

ConnectPower CP DC UPS 24V 40A

Weidmüller Interface GmbH & Co. KG

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The UPS control unit together with the associated battery module and the power supply unit form a complete DC UPS system. In normal operation, the input voltage from the UPS control unit is connected directly to the load. In the event of a mains failure (drop of the DC input voltage) the system switches instantly to battery operation.

Once the mains supply has been restored, the system switches back to normal operation and the battery is fully recharged by the integrated charger.

Three relay outputs, as well as three additional active transistor outputs and a control input to lock battery operation, provide full remote control by means of SPS or DCS control. Numerous modes of operation and an easy-to-use status display provide rapid fault diagnosis and optimum customisation to the application.

General ordering data

Type	CP DC UPS 24V 40A
Order No.	1370040010
Version	UPS control unit
GTIN (EAN)	4050118202342
Qty.	1 pc(s).

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Technical data
Dimensions and weights

Width	66 mm	Width (inches)	2.598 inch
Height	130 mm	Height (inches)	5.118 inch
Depth	150 mm	Depth (inches)	5.905 inch
Net weight	1,051.8 Kg		

Temperatures

Humidity	5...95 %, no condensation	Operating temperature, max.	70 °C
Operating temperature, min.	-25 °C	Storage temperature, max.	85 °C
Storage temperature, min.	-40 °C	Operating temperature	-25 °C...70 °C
Storage temperature	-40 °C...85 °C		

Battery module

Parallel connection option	yes, max 2.	Rated voltage	24 V
Storage medium	3.4 Ah, 7.2 Ah, 12 Ah, 17 Ah, Selectable with rotary switch		

Integrated battery charger

Battery availability test	every minute	Charging current	0.15 CA
Charging feature	IU characteristic curve	Charging voltage (temperature compensated)	27.48 V @ 20°C
Temperature coefficient	-48 mV / °C		

Operating interfaces and control inputs

DIP switch	Inversion of transistor outputs, Operation without temperature probe	Remote disconnection (Interlock)	Yes
Selector switch battery	3.4 Ah, 7.2 Ah, 12 Ah, 17 Ah, No Battery, Service	Selector switch buffer times	0.5 min, 1 min, 3 min, 5 min, 10 min, 20 min, 30 min, 45 min, ∞, ∞ w/0
Temperature probe	NTC 100 kΩ		

Input

DC current consumption	max. 200 mA (without battery), max. 0.5 A (with fully charged battery)	DC input voltage range	20...30 V DC
Input current	≤ 43 A	Input fuse (internal)	Yes
Max. approved input current	52 A	Wire connection method	Screw connection

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output

Continuous output current @ U_{Rated}	48 A @ 45 °C, 24 A @ 70 °C, 40 A @ 60 °C	Output current, max.	48 A
Output voltage	$V_o = V_{in} - 0.2$ V normal operation (I_{max}), $V_o = V_{in} - 0.3$ V battery operation (I_{max})	Overload protection	Yes
Parallel connection option	yes, max 2., Yes, with diode module	Power reserve at nom. voltage	48 A for 1 min, ED = 5 %
Protection against inverse voltage	Yes	Rated (nominal) output current @ U_{Nom}	40 A @ 60 °C
Rated output voltage	24 V DC \pm 1 %	Residual ripple, breaking spikes	< 50 mV _{SS} @ 24 V DC, I_N
Temperature coefficient	- 48 mV / °C	Temperature probe	NTC 100 k Ω
Wire connection method	Screw connection		

General data

Buffer times	Depending on the connected battery	Clip-in foot	metal
Current limiting	> 120 % I_N	Degree of efficiency	\geq 96% normal mode, battery is being charged, \geq 98% normal mode, battery is charged, \geq 98% buffer mode
Housing version MTBF	Metal, corrosion resistant	Humidity	5...95 %, no condensation
Operating temperature	> 500,000 h acc. to IEC 1709 (SN29500) -25 °C...70 °C	Mounting position, installation notice	Horizontal on TS35 mounting rail. 50 mm of clearance at top & bottom for air circ. Can mount side by side with no space in between.
Protection against reverse voltages from the load	32...34 V DC	Power loss	< 10 W
Short-circuit protection	Yes	Protection degree	IP20
Surge voltage category	III	Storage medium	3.4 Ah, 7.2 Ah, 12 Ah, 17 Ah, Selectable with rotary switch

EMC / shock / vibration

Noise emission acc. to EN55022	Class B	Vibration resistance IEC 60068-2-6	2.3 g
Interference immunity test acc. to	EN 61000-4-2 (ESD) EN 61000-4-3 and EN 61000-4-8 (fields) EN 61000-4-4 (burst) EN 61000-4-5 (surge) EN 61000-4-6 (conducted) EN 61000-4-11 (dips)	Shock resistance IEC 60068-2-27	30 g in all directions

Insulation coordination

Class of protection	III, with no ground connection, for SELV	Insulation voltage	1 kV DC
Pollution severity	2	Surge voltage category	III
electrical isolation, input-earth	1 kV	electrical isolation, output-earth	1 kV

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Technical data
Electrical safety (applied standards)

Electrical machine equipment	Acc. to EN60204	For use with electronic equipment	Acc. to EN50178 / VDE0160
Protection against dangerous shock currents	Acc. to VDE0106-101	Protective separation / protection against electrical shock	VDE0100-410 / acc. to DIN57100-410
Safety extra-low voltage	SELV acc. to EN60950, PELV acc. to EN60204	Safety transformers for switch-mode power supplies	nach EN61558-2-16

Connection data (input)

Conductor cross-section, AWG/kcmil , max.	6	Conductor cross-section, AWG/kcmil , min.	26
Conductor cross-section, flexible , min.	0.5 mm ²	Conductor cross-section, rigid , max.	16 mm ²
Conductor cross-section, rigid , min.	0.5 mm ²	Reverse polarity protection	Yes
Tightening torque, max.	1.5 Nm	Tightening torque, min.	1.2 Nm
Wire connection cross section, flexible (input), max.	16 mm ²		

Connection data (output)

Conductor cross-section, AWG/kcmil , max.	6	Conductor cross-section, AWG/kcmil , min.	26
Conductor cross-section, flexible , max.	16 mm ²	Conductor cross-section, flexible , min.	0.5 mm ²
Conductor cross-section, rigid , max.	16 mm ²	Conductor cross-section, rigid , min.	0.6 mm ²
Tightening torque, max.	1.5 Nm	Tightening torque, min.	1.2 Nm

Connection data (signal)

Wire connection cross-section, flexible (signal), max.	16 mm ²	Wire connection cross-section, flexible (signal), min.	0.5 mm ²
Wire connection method	Screw connection	Wire cross-section, AWG/kcmil , max.	12
Wire cross-section, AWG/kcmil , min.	26	Wire cross-section, solid , max.	16 mm ²
Wire cross-section, solid , min.	0.5 mm ²		

Signalling

Floating contact	Yes	Status indicator	Three-colour LED: battery capacity > 85% green, > 40% yellow, > 20% red, < 20% red (blinking), Green/yellow LED: normal / buffering, Yellow/red LED: temperature alarm / alarm, Yellow/red LED: switch-off / battery fault
Status relay (max. load)	Fault (alarm) (30 V AC/DC 0.1 A), Battery operation (buff.) (30 V AC/DC 0.1 A), Laden (Charg.) (30V AC/DC 0,1A)		



Data sheet

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Approvals

Institute (GERMLLOYD)		Certificate No. (GERMLLOYD)	61934-14
Institute (cULus)		Certificate no. (cULus)	E258476

Classifications

ETIM 6.0	EC002850	eClass 6.2	27-04-06-03
eClass 7.1	27-04-06-03	eClass 8.1	27-04-06-03
eClass 9.0	27-04-06-03	eClass 9.1	27-04-92-01

Approvals

Approvals	
ROHS	Conform

Downloads

Approval/Certificate/Document of Conformity	DE_PA5200_160310_004.pdf
Brochure/Catalogue	CAT 4.3 ELECTR 15/16 EN
Engineering Data	EPLAN_WSCAD
User Documentation	Operating instructions