



Figure similar

SIPLUS ET 200SP TM ECC 2xPWM ST based on 6FE1242-6TM10-0BB1 with conformal coating, -30...+60 °C, load controller for conductive charging of electric vehicles according to IEC61851 with 2 charging outlets; 2x Control Pilot; 2x plug present; 2x DQ switching contact for load contactor as open collector; 2x DI for feedback; load contactor or connector lock; 2x ACT for connector interlock suitable for BU type BU20-P12+A0+4B and BU20-P12+A4+0B

General information	
Product type designation	ECC 2x PWM ST
Firmware version	
<ul style="list-style-type: none"> <li>FW update possible</li> </ul>	Yes
Product description	Communication controller for controlling conductive AC charging according to IEC 61851
usable BaseUnits	BU type B0, B1
Color code for module-specific color identification plate	CC40
Number of channels	2; According to IEC 61851/SAE J1772
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
Installation type/mounting	
Mounting type	standard rail
Mounting position	Horizontal
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
Input current	
Current consumption, typ.	40 mA
Current consumption, max.	90 mA
Digital inputs	
Number of digital inputs	2; 1 per channel
Digital inputs, parameterizable	Yes; 12 V / 24 V
Digital input functions, parameterizable	
<ul style="list-style-type: none"> <li>Freely usable digital input</li> </ul>	No; Readback contact contactor / connector lock
Input voltage	
<ul style="list-style-type: none"> <li>Type of input voltage</li> </ul>	DC
<ul style="list-style-type: none"> <li>for signal "0"</li> </ul>	<0.2 V (nom)
<ul style="list-style-type: none"> <li>for signal "1"</li> </ul>	>0.6 V (nom)
<ul style="list-style-type: none"> <li>permissible voltage at input, min.</li> </ul>	0 V
<ul style="list-style-type: none"> <li>permissible voltage at input, max.</li> </ul>	30 V
Cable length	
<ul style="list-style-type: none"> <li>unshielded, max.</li> </ul>	30 m
Digital outputs	
Type of digital output	Transistor

Number of digital outputs	2; 1 per channel
short-circuit proof	Yes
Short-circuit protection	Yes; electronic/thermal
<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>	Yes; According to IEC 61851 2; 1 per channel No; 1 kHz Yes; ACT p/n connector locking
<b>Switching capacity of the outputs</b>	
<ul style="list-style-type: none"> <li>• with resistive load, max.</li> </ul>	1.3 A
<b>Output voltage</b>	
<ul style="list-style-type: none"> <li>• Type of output voltage</li> <li>• Rated value (DC)</li> </ul>	DC 24 V
<b>Cable length</b>	
<ul style="list-style-type: none"> <li>• unshielded, max.</li> </ul>	30 m
<b>Protocols</b>	
Bus communication	Yes
Vehicle communication according to IEC 61851	Yes; MODE 3
<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>• Short-circuit</li> </ul>	No Yes
<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>	Yes; red LED Yes; green PWR LED Yes; green LED Yes; green/red DIAG LED
<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>	No Yes
<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
<b>Ambient conditions</b>	
<b>Ambient temperature during operation</b>	
<ul style="list-style-type: none"> <li>• horizontal installation, min.</li> <li>• horizontal installation, max.</li> <li>• vertical installation, min.</li> <li>• vertical installation, max.</li> </ul>	-30 °C; = Tmin 60 °C; = Tmax -30 °C; = Tmin 50 °C; = Tmax
<b>Ambient temperature during storage/transportation</b>	
<ul style="list-style-type: none"> <li>• Storage, min.</li> <li>• Storage, max.</li> <li>• Transportation, min.</li> <li>• Transportation, max.</li> </ul>	-40 °C 70 °C -40 °C 70 °C
<b>Altitude during operation relating to sea level</b>	
<ul style="list-style-type: none"> <li>• Installation altitude above sea level, max.</li> </ul>	5 000 m

<ul style="list-style-type: none"> <li>• Ambient air temperature-barometric pressure-altitude</li> </ul>	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)
<b>Relative humidity</b>	
<ul style="list-style-type: none"> <li>• With condensation, tested in accordance with IEC 60068-2-38, max.</li> </ul>	100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation
<b>Vibrations</b>	
<ul style="list-style-type: none"> <li>• Vibration resistance during operation acc. to IEC 60068-2-6</li> </ul>	10 ... 58 Hz / 0.075 mm, 58 ... 150 Hz / 1 g
<b>Shock testing</b>	
<ul style="list-style-type: none"> <li>• Shock resistance acc. to IEC 60068-2-27</li> </ul>	15 g / 11 ms
<b>Resistance</b>	
<b>Coolants and lubricants</b>	
<ul style="list-style-type: none"> <li>— Resistant to commercially available coolants and lubricants</li> </ul>	Yes; Incl. diesel and oil droplets in the air
<b>Use in stationary industrial systems</b>	
<ul style="list-style-type: none"> <li>— to biologically active substances according to EN 60721-3-3</li> </ul>	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
<ul style="list-style-type: none"> <li>— to chemically active substances according to EN 60721-3-3</li> </ul>	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
<ul style="list-style-type: none"> <li>— to mechanically active substances according to EN 60721-3-3</li> </ul>	Yes; Class 3S4 incl. sand, dust, *
<ul style="list-style-type: none"> <li>— Against mechanical environmental conditions acc. to EN 60721-3-3</li> </ul>	Yes; Class 3M8 using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0)
<b>Usage in industrial process technology</b>	
<ul style="list-style-type: none"> <li>— Against chemically active substances acc. to EN 60654-4</li> </ul>	Yes; Class 3 (excluding trichlorethylene)
<ul style="list-style-type: none"> <li>— Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04</li> </ul>	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)
<b>Remark</b>	
<ul style="list-style-type: none"> <li>— Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04</li> </ul>	* The supplied plug covers must remain in place over the unused interfaces during operation!
<b>Conformal coating</b>	
<ul style="list-style-type: none"> <li>• Coatings for printed circuit board assemblies acc. to EN 61086</li> </ul>	Yes; Class 2 for high reliability
<ul style="list-style-type: none"> <li>• Protection against fouling acc. to EN 60664-3</li> </ul>	Yes; Type 1 protection
<ul style="list-style-type: none"> <li>• Military testing according to MIL-I-46058C, Amendment 7</li> </ul>	Yes; Discoloration of coating possible during service life
<ul style="list-style-type: none"> <li>• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A</li> </ul>	Yes; Conformal coating, Class A
<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.	32 g
<b>last modified:</b>	10/9/2023 