



SIMATIC ET 200SP TM ECC PL ST load controller for conductive charging of electric vehicles according to DIN SPEC 70121 / ISO15118 charge operating mode 4 CCS combined charging temp.: -30 °C to 60 °C 1x Control Pilot including Powerline Green Phy 1x Plug Present / Proximity Pilot 1x Digital Out TRIP function as open collector 1x Digital Out (DQ P) as open collector suitable for BU type BU20-P12+A0+4B or BU type BU20-P12+A4+0B

General information	
Product type designation	ECC PL ST
HW functional status	1
Firmware version	V1.1
• FW update possible	Yes
Product description	Technology module for the conductive charging of electric vehicles according to DIN 70121
usable BaseUnits	BU type B0, B1
Number of channels	1; Acc. to IEC 61851-1 Mode 4 and DIN SPEC 70121
Product function	
• I&M data	Yes; I&M0 to I&M3
• Isochronous mode	No
Engineering with	
• STEP 7 TIA Portal configurable/integrated from version	STEP 7 V16 or higher
Installation type/mounting	
Mounting type	standard rail
Mounting position	Horizontal, vertical
Supply voltage	
Type of supply voltage	DC
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes; against destruction
Load voltage L+	
• Rated value (DC)	24 V
• permissible range, lower limit (DC)	19.2 V
• permissible range, upper limit (DC)	28.8 V
• Reverse polarity protection	Yes
Input current	
Current consumption, typ.	40 mA
Current consumption, max.	100 mA
Digital inputs	
Number of digital inputs	0
Digital inputs, parameterizable	No
Cable length	
• shielded, max.	10 m
Digital outputs	
Type of digital output	Transistor
Number of digital outputs	2; 1x digital out TRIP function as open collector, 1x digital out (DQ P) as open collector

Current-sinking	Yes
short-circuit proof	Yes
Digital output functions, parameterizable	
• PWM output — Number, max. — Cycle duration, parameterizable • Connection of a DC motor	Yes; acc. to DIN SPEC 70121 and ISO 15118 1; 1 per channel No; 1 kHz No; Only fixed charging cables are permitted for DC charging systems
Switching capacity of the outputs	
• with resistive load, max.	0.6 A; Per digital output
Output voltage	
• Type of output voltage • Rated value (DC)	DC 24 V
Cable length	
• unshielded, max.	10 m
Analog outputs	
Number of analog outputs	1
Type of analog output	Control pilot including Powerline Green Phy, acc. to DIN SPEC 70121
Connection of a DC motor	No
Protocols	
Bus communication	Yes; Backplane bus
Vehicle communication according to IEC 61851	Yes; Mode 4
Interrupts/diagnostics/status information	
Alarms	
• Diagnostic alarm	Yes
Diagnoses	
• Monitoring the supply voltage • Wire-break • Short-circuit	No; Supply voltage diagnostics No No
Diagnostics indication LED	
• ERROR LED • Monitoring of the supply voltage (PWR-LED) • Channel status display • for module diagnostics	No Yes; green PWR LED Yes; green LED Yes; green/red DIAG LED
Potential separation	
Potential separation channels	
• between the channels • between the channels and backplane bus	No; Only one channel is available Yes
Isolation	
Isolation tested with	707 V DC
Degree of pollution	2
EMC	
Electrostatic discharge acc. to IEC 61000-4-2	4 kV contact discharge / 8 kV air discharge
Field-related interference acc. to IEC 61000-4-3	10 V/m (80 ... 1 000 MHz), 3 V/m (1.4 ... 2.0 GHz), 1 V/m (2.0 ... 2.7 GHz)
Conducted interference due to burst acc. to IEC 61000-4-4	2 kV signal lines
Conducted interference due to surge acc. to IEC 61000-4-5	On DC supply lines: 0.5 kV symmetrical and asymmetrical
Conducted interference due to high-frequency radiation acc. to IEC 61000-4-6	10 V (0.15 ... 80 MHz)
Degree and class of protection	
IP degree of protection	IP20
Standards, approvals, certificates	
Certificate of suitability	CE / RCM / EAC / UL / KC
Ambient conditions	
Ambient temperature during operation	
• min. • max. • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max.	-30 °C 60 °C -30 °C 60 °C -30 °C 50 °C
Ambient temperature during storage/transportation	

• Storage, min.	-40 °C
• Storage, max.	70 °C
• Transportation, min.	-40 °C
• Transportation, max.	70 °C
Altitude during operation relating to sea level	
• Installation altitude above sea level, max.	2 000 m
• Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 080 hPa ... 795 hPa (-1 000 m ... +2 000 m)
Relative humidity	
• Operation, min.	5 %
• Operation, max.	95 %; no condensation
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	10 ... 58 Hz / 0.075 mm, 58 ... 150 Hz / 1 g
Shock testing	
• Shock resistance acc. to IEC 60068-2-27	15 g / 11 ms
Decentralized operation	
to SIMATIC S7-1500	Yes
Dimensions	
Width	20 mm
Height	73 mm
Depth	58 mm
Weights	
Weight, approx.	51 g
Other	
Note:	The Tone Mask of the Green Phy defined in DIN 70121 for North America applies

last modified: 10/10/2023 