



SIMATIC ET 200SP TM ECC PL ST Chargecontroller for conductiv
Charging of electric vehicles according DIN SPEC 70121 Charging
Mode 4 TEMP:-30°C...60°C 1x Control Pilot including Powerline
Green Phy 1x Plug Present / Proximity Pilot 1x Digital Out TRIP-
Funktion as Open Collector 1x Digital Out (DQ P) as Open Collector
suitable for BU Typ BU20-P12+A0+4B or BU-Typ BU20-P12+A4+0B

General information	
Product type designation	ECC PL ST
HW functional status	1
Firmware version	V1.0.5
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 V15.1 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	Yes; Acc. to DIN SPEC 70121
— Number, max.	1; 1 per channel
— Cycle duration, parameterizable	No; 1 kHz
• Connection of a DC motor	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	DC
• Rated value (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	No; Supply voltage diagnostics
• Wire-break	No
• Short-circuit	No
Diagnostics indication LED	
• ERROR LED	No
• Monitoring of the supply voltage (PWR-LED)	Yes; green PWR LED
• Channel status display	Yes; green LED
• for module diagnostics	Yes; green/red DIAG LED
Potential separation	
Potential separation channels	
• between the channels	No; Only one channel is available
• between the channels and backplane bus	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.	-30 °C
• max.	60 °C
• horizontal installation, min.	-30 °C
• horizontal installation, max.	60 °C
• vertical installation, min.	-30 °C
• vertical installation, max.	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
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