



General technical data:

product brand name		SIPLUS ECC2000
Product designation		CM-230 stand-alone variant
Charging current / typical	A	16
adjustable charging current	A	6 ... 80
Product description		Actuation and monitoring of power components in the charging station, used for communication with the electric vehicle in acc. with IEC61851
Standard / for safety		according to IEC 61010-1 / EN 61010-1 (2nd edition) or UL 61010-1 (2nd edition)
Protection class IP / on the front		IP20
Degree of pollution		3, to IEC/EN 61010-1
Insulation voltage / with degree of pollution 3 / rated value	V	230

Supply voltage:

Type of / supply voltage		DC
Supply voltage		
• for DC / rated value	V	24
• at DC	V	18 ... 28
Consumed current / for rated value of supply voltage	mA	300

Communication:

Product function / bus-communication		Yes
Protocol / is supported		
• communication to electric vehicle according to IEC 61851		Yes
• Ethernet protocol		Yes

Display:

Number of LEDs		1
Type of display		
• for normal operation		green, flashing / continuously illuminated, waiting for EF / charging active
• as status display of the inputs		orange, flashing (1 Hz / 5 Hz), device waiting for enable / preheat charging column
• for fault signal		red, flashing / flashing, error (see operating instructions)

Inputs/ Outputs:

Number of interfaces / to IEC 61851		1
Number of digital inputs		8
Type of / input voltages		DC
Input voltage	V	0 ... 28
Number of digital outputs		8
Voltage type / of output voltages		DC
Output voltage	V	18 ... 28
Output current / at the digital output / for signal <1> / nominal value	A	0.3
Characteristic feature of the output / short-circuit protected		Yes

Auxiliary circuit:

Number of NO contacts / for auxiliary contacts		8
Operating current / of auxiliary contacts		
• at 230 V / AC	A	0.75
• at 110 V / AC	A	0.75
• at 24 V / DC	A	1

terminals

Contact assignment		
• of the bushing 1 at the PIN 1		L+24 V: DC 24 V connection (SELV)
• of the bushing 1 at the PIN 2		M: DC 24 V connection (SELV)
• of the bushing 2 at the PIN 1		FE: Functional grounding (part of the vehicle interface, connection to connector according to IEC 61851)
• of the bushing 2 at the PIN 2		PX: Proximity (part of the vehicle interface, connection to connector according to IEC 61851)
• of the bushing 2 at the PIN 3		CP: Control pilot (part of the vehicle interface, connection to connector according to IEC 61851)

- of the bushing 3 at the PIN 1
- of the bushing 3 at the PIN 2
- of the bushing 3 at the PIN 3
- of the bushing 3 at the PIN 4
- of the bushing 3 at the PIN 5
- of the bushing 4 at the PIN 1
- of the bushing 4 at the PIN 2
- of the bushing 4 at the PIN 3
- of the bushing 4 at the PIN 4
- of the bushing 4 at the PIN 5
- of the bushing 5 at the PIN 1
- of the bushing 5 at the PIN 2
- of the bushing 5 at the PIN 3
- of the bushing 5 at the PIN 4
- of the bushing 5 at the PIN 5
- of socket 5 at PIN 6
- of the bushing 6 at the PIN 1
- of the bushing 6 at the PIN 2
- of the bushing 6 at the PIN 3
- of the bushing 6 at the PIN 4
- of the bushing 6 at the PIN 5
- of socket 6 at PIN 6
- of socket 6 at PIN 7
- of socket 6 at PIN 8
- of socket 6 at PIN 9
- of the bushing 7 at the PIN 1
- of the bushing 7 at the PIN 2
- of the bushing 7 at the PIN 3
- of the bushing 7 at the PIN 4
- of the bushing 7 at the PIN 5
- of socket 7 at PIN 6
- of the bushing 7 at the PIN 7
- of socket 7 at PIN 8
- of socket 7 at PIN 9
- of the bushing 8 at the PIN 1

1L: Root R1 ... R4

R1 (P): Relay for enabling power outlet

R2 (V): Fan relay

R3 (H): Relay locking

R4 (S): Signaling relay

2L: Root R5 ... R8

R5 (HT): Heating relay

R6: Relay output 6

R7: Relay output 7

R8: Relay output 8

24 V: Supply for 24 V outputs O1 ... O8

Not used

RX: Receive line (RS232)

TX: Send line (RS232)

1M: DC 24 V Minus (SELV/PELV)

24 V: DC 24 V Plus (SELV/PELV) connection

O1 (RC): 24V switching output status charging output (Ready to Charge)

O2 (E): 24 V switching output error status (Error)

O3 (CS): 24 V switching output status cable connected (Cable Status)

O4 (V): 24 V switching output status vehicle connected (Vehicle connected)

O5 (VC): 24 V switching output status charging (Vehicle Charging)

O6: 24 V switching output 6

O7: 24 V switching output 7

O8: 24 V switching output 8

3M: reference point 24 V outputs O1 ... O8

I1: 24 V input 1

I2 (HL): 24 V input status circuit breaker

I3 (LS): 24 V input status circuit breaker

I3 (FI): 24 V input RCCB status

I4 (EO): 24 V input emergency unlocking

I6: 24 V input 6

I7: 24 V input 7

I8: 24 V input 8

2M: 24 V reference point for inputs I1 ... I8

RJ45: Ethernet 10/100

Ambient conditions:

Installation altitude / at a height over sea level / maximum

m

2,000

Ambient temperature		
• during storage	°C	-25 ... +70
• during operating	°C	-25 ... +55
• during transport	°C	-25 ... +70
Relative humidity		
• during operating phase	%	0 ... 95

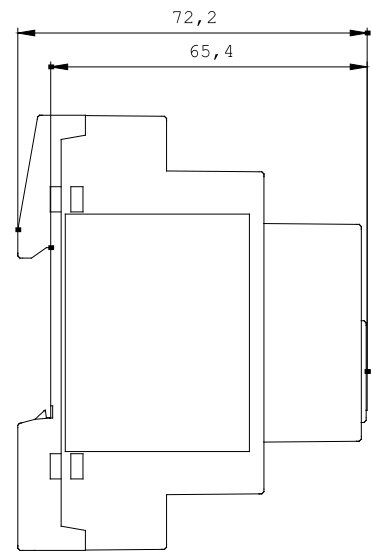
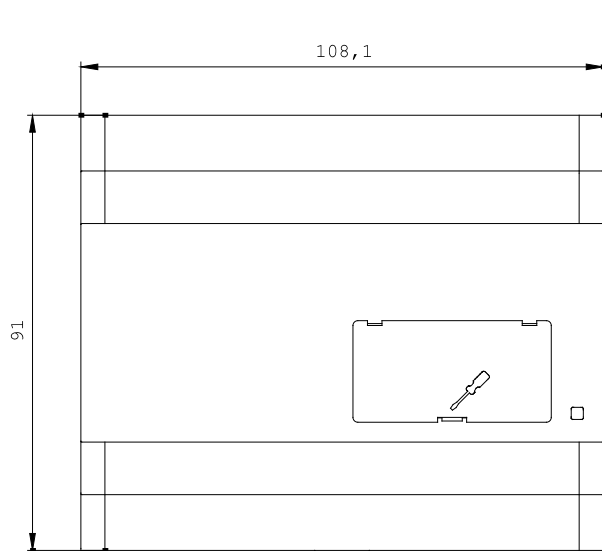
Electromagnetic compatibility:

EMC emitted interference / according to IEC 61000-6-3		Suitable for operation in residential, public and industrial environments
EMC immunity to interference / according to IEC 61000-6-2		Suitable for operation in industrial and residential environments
Conductor-bound parasitic coupling BURST / according to IEC 61000-4-4		2 kV / 5 kHz DC supply cables, 1 kV / 5 kHz control cables, relay outputs, RS232 and Ethernet, evaluation criterion B
Conductor-bound parasitic coupling SURGE / according to IEC 61000-4-5		Asymmetrical: DC supply lines 0.5 kV / 12 ohm; control lines, functional grounding, RS232 interface 1 kV / 42 ohm; relay outputs 2 kV / 12 ohm; Ethernet line (shield) 1 kV direct; evaluation criterion B. Symmetrical: DC supply lines 0.5 kV / 2 ohm; evaluation criterion B
Field-bound parasitic coupling / according to IEC 61000-4-3		80 MHz ... 1 GHz 10 V/m, modulation 80 % AM with 1 kHz, evaluation criterion B; 80 MHz ... 1.0 GHz 3 V/m, 1.4 GHz ... 2.0 GHz 3 V/m, 2.0 GHz ... 2.7 GHz 1 V/m, modulation 80 % AM with 1 kHz, evaluation criterion A
Electrostatic discharge / according to IEC 61000-4-2		4 kV contact discharge / 8 kV air discharge, evaluation criterion B
Shock resistance / according to IEC 60068-2-27		15g / 11 ms / 3 shocks / axis
Resistance against shock / during transport / to IEC 60068-2-29		1000 shocks / axis, 25g, 6 ms semi-sinusoidal
Vibration resistance		
• during transport / to IEC 60068-2-6		5 ... 8.4 Hz / 3.5 mm amplitude, 8.4 ... 500 Hz / 1g
• during operating phase / to IEC 60068-2-6		5 ... 8.4 Hz / 3.5 mm amplitude, 8.4 ... 150 Hz / 1g
Conducted interference as high-frequency radiation / according to IEC 61000-4-6		3 V rms in the frequency range 0.15 ... 80 MHz, modulation 80 % AM at 1 kHz, evaluation criterion A
Magnetic field immunity at power frequencies / to EN 61000-4-8		100 A/m at 50 Hz and 60 Hz, evaluation criterion A
Active power loss / total / typical	W	4
Protection against electrical shock		finger-safe
Contact reliability		80000 operating cycles at 1 A, inductive load

Installation/mounting/dimensions:

mounting position		vertical, on horizontal standard mounting rail
Material / of the enclosure		Wellamid 6600-PA66-GV 30 HWV0CP
Mounting type		Snap-on mounting on DIN rail TH 35 mm according to IEC 60715
Width	mm	108
Height	mm	91

Depth	mm	72
Connections:		
Design of the electrical connection • of the inputs and outputs • for auxiliary and control current circuit		combicon connection GMSTB 2.5 combicon connection MSTB 2.5
Design of the pin assignment • of the outputs • of the inputs		combicon connection MSTB 2.5 combicon connection MSTB 2.5
Product function / removable terminal for auxiliary and control circuit		Yes
Conductor cross-section that can be connected • solid • finely stranded • without wire end processing • with wire end processing	mm ² mm ² mm ²	0.5 ... 2.5 0.5 ... 2.5 0.5 ... 2.5
AWG number • as encoded connectable conductor cross-section		20 ... 14
Certificates/approvals:		
Verification of suitability		CE
Further information:		
Information- and Downloadcenter (Catalogs, Brochures,...) http://www.siemens.com/industrial-controls/catalogs		
Industry Mall (Online ordering system) http://www.siemens.com/industrial-controls/mall		
CAX-Online-Generator http://www.siemens.com/cax		
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/6FE1021-3CM10-2AA0/all		
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=6FE1021-3CM10-2AA0		



last change:

Jul 28, 2014