SIEMENS

Data sheet 6AG1242-6TM10-2BB1

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	
● FW update possible	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	
● I&M data	Yes; I&M0 to I&M3
● Isochronous mode	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	
● Freely usable digital input	No; Readback contact contactor / connector lock
Input voltage	
● Type of input voltage	DC
● for signal "0"	<0.2 V (nom)
● for signal "1"	>0.6 V (nom)
● permissible voltage at input, min.	0 V
● permissible voltage at input, max.	30 V
Cable length	
● unshielded, max.	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
Digital output functions, parameterizable	
● PWM output	Yes; According to IEC 61851
— Number, max.	2; 1 per channel
— Cycle duration, parameterizable	No; 1 kHz
● Connection of a DC motor	Yes; ACT p/n connector locking
Switching capacity of the outputs	
● with resistive load, max.	1.3 A
Output voltage	
● Type of output voltage	DC
● Rated value (DC)	24 V
Cable length	
● unshielded, max.	30 m
Protocols	
Bus communication	Yes
Vehicle communication according to IEC 61851	Yes; MODE 3
Interrupts/diagnostics/status information	
Alarms	
● Diagnostic alarm	Yes
Diagnoses	
● Monitoring the supply voltage	No
● Short-circuit	Yes
Diagnostics indication LED	
● ERROR LED	Yes; red LED
● 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
● 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
Ambient conditions	
Ambient temperature during operation	
● horizontal installation, min.	-30 °C; = Tmin
● horizontal installation, max.	60 °C; = Tmax
● vertical installation, min.	-30 °C; = Tmin
● vertical installation, max.	50 °C; = Tmax
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.	5 000 m

● Ambient air temperature-barometric pressure-altitude	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)
Relative humidity	
● With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation
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
Resistance	
Coolants and lubricants	
— Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems	
— to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
— to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *
— Against mechanical environmental conditions acc. to EN 60721-3-3	Yes; Class 3M8 using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0)
Usage in industrial process technology	
— Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)
— Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	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)
Remark	
— Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!
Conformal coating	
● Coatings for printed circuit board assemblies acc. to EN 61086	Yes; Class 2 for high reliability
● Protection against fouling acc. to EN 60664-3	Yes; Type 1 protection
● Military testing according to MIL-I-46058C, Amendment 7	Yes; Discoloration of coating possible during service life
● Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A
Decentralized operation	
to SIMATIC S7-1500	Yes
Dimensions	
Width	20 mm
Height	73 mm
Depth	58 mm
Weights	
Weight, approx.	32 g

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