



# 2CP405

Compact-Power Blockline™



# Technical specifications

## Type

## 2CP405

Part number

61020405


### Electrical Data

Nominal voltage	2 V	
Number of cells	1	
Rated capacity C <sub>10</sub> to 1.80 Vpc at 20 °C	406 Ah	
Rated capacity C <sub>8</sub> to 1.75 Vpc at 25 °C	419 Ah	
Current/Power for 0.5 h back-up time 1.65 Vpc 20 °C	502 A	904 W
Current/Power for 1.0 h back-up time 1.67 Vpc 20 °C	286 A	539 W
Current/Power for 2.0 h back-up time 1.80 Vpc 20 °C	155 A	292 W
Current/Power for 4.0 h back-up time 1.80 Vpc 20 °C	91.7 A	164 W
Current/Power for 8.0 h back-up time 1.80 Vpc 20 °C	50.4 A	92 W
Current/Power for 10.0 h back-up time 1.80 Vpc 20 °C	40.6 A	77 W
Current/Power for 20.0 h back-up time 1.80 Vpc 20 °C	19.9 A	44 W
Conversion to capacity at 25 °C (77 °F)	20 °C Ah x 1.03 (t > 1 h)	
Internal resistance (± 10%) to IEC/EN 60896-21	0.25 mΩ	
Short circuit current (± 10%) to IEC/EN 60896-21	7.8 kA	
Self discharge at 20 °C to IEC/EN 60896-21	max. 3%/month	
Heat loss during float service at 20 °C	≈ 0.41 W	

### Mechanical Data

Weight ready for use	36.5 kg	
Height of monobloc	283 mm	
Height over terminal connector	298 mm	
Width	177 mm	
Depth	282 mm	
Number of terminals	1⊕/1⊖	
Dimension of connector screw hole	M8	
Suggested/maximum cable cross-section	185 mm <sup>2</sup>	
Connection torque	11 Nm	
Terminal insulation class according to IEC/EN 60529	IP20	
Diameter of diagnostic hole for voltage probe	2 mm Ø	
Connector (copper, tin-coated) rigid and insulated	90 mm <sup>2</sup>	
Complete connector and terminal connection accessoires	available	

### Environmental Data

Shelves, cabinets and racks	available upon request
Installation	vertically/horizontally
Distance for cooling and ventilation (preset with the rigid connectors)	10 mm
Flame retardancy rating case/cover according to Underwriters Laboratories (UL) USA	ABS – UL 94 HB (std.) ABS-PC – UL 94 V-0 with LOI > 32%, halogen-free
Flame barriers at vents	installed
UL file number 	MH 26065
Service life expected at 20 °C	15 years

# Operating specifications

Figure 1



Figure 2

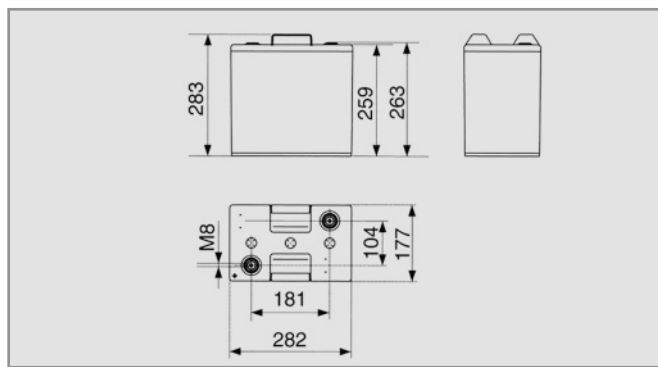
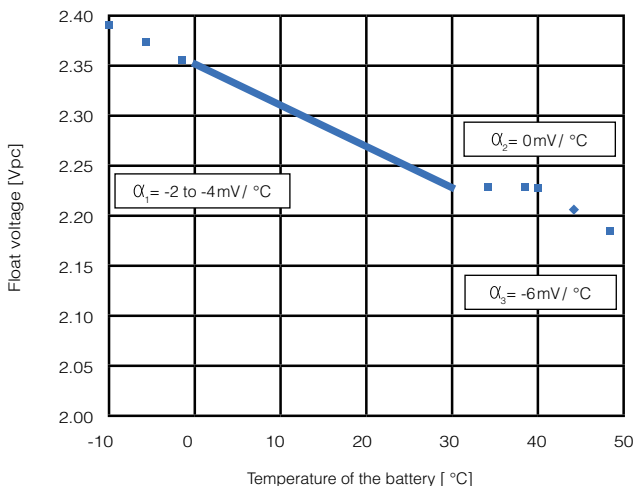


Figure 3



Temperature in °C	Temperature in °F	Percent of the rated capacity
40	104	104.8
35	95	104.2
30	86	103.6
25	77	103.0
20	68	100.0
15	59	97.0
10	50	94.0
5	41	90.0
0	32	84.7
-5	23	77.7
-10	14	69.4
-15	5	60.0
-20	-4	49.6
-25	-13	38.4
-30	-22	25.6
-35	-31	14.1
-40	-40	2.1

## Battery installation and operation

Float voltage setting according to DIN 41773

Float voltage with daily discharge cycles

CC-CV charge current according to DIN 41773

Float voltage compensation in function of temperature

Boost charge

Air exchange

Preferred operating temperature range

Maximum long term operating temperature

Maximum short term operating temperature (for hours)

Minimum fully charged operating temperature

Stand-by mode with constant voltage float operation according to EN 50272-2:2001

2.25 Vpc ± 1% at 20 to 25 °C (68 to 77 °F)

2.29 Vpc - 2.30 Vpc (no correction factor needed)

unlimited, otherwise 3 · I<sub>10</sub> max. if T > 25 °C

-2 to -4 mV/°C or with profile as displayed figure 3

Not needed, if desirable then 2.35 Vpc and I<sub>10</sub> max. for 24 h max. at t < 30 °C

As a VRLA battery according to EN 50272-2:2001

$Q = 0.05 \cdot N_{\text{cells}} \cdot I_{\text{gas}} \cdot C_{\text{Ah C10}} \cdot 10^{-3} [\text{m}^3/\text{h}]$

I<sub>gas</sub> = 1 (at 2.25 Vpc) I<sub>gas</sub> = 8 (at 2.40 Vpc)

e.g. 48 V: 0.4872 m<sup>3</sup>/h = 17.21 cu.ft/h (at 2.25 Vpc)

Between 15 °C (68 °F) and 25 °C (77 °F)

+40 °C (104 °F) with ventilation assured (reduced service life)

+50 °C (122 °F) with ventilation assured (reduced service life)

-40 °C (-40 °F)

