



SIMATIC ET 200SP TM ECC PL ST Chargecontroller for conductiv Charging of electric vehicles according to 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
<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>	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+	
<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
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
<b>Digital output functions, parameterizable</b>	
<ul style="list-style-type: none"> <li>• PWM output <ul style="list-style-type: none"> <li>— Number, max.</li> <li>— Cycle duration, parameterizable</li> </ul> </li> <li>• Connection of a DC motor</li> </ul>	<p>Yes; Acc. to DIN SPEC 70121</p> <p>1; 1 per channel</p> <p>No; 1 kHz</p> <p>No; Only fixed charging cables are permitted for DC charging systems</p>
<b>Switching capacity of the outputs</b>	
<ul style="list-style-type: none"> <li>• with resistive load, max.</li> </ul>	0.6 A; Per digital output
<b>Output voltage</b>	
<ul style="list-style-type: none"> <li>• Type of output voltage</li> <li>• Rated value (DC)</li> </ul>	<p>DC</p> <p>24 V</p>
<b>Cable length</b>	
<ul style="list-style-type: none"> <li>• unshielded, max.</li> </ul>	10 m
<b>Analog outputs</b>	
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
<b>Protocols</b>	
Bus communication	Yes; Backplane bus
Vehicle communication according to IEC 61851	Yes; Mode 4
<b>Interrupts/diagnostics/status information</b>	
<b>Alarms</b>	
<ul style="list-style-type: none"> <li>• Diagnostic alarm</li> </ul>	Yes
<b>Diagnoses</b>	
<ul style="list-style-type: none"> <li>• Monitoring the supply voltage</li> <li>• Wire-break</li> <li>• Short-circuit</li> </ul>	<p>No; Supply voltage diagnostics</p> <p>No</p> <p>No</p>
<b>Diagnostics indication LED</b>	
<ul style="list-style-type: none"> <li>• ERROR LED</li> <li>• Monitoring of the supply voltage (PWR-LED)</li> <li>• Channel status display</li> <li>• for module diagnostics</li> </ul>	<p>No</p> <p>Yes; green PWR LED</p> <p>Yes; green LED</p> <p>Yes; green/red DIAG LED</p>
<b>Potential separation</b>	
<b>Potential separation channels</b>	
<ul style="list-style-type: none"> <li>• between the channels</li> <li>• between the channels and backplane bus</li> </ul>	<p>No; Only one channel is available</p> <p>Yes</p>
<b>Isolation</b>	
Isolation tested with	707 V DC
Degree of pollution	2
<b>EMC</b>	
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)
<b>Degree and class of protection</b>	
IP degree of protection	IP20
<b>Standards, approvals, certificates</b>	
Certificate of suitability	CE / RCM / EAC / UL / KC
<b>Ambient conditions</b>	

<b>Ambient temperature during operation</b>	
• 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
<b>Ambient temperature during storage/transportation</b>	
• Storage, min.	-40 °C
• Storage, max.	70 °C
• Transportation, min.	-40 °C
• Transportation, max.	70 °C
<b>Altitude during operation relating to sea level</b>	
• 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)
<b>Relative humidity</b>	
• Operation, min.	5 %
• Operation, max.	95 %; no condensation
<b>Vibrations</b>	
• Vibration resistance during operation acc. to IEC 60068-2-6	10 ... 58 Hz / 0.075 mm, 58 ... 150 Hz / 1 g
<b>Shock testing</b>	
• Shock resistance acc. to IEC 60068-2-27	15 g / 11 ms
<b>Decentralized operation</b>	
to SIMATIC S7-1500	Yes
<b>Dimensions</b>	
Width	20 mm
Height	73 mm
Depth	58 mm
<b>Weights</b>	
Weight, approx.	51 g
<b>Other</b>	
Note:	The Tone Mask of the Green Phy defined in DIN 70121 for North America applies
<b>last modified:</b>	1/16/2021 