

# servo drive CMMT-AS-C12-11A-P3-EP-S1

料號: 8133357  
將停止供貨的產品

FESTO

Type to be discontinued. Available until 2023. See Support Portal for alternative products.



## 技術參數

| 特性   | 值  |
|--|--|
| 安裝類型   | 使用螺栓的安裝板   |
| 裝配位置   | 自由對流<br>垂直   |
| 產品重量   | 4,100 g  |
| 顯示   | LED green/yellow/red   |
| 控制元件   | Optional: control unit CDSB  |
| 符合標準   | EN 61800-3<br>EN 61800-5-1<br>EN 61800-5-2<br>EN ISO 13849-1   |
| 基於標準   | 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 |
| 授權   | RCM Mark<br>TÜV<br>c UL us - Listed (OL)   |
| KC mark                                      | KC-EMV   |
| CE 符號 (參見符合的標準)                              | 根據 EU-EMV 指導原則<br>根據 EU 機器設備指導原則<br>in accordance with EU RoHS directive   |
| UKCA marking (see declaration of conformity) | To UK instructions for EMC<br>To UK instructions for machines<br>To UK RoHS instructions   |
| 認證核發部門                                       | TÜV Rheinland 01/205/5640.00/18<br>UL E331130<br>TÜV Rh. UK 01/205U/5640.00/22   |
| 儲藏溫度   | -25 ... 55 °C  |
| 環境溫度   | 0 ... 50 °C  |
| Note on ambient temperature                  | Power must be reduced by 3%/°C at ambient temperatures above 40°C.   |
| UL 環境溫度                                      | 0 ... 40 °C  |
| 相對空氣濕度                                       | 5 - 90 %<br>非冷凝  |
| Max. installation height                     | 2,000 m  |
| Note on max. installation height             | From 1000 m, power reduction by 1% per 100 m   |

| 特性  | 值   |
|---|---|
| 防護等級  | IP20  |
| 安全等級  | I   |
| Overvoltage category  | III   |
| 污染程度  | 2   |
| 浪湧強度  | 6 kV  |
| 材料備註  | 符合 RoHS   |
| PWIS conformity   | VDMA24364 zone III  |
| 額定操作壓力, 相位  | 3相  |
| 額定工作電壓, AC  | 400 V   |
| 容許的電壓波動   | +/- 10 %  |
| 輸入電壓範圍AC  | 200 ... 480 V   |
| 線頻率   | 48 ... 62 Hz  |
| 額定電流, 負載電源  | 15 A  |
| 峰值 (最大) 電流, 負載電源  | 45 A  |
| 有效的 PFC   | 否   |
| 電源濾波器   | 整合  |
| System voltage to EN 61800-5-1                                | 300 V   |
| Max. short circuit protection of the mains                    | 10 kA   |
| Mains types   | TN<br>IT  |
| 額定電壓, 負載提供 DC   | 560 V   |
| 容許範圍, 負載電源  | ± 10 %  |
| 最大中間電路電壓, DC  | 800 V   |
| 制動電阻, 整合的   | 47 Ohm  |
| 制動阻力的脈衝功率   | 13.6 kW   |
| Pulse energy for braking resistor                             | 1,200 Ws  |
| Nominal power braking resistor (IEC)                          | 100 W   |
| 制動電阻, 外部的   | 40 ... 60 Ohm   |
| Max. continuous output of the external braking resistor (IEC) | 3,000 W   |
| 額定DC電壓, 邏輯電源  | 24 V  |
| 邏輯電源的容許範圍   | ± 20 %  |
| 電流消耗, 不具夾緊制動的邏輯電源   | 0.5 A   |
| Current consumption for logic supply with locking brake       | 2 A   |
| 用於邏輯電源, 制動保持和 I/O 的最大電流消耗                                     | 2.5 A   |
| 輸出電壓範圍AC  | 3x (0 – Input) V  |
| 每相的有效額定電流   | 12 A  |
| 每相的有效峰值 (最大) 電流   | 36 A  |
| 最大峰值電流持續時間  | 2 s   |
| 控制器額定功率   | 6,000 W   |
| 峰值 (最大) 功率  | 18,000 W  |
| 輸出頻率  | 0 ... 599 Hz  |
| 不具外來主要調節器的最大馬達電纜長度  | 25 m  |
| Max. output current of holding brake                          | 1.5 A   |
| Max. voltage drop from logic supply to brake output           | 1 V   |
| Number of inputs for motor temperature sensor                 | 1   |
| 控制器操作模式   | Cascade controller<br>P 位置控制器<br>PI 速度控制器<br>PI current regulator for F or M<br>Profile operation with record and direct mode<br>Interpolated mode via fieldbus<br>Synchronised operating modes<br>Homing<br>Setting-up<br>Autotuning |
| 操作模式  | Field-oriented closed-loop control<br>Position resolution 24 bit/U<br>Sampling rate 16 kHz<br>PWM at 8 or 16 KHz<br>Vector modulation with 3rd harmonic<br>Real-time data acquisition   |

| 特性  | 值  |
|---|--|
|   | 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   |
| Fieldbus interface, protocol                    | EtherNet/IP<br>Modbus/TCP  |
| Fieldbus接口                                      | EtherNet/IP<br>Modbus/TCP  |
| 通訊協議  | DriveProfile   |
| 過程接口  | Adjustable speed drives<br>Drives with positioning function  |
| Fieldbus介面, 傳輸速度                                | 100 Mbit/s   |
| Fieldbus interface, type of connection          | 2x 插座  |
| Fieldbus interface, connection technology       | RJ45   |
| Encoder interface, function                     | ENDAT 2.1 encoder<br>ENDAT 2.2 encoder<br>Hiperface encoder<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   |
| 編碼器接口輸出, 特性                                     | 1 MHz maximum output frequency<br>max. 16384 ppr   |
| 編碼器接口輸入, 特性                                     | 1 MHz maximum output frequency<br>max. 16384 ppr   |
| 數位邏輯輸入的數量                                       | 12   |
| 邏輯輸入電路  | PNP (正向切換)   |
| 邏輯輸入特性  | 可在一定程度上自由配置<br>Safety inputs in some cases<br>非電絕緣   |
| 規格, 邏輯輸入  | Based on IEC 61131-2, type 3   |
| 邏輯輸入工作範圍  | -3 ... 30 V  |
| Number of high-speed logic inputs               | 2  |
| Time resolution of high-speed logic inputs      | 1 µs   |
| 24V DC時數位邏輯輸出的數量                                | 6  |
| 邏輯開關, 輸出  | PNP (正向切換)   |
| 數位邏輯輸出特性  | 可在一定程度上自由配置<br>非電絕緣<br>Diagnostics outputs in some cases   |
| 最大電流, 數位邏輯輸出                                    | 20 mA  |
| 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  |
| 類比設定點輸入的數量                                      | 1  |
| 設定點輸入特性   | 差動輸入<br>可按照RPM的速度進行配置<br>Configurable for current/force  |
| 設定點輸入工作範圍                                       | ± 10 V   |
| 操作範圍類比輸入  | ± 10 V   |
| 設定點輸入阻抗   | 70 kOhm  |
| 安全功能  | Safe brake control (SBC)<br>Safe torque off (STO)<br>Safe stop 1 (SS1)   |
| 安全完整性等級 (SIL)                                   | Safe brake control (SBC) / SIL 3 / SILCL 3<br>Safe torque off (STO)/SIL 3/SILCL 3  |

| 特性                           | 值   |
|------------------------------|---|
| 性能等級 (PL)                    | Safe brake control (SBC) / category 3, Performance Level e<br>Safe Torque off (STO)/Category 4, Performance Level e |
| 診斷覆蓋率                        | 97 %  |
| SFF 安全故障失效比率                 | 99 %  |
| 硬體誤差                         | 1   |
| Number of safe 2-pin inputs  | 2   |
| Number of diagnostic outputs | 2   |