



Monitoring Unit

UPC4 Master

KEY FEATURES

- **Extensive battery management**
- **DIN Rail mounting**
- **Easy in use and programming**
- **Free programmable signalling concept**
- **CAN-Bus interface**
- **Remote control and monitoring**
- **Modbus integrated**

APPLICATIONS

Battery-backed DC power supply systems in all areas of industry, telecommunication, power generation and power distribution.

PRODUCT DESCRIPTION

Monitoring units of the new UPC4 Master series are integrated units for control, monitoring and signaling of battery-backed DC power supply systems. The unit is easy to use and programmable via display panel or RS232/Ethernet interface in combination with PC software. On the basis of a free programmable signal matrix, the customer is able to configure several alarms to groups and which of all the signaling outputs are to be used.

The UPC4 Master is the communication center of the modular UPC4 structure. The control of the rectifier modules is realized via CAN communication bus. Due to the system wide CAN communication concept each of our power modules such as DC/DC converters, inverters and static bypass switches can additionally be monitored by the UPC4 Master. Additional input and output CAN modules, such as Mains Monitoring Board, Fuse Monitoring Board, Digital Input Board, Relay Board etc. are available. All these extensions are configurable and controlled by the UPC4 Master. As a special extension module the UPC4 Basic unit is available. It can be placed as close as possible to the measurement point and transmits the measured values digitally via CAN. Due to this, no long measurement wires are necessary. The UPC4 Master is able to support up to eight Basic units in the same system.

By connecting additional CAN modules to the UPC4 Master it is possible to set up several configurations, please see reverse side: "Options".

For remote control PC connection, external modem, SNMP or Modbus (Profibus is planned) can be used.

For the proprietary communication protocol special PC software (Multi Management Tool) for remote monitoring, controlling and parameter setting is available.



TECHNICAL DATA

Type	Monitoring Unit UPC4 Master
Article code	301-004-395.00
Supply voltage	3 x redundant power supply inputs 24 VDC ±10 % , supplied by external power supply units DC/DC or AC/DC
Voltage measuring range	0-320 VDC by UPC4 Basic unit
Current measuring range	±0-60 mV (shunt value programmable) by UPC4 Basic unit
Power consumption	Max. 25 W
LED indications	5 LEDs
Relay outputs	3 (isolated; max. 0.5 A @ 60 VDC), plus one per UPC4 Basic unit (isolated; max. 0.1 A @ 300 VDC)
Optocoupler output	One LVD optocoupler control output per UPC4 Basic unit
Interfaces:	
Ethernet	RJ45 10/100 Mbit
CAN interface	2 x RJ12 (100 kbit) and 2 x RJ45 (125 kbit); proprietary CAN protocol
Modem connection (not supported yet)	9-pole SUB-D male RS232 (modem optional, analogue, ISDN or GPRS/GSM)
Fieldbus (Modbus) connection	One 4-pole MSTB, 5 mm and one 9-pole SUB-D female RS485
Controller functions	Temperature compensated float charge, equalize charge, boost charge, battery test; boost charge automatic (power, voltage and time related), LVD control, PLD control; time controlled battery test; charge current limitation; drop diode control (double-stage)
Monitoring functions	Battery voltage, battery tap voltage, battery charge voltage, battery charge current, battery operation; isolation fault, battery voltage low, battery voltage high, CAN-Bus status, CAN-connected module status; external alarm loops, internally switchable isolation measurement, six general voltages, six general currents, six general resistors, six general temperatures
Event history function	Text message of active faults; stack memory for the last 500 faults/events; stacking "coming/going" with time stamp (permanent)
Battery test memory	Storage of the last 16 battery test results; storage of the last battery test curve
RTC with time and date	Yes
Control buttons	Two (for future functions)
Languages	German, English, Swedish; other versions loadable on demand
Ambient temperature	Operation: -20 °C to +45 °C; non condensing; storage: -40 °C to +85 °C
Cooling	Convection cooling
Max. installation altitude	1500 m
Audible noise	<30 dBA
Type of construction	DIN Rail mounting
Dimensions (W/H/D)	47/103/108 mm
Weight	approx. 0.8 kg
Type of enclosure / Protection class	IP20/III
Surfaces	Stainless steel, brush-finished, neutral, black print RAL 9005
CE conformity	yes
Compliance to safety standards	EN60950-1; EN50178; EN60146
Compliance to EMC standards	EN55011/22 class "B"; EN61000-4 T2-5

OPTIONS

Article code	Designation
302-UP4-DCDC.LV	Power supply, DIN rail mounting, Vi=18-75 VDC; Vo=24 VDC, Imax=2,5 A
302-UP4-DCDC.HV	Power supply, DIN rail mounting, Vi=85-375 VDC; Vo=24 VDC, Imax=2,5 A
301-004-395.10	Monitoring Unit UPC4 Basic, 3 x voltage (0-300 V), 3 x current (60 mV shunt), 2 x temperature, one output relay, one LVD optocoupler control output
302-UP3-MMT.00	Configuration software "Multi Management Tool" (MMT)
302-003-RDD.00	Remote display for door mounting; connection via CAN interface
302-003-RDMD.00	Remote display for door mounting with mimic diagram; connection via CAN interface
302-DCC-0MM.00	Mains monitoring board 1/3 phase; DIN rail module; connection via CAN interface
302-DCC-0BM.00	Battery monitoring board DCC-BMB (for one additional battery string; V, V/2, I, T); DIN rail module; max. six modules DCC-BMB applicable
302-DCC-DI8.00	Signalling board with 8 digital alarm inputs; DIN rail module; connected via CAN interface
302-DCC-0RB.00	Relay board with 6 isolated signalling outputs; DIN rail module; connected via CAN interface
302-DCC-0FM.00	Fuse monitoring board (20 fuses, 24-60 VDC, 1-pole); open frame
302-UP3-0SW.02	SNMP monitoring software (Win)
TBD	Analog modem, GSM, DIN rail, VDC

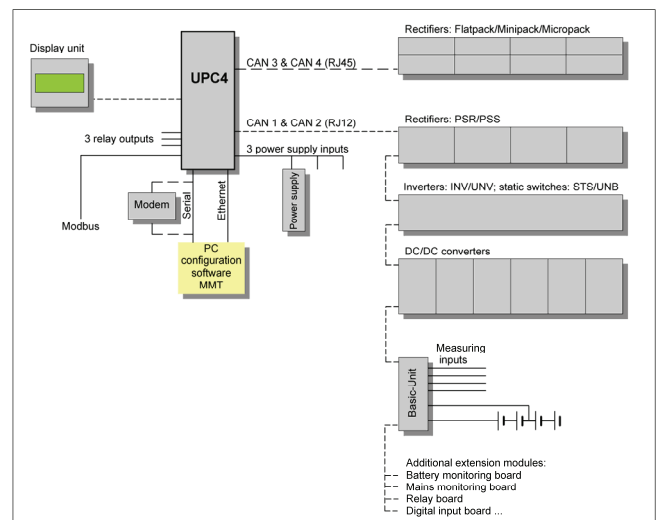


Diagram of an UPC4-controlled system

DS_UPC4_Master_E_R00_2011-01-06 - Subject to change without notice - Eltek Valere Deutschland GmbH

Eltek Valere Deutschland GmbH
 Schillerstrasse 16
 D-32052 Herford
 Tel: +49 52 21 17 08 200
 info.industrial@eltekvalere.com
 www.eltekvalere.com

Finland
 Eltek Energy Oy
 Tel: +35 820 779 88 20
France
 Eltek - SFEE SA
 Tel: +33 562 340 930
Germany
 Eltek Valere Industrial GmbH
 Tel: +49 52 21 17 08 200
 Eltek Valere Deutschl. GmbH
 Tel: +49 694 2002 0

Norway
 Eltek Valere AS
 Tel: +47 32 20 32 00
Poland
 OOO Eltek Polska Sp. Z.o.o.
 Tel: +48 914 852 440
Russia
 OOO Eltek St. Petersburg
 Tel: +78 123 321 117
Slovakia
 Eltek Energy Slovakia s.r.o
 Tel: +42 144 520 1607

Spain
 Eltek Energia S.A.
 Tel: +34 914 920 660
Sweden
 Eltek Energy AB
 Tel: +46 862 664 20
 Aliab DC Systems AB
 Tel: +46 54 68 81 50
United Kingdom
 Eltek Energy (UK) Ltd
 Tel: +44 144 22 193 55

Australia
 Eltek Pacific Pty Ltd
 Tel: +61 294 794 200
Bangladesh
 Eltek Energy Pte Ltd
 Tel: +88 017 2097 097
India
 Eltek SGS Pvt Ltd
 Tel: +91 124 221 00 18
Malaysia
 Eltek Energy (M)Sdn Bhd
 Tel: +60 179 815 866/74 552

Pakistan
 Eltek Energy AS Pakistan
 Tel: +92 512 853 149
Philippines
 Eltek Energy Incorporated
 Tel: +63 291 063 55
Singapore
 Eltek Energy Pte Ltd
 Tel: +65 773 23 26
Thailand
 Eltek Energy Incorp 2005 Ltd
 Tel: +66 294 369 05

UAE
 Eltek Middle East
 Tel: +97 148 871 176
China
 Eltek Energy Technology Ltd
 Tel: +86 769 226 511 08
Hong Kong
 Eltek Energy Ltd
 Tel: +85 228 982 689
Brazil
 Eltek Sistemas de Energia
 Tel: +55 116 487 56 56

Colombia
 Eltek Energy LLC
 Tel: +57 162 216 91
USA
 Eltek Energy LLC
 Tel: +18 154 599 100
Mexico
 Eltek Energy International
 Tel: +52 55 53 74 1842
Peru
 Eltek Energy de Peru SRL
 Tel: +51 142 192 71