power reduction by 1% per 100 m.                                                                                                      |
| Degree of protection                    | IP20                                                                                                                                               |
| Overvoltage category                    | III                                                                                                                                                |

| Feature                                                          | Value                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Note on materials                                                | RoHS-compliant                                                                                                                                                                                                                                                                                                                                  |
| LABS (PWIS) conformity                                           | VDMA24364 zone III                                                                                                                                                                                                                                                                                                                              |
| Phases of nominal operating voltage                              | 3-phase                                                                                                                                                                                                                                                                                                                                         |
| Nominal operating voltage AC                                     | 400 V                                                                                                                                                                                                                                                                                                                                           |
| Permissible voltage fluctuations                                 | +/- 10 %                                                                                                                                                                                                                                                                                                                                        |
| Max. intermediate circuit voltage DC                             | 800 V                                                                                                                                                                                                                                                                                                                                           |
| Pulse power, brake resistance                                    | 13.6 kVA                                                                                                                                                                                                                                                                                                                                        |
| Nominal voltage for logic power supply DC                        | 24 V                                                                                                                                                                                                                                                                                                                                            |
| Permissible range for logic voltage                              | ± 20 %                                                                                                                                                                                                                                                                                                                                          |
| Current consumption of logic power supply without clamping brake | 0.5 A                                                                                                                                                                                                                                                                                                                                           |
| Nominal current per phase, effective                             | 7 A                                                                                                                                                                                                                                                                                                                                             |
| Peak current per phase, effective                                | 21 A                                                                                                                                                                                                                                                                                                                                            |
| Max. peak current duration                                       | 2 s                                                                                                                                                                                                                                                                                                                                             |
| Controller nominal output                                        | 4000 W                                                                                                                                                                                                                                                                                                                                          |
| Maximum output                                                   | 12000 W                                                                                                                                                                                                                                                                                                                                         |
| Operating mode                                                   | Field-oriented closed-loop control<br>Position resolution 24 bit/rev<br>Sampling rate 16 kHz<br>PWM with 8 or 16 KHz<br>Vector modulation with 3rd harmonic<br>Real-time data acquisition<br>2x input capture (x, v, F)<br>2x output trigger (x, v, F)<br>2x position encoder input<br>1x SYNC interface for encoder emulation or encoder input |
| Ethernet interface, function                                     | Parameterisation and commissioning                                                                                                                                                                                                                                                                                                              |
| Ethernet interface, protocol                                     | TCP/IP                                                                                                                                                                                                                                                                                                                                          |
| Field bus, protocol                                              | EtherCAT®<br>EtherNet/IP<br>Modbus/TCP<br>PROFINET IRT<br>PROFINET RT                                                                                                                                                                                                                                                                           |
| Field bus, connection type                                       | 2x socket                                                                                                                                                                                                                                                                                                                                       |
| Field bus, connection system                                     | RJ45                                                                                                                                                                                                                                                                                                                                            |
| Encoder interface, function                                      | BiSS-C<br>ENDAT® 2.1 encoder<br>EnDat® 2.2 encoder<br>Hiperface-Geber<br>Incremental encoder<br>Nikon<br>SIN/COS encoder                                                                                                                                                                                                                        |
| Encoder interface 2, function                                    | Incremental encoder<br>SIN/COS encoder                                                                                                                                                                                                                                                                                                          |
| Synchronisation interface, function                              | Encoder emulation A/B/Z<br>Encoder input A/B/Z                                                                                                                                                                                                                                                                                                  |
| Switching logic for inputs                                       | PNP (positive switching)                                                                                                                                                                                                                                                                                                                        |
| Number of high-speed logic inputs                                | 2                                                                                                                                                                                                                                                                                                                                               |
| Time resolution of high-speed logic inputs                       | 1 µs                                                                                                                                                                                                                                                                                                                                            |
| Number of high-speed switching outputs                           | 2                                                                                                                                                                                                                                                                                                                                               |
| Time resolution of high-speed switching outputs                  | 1 µs                                                                                                                                                                                                                                                                                                                                            |
| Number of floating switching outputs                             | 1                                                                                                                                                                                                                                                                                                                                               |
| Max. current of the floating switching outputs                   | 50 mA                                                                                                                                                                                                                                                                                                                                           |
| Number of analogue setpoint inputs                               | 1                                                                                                                                                                                                                                                                                                                                               |
| Features of setpoint inputs                                      | Differential inputs<br>Configurable for speed<br>Configurable for current/force                                                                                                                                                                                                                                                                 |
| Working range setpoint input                                     | ± 10 V                                                                                                                                                                                                                                                                                                                                          |
| Impedance of setpoint input                                      | 70 kOhm                                                                                                                                                                                                                                                                                                                                         |
| Number of safe 2-pin inputs                                      | 4                                                                                                                                                                                                                                                                                                                                               |

| Feature                      | Value |
|------------------------------|-------|
| Number of diagnostic outputs | 4     |