



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 / Proximty 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	V1.0.1
<ul style="list-style-type: none"> <li>FW update possible</li> </ul>	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	
<ul style="list-style-type: none"> <li>I&amp;M data</li> </ul>	Yes; I&M0 to I&M3
<ul style="list-style-type: none"> <li>Isochronous mode</li> </ul>	No
Engineering with	
<ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated from version</li> </ul>	V15
Installation type/mounting	
Mounting type	standard rail
Mounting position	Horizontal, vertical

Supply voltage	
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+	
<ul style="list-style-type: none"> <li>Rated value (DC)</li> </ul>	24 V
<ul style="list-style-type: none"> <li>permissible range, lower limit (DC)</li> </ul>	19.2 V
<ul style="list-style-type: none"> <li>permissible range, upper limit (DC)</li> </ul>	28.8 V
<ul style="list-style-type: none"> <li>Reverse polarity protection</li> </ul>	Yes
Input current	
Current consumption, typ.	40 mA
Current consumption, max.	100 mA
Digital inputs	
Number of digital inputs	0
Digital inputs, parameterizable	No
Input delay (for rated value of input voltage)	
for technological functions	
— parameterizable	Yes; Type of charging standard
Cable length	
<ul style="list-style-type: none"> <li>shielded, max.</li> </ul>	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	
<ul style="list-style-type: none"> <li>PWM output</li> </ul>	Yes; Acc. to DIN SPEC 70121
<ul style="list-style-type: none"> <li>— Number, max.</li> </ul>	1; 1 per channel
<ul style="list-style-type: none"> <li>— Cycle duration, parameterizable</li> </ul>	No; 1 kHz
<ul style="list-style-type: none"> <li>Connection of a DC motor</li> </ul>	No; Only fixed charging cables are permitted for DC charging systems
Switching capacity of the outputs	
<ul style="list-style-type: none"> <li>with resistive load, max.</li> </ul>	0.6 A; Per digital output
Output voltage	
<ul style="list-style-type: none"> <li>Type of output voltage</li> </ul>	DC
<ul style="list-style-type: none"> <li>Output voltage, min.</li> </ul>	24 V
Cable length	
<ul style="list-style-type: none"> <li>unshielded, max.</li> </ul>	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

<b>Alarms</b>	
• Diagnostic alarm	Yes
<b>Diagnostic messages</b>	
• Monitoring the supply voltage	No; Supply voltage diagnostics
• Wire-break	No
• Short-circuit	No
<b>Diagnostics indication LED</b>	
• 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

<b>Potential separation channels</b>	
• 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
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#### Standards, approvals, certificates

Certificate of suitability	CE / RCM / EAC / UL / KC
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## 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

**last modified:** 06/22/2020