## **EN54/LED** series power supply unit Power supply for fire alarm systems 27,6 V DC



CODE: **EN54-5A40** v.1.1/VIII TYPE: EN54 27,6V/5A/2x40Ah

power supply unit for fire alarm systems

**EN\*\*** 





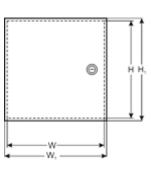


Power supply unit for fire systems used in building industry.
Declared performance: Fire safety.
Certificate of constancy of performance: 1438-CPR-0385
Certificate of admittance: 3724/2019
Conformity: EN 54-4:1997+AC:1999+A1:2002+A2:2006
EN 12101-10:2005+AC:2007

EN 12101-10:2005+AC:2007









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"This product is suitable for the systems designed in compliance with the standards EN 54-4 and EN 12101-10"

Requirements	Requirements according to standards	PSU EN54-5A40
External Power Supply failure indication	YES	YES
Two independent power supply outputs protected against short-circuit	YES	YES
Temperature-compensated battery charging	YES	YES
Measurement of the resistance of the battery circuit	YES	YES
Low battery indication	YES	YES
Deep discharge battery protection	YES	YES
Protection against short-circuit of the battery terminals	YES	YES
Blown battery fuse indication	YES	YES
Charging circuit failure indication	YES	YES
Low output voltage indication	YES	YES
High output voltage indication	YES	YES
Indication of power supply failure	YES	YES
Overvoltage protection	YES	YES
Short-circuit protection	YES	YES
Overload protection	YES	YES
Output of collective failure ALARM	YES	YES
EPS technical output	YES	YES
APS technical output	YES	YES
PSU technical output	-	YES
Input of an external failure indication EXTi	-	YES
Controlled relay output EXTo	-	YES
Remote battery test	-	YES
~230 V mains supply voltage measurement	-	YES
LED optical indication	-	YES
Tamper indicating enclosure opening	-	YES

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#### **PSU features:**

- In accordance with standards:
   EN 54-4:1997+AC:1999+A1:2002+A2:2006,
   EN 12101-10:2005+AC:2007
- 27,6 V DC/ 5 A uninterruptible power supply
- battery housing for two 40 Ah/12 V batteries
- independently protected outputs AUX1 and AUX2
- high efficiency 84%
- low level of voltage ripple
- · microprocessor-based automation system
- intelligent PSU overload protection
- · measurement of the resistance of the battery circuit
- · automatic temperature-compensated charging
- · battery test
- · two-stage battery charging process
- · accelerated battery charging
- · monitoring of the continuity of the battery circuit
- · monitoring of the battery voltage
- · monitoring of the battery fuse
- monitoring of charging and maintenance of the batteries
- deep discharge battery protection (UVP)
- battery overcharge protection
- battery output protection against short-circuit and reverse connection
- · monitoring of the load current
- · output voltage control
- fuse monitoring of AUX1and AUX2 outputs
- ~230 V mains supply voltage measurement
- "SERIAL" communication port with implemented MODBUS RTU protocol
- Power Security" is a free application for remote monitoring of power supplies (for PC and Android Phones)

- remote monitoring (options: Ethernet, RS485)
- · remote battery test (additional modules required)
- cooperation with optional EN54-LB4 or EN54-LB8 fuse modules
- · optical indication of PSU overload OVL
- · acoustic indication of failure
- adjustable delay for ~230 V power loss indication
- relay output of collective failure ALARM
- · input of collective failure EXTi
- controlled relay output EXTo
- technical inputs/outputs with galvanic isolation
- EPS technical output indicating ~230 V power loss
- PSU technical output indicating PSU failure
- APS technical output indicating battery failure
- · internal memory of PSU operating status
- optical indication LED panel
  - · output current readings
  - output voltage readings: AUX1, AUX2
  - · resistance of the battery circuit
  - ~230 V mains voltage readings
  - · failure codes with history
- protections:
  - SCP short-circuit protection
  - OLP overload protection
  - OHP overheat protection
  - OVP overvoltage protection
  - Surge protection
  - Antisabotage protection Tamper
- closing the enclosure lock
- · convection cooling
- warranty 5 years from the production date

#### **General description**

The buffer power supply has been designed for an uninterrupted supply of fire alarm systems, smoke and heat control systems, fire protection equipment and fire automatics requiring stabilized voltage of 24 V DC (± 15%). The PSU is fitted with two independently protected outputs AUX1 and AUX2, which supply voltage of **27,6 V DC** with a total output current:

Continuous operation
Output current Imax a=3 A

Instantaneous operation
Output current Imax b=5 A

In case of power loss, the PSU switches to battery power, providing uninterruptible power supply. The PSU is enclosed in a metal casing (RAL 3001 - red) with battery housing for two 40 Ah/12 V batteries. The PSU works with maintenance-free lead acid batteries made with AGM technology or gel technology.

# **EN54/LED** series power supply unit Power supply for fire alarm systems 27,6 V DC

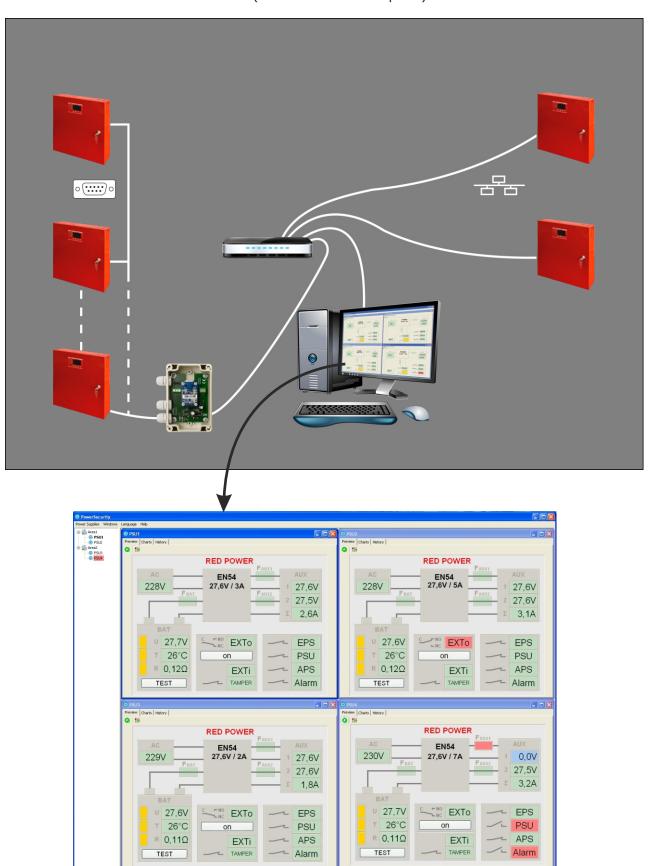


Functional class EN 1211-10:2007  Amains supply  - 230 V  Current consumption  Output voltage at 20 °C  Overvoltage protection OVP  Hordward Fax melting fuse (failure requires fuse replacement)  Output voltage (AUX+ disconnection)  Final protection outputs  - APS ELT; indicating but failure  - APS ELT; indicating but failure  - APS ELT; indicating but failure  - APS ELT; indicating PSU failure  - APS ELT; i	Functional class EN 40404 40:0007	
Current consumption  Option  Output current  Maximal resistance of the battery circuit  Ripple voltage  Current consumption by the PSU during battery-assisted operation  Battery charging current  Current consumption by the PSU during battery-assisted operation  Battery charging current  Caution! If the power supply is connected with the communication interface or fuse models, additional current consumption should be considered.  2 A  4 Apple voltage  Current consumption by the PSU during battery-assisted operation  Battery charging current  Destroy voltage indication  Overvoltage protection over  Eathery voltage indication  Overvoltage protection OVP  Hardware - Software  Battery charging tradection OLP  Hardware - Software  PSU LTI; indicating py Distulture  - APS FLT; indicating py Distulture  - APS FLT; indicating battery failure  - PSP LT; indicating oblicative failure  - PSP LT; indicating oblicative failure  - ALARAM; indicating collective failure  - ALARAM; indicating collective failure  - ALARAM; indicating collective failure  - PSP LT; indicating py Distulture  - ALARAM; indicating collective failure  - PSP LT; indicating position of the failure approximately by failure approximately by failure indicating account of pailure indication indication:  Optical in	Functional class EN 12101-10:2007	A
Power fraguency   50 Hz		
FSUs power   139 W   Efficiency   84%   22,0 V+ 27,6 V DC - buffer operation   22,0 V+ 27,6 V	•	,
Section   Sect		
Section   Sect	PSU's power	138 W
Court voltage at 20 °C   22.0 V > 7.6 V DC - buffer operation   20.0 V > 7.6 V DC - buffer operation   20.0 V > 7.6 V DC - buffer operation   20.0 V > 7.6 V DC - buffer operation   20.0 V > 7.6 V DC - buffer operation   20.0 V > 7.6 V DC - buffer operation   20.0 V > 7.6 V DC - buffer operation   20.0 V > 7.6 V DC - buffer operation   20.0 V > 7.6 V DC - buffer operation   20.0 V > 7.6 V DC - buffer operation   20.0 V > 7.6 V DC - buffer operation   20.0 V > 7.6 V DC - buffer operation   20.0 V > 7.6 V DC - buffer operation   20.0 V > 7.6 V DC - buffer operation   20.0 V > 7.6 V DC - buffer operation   20.0 V > 7.6 V DC - buffer operation   20.0 V > 7.6 V DC - buffer operation   20.0 V > 7.6 V DC - buffer operation   20.0 V DC - buf		84%
Output current    20.0 V* 27.6 V DC — battery-assisted operation   Continuous operation:   Imax as 3 A   Instantaneous operation:   Imax b=5 A		
Output current    Maximal resistance of the battery circuit   300m Ohm   Imax b=5 A		
Instantaneous operation: Imax b=5 A	Output current	
Maximal resistance of the battery circuit   300m Ohm   Ripple voltage   90m/ p- max.   = 78m A   Caution   5 module, additional current consumption by the PSU during battery-assisted operation   2 A   Caution   5 module, additional current consumption should be considered.   2 A   40mV/ °C (-5 °C + 40 °C)   40mV/ °	output duriont	
Ripple voltage Current consumption by the PSU Caution! If the power supply is connected with the communication interface or fuse module, additional current consumption should be considered.  2 A Coefficient of temperature compensation of the battery voltage indication  Ubst < 23 V, during battery mode U>30.5 V, disconnection of the buttery voltage indication  Overvoltage protection OVP  Short-circuit protection SCP F6,3 A – current limit, F <sub>AUX</sub> melting fuse (failure requires fuse replacement)  Hardware - Software  P10 A - current limit, F <sub>AUX</sub> melting fuse (failure requires fuse replacement)  U-20 V (£ 2%) - disconnection of the butteries, which is a current limit, F <sub>AUX</sub> melting fuse (failure requires fuse replacement)  Hardware - Software  P10 A - current limit, F <sub>AUX</sub> melting fuse (failure requires fuse replacement)  U-20 V (£ 2%) - disconnection (PAT) of the batteries, which is a current limit, F <sub>AUX</sub> melting fuse (failure requires fuse replacement)  U-20 V (£ 2%) - disconnection (PAT) of the batteries, which is a current limit, F <sub>AUX</sub> melting fuse (failure requires fuse replacement)  U-20 V (£ 2%) - disconnection (PAT) of the batteries, which is a current limit, F <sub>AUX</sub> melting fuse (failure requires fuse replacement)  U-20 V (£ 2%) - disconnection (PAT) of the batteries, which is a current limit, F <sub>AUX</sub> melting fuse (failure requires fuse replacement)  U-20 V (£ 2%) - disconnection (PAT) of the batteries, which is a current limit, F <sub>AUX</sub> melting fuse (failure requires fuse replacement)  U-20 V (£ 2%) - disconnection (PAT) of the batteries, which is a current limit, F <sub>AUX</sub> melting fuse (failure requires fuse replacement)  U-20 V (£ 2%) - disconnection (PAT) of the batteries, which current limit, F <sub>AUX</sub> melting fuse (failure requires fuse replacement)  U-20 V (£ 2%) - disconnection (PAT) of the batteries, use replacement)  U-20 V (£ 2%) - disconnection (PAT) of the batteries, use replacement)  U-20 V (£ 2%) - discon	Maximal resistance of the hattery circuit	<u> </u>
Current consumption by the PSU during battery-assisted operation  Battery charging current  2 A  40mV/°C (-5 °C + 40 °C)  Destricy charging current  2 A  40mV/°C (-5 °C + 40 °C)  Destricy charging current  2 A  40mV/°C (-5 °C + 40 °C)  Destricy contage indication  Ubat < 23 V, during battery mode  U>30,5 V, disconnection of the output voitage (AUX+ disconnection), automatic return  Destricy charging battery protection SCP  F6,5 A - current limit, F <sub>MX</sub> melting fuse (failure requires fuse replacement)  Hardware - Software  Battery circuit protection SCP and reverse  polarity connection  Deep discharge battery protection UVP  TAMPER output indicating enclosure opening  Technical outputs:  -EPS F1, indicating AC power failure  -PSU F1, indicating AC power failure  -PSU F1, indicating battery failure  -PSU F1, indicat		
Caution If the power supply is connected with the communication interface or fusing battery-assisted operation fuse module, additional current consumption should be considered.  2 A  Coefficient of temperature compensation of the battery voltage indication  Overvoltage protection OVP  U>30,5 V, disconnection of the output voltage (AUX+ disconnection), automatic return  Short-circuit protection SCP  F6,3 A – current limit, F <sub>AUX</sub> melting fuse (failure requires fuse replacement)  Overload protection OCP  Battery circuit protection SCP on dreverse polarity connection  Deep discharge battery protection UVP  TAMPER output indicating enclosure opening  Technical outputs:  - APS FLT; indicating AD power failure  - PSP LT; indicating AD power failure  - PSP LT; indicating AD power failure  - ALARM; indicating AD power failure  - ALARM; indicating AD power failure  - PSI LT; indicating AD power failure  - ALARM; indicating AD power failure  - PSI LT; indicating AD power failure  - ALARM; indicating AD power failure  - ALARM; indicating AD power failure  - ALARM; indicating AD power failure  - PSI LT; indicating AD power failure  - ALARM; indicating AD power failu	Rippie voitage	
fuse module, additional current consumption should be considered.  Battery charging current  2 A  Coefficient of temperature compensation of the battery voltage indication  Ubat < 23 V, during battery mode  Uvalos 5 V, disconnection of the output voltage (AUX+ disconnection), automatic return  Voltage protection OVP  Short-circuit protection SCP  F6.3 A – current limit. F <sub>BAY</sub> melting fuse (failure requires fuse replacement)  Hardware - Software  Pattery circuit protection SCP and reverse polarity connection  Deep discharge battery protection UVP  TAMPER output indicating enclosure opening  Technical outputs:  - EPS FLT; indicating AC power failure  - APS FLT; indicating AC power failure  - APS FLT; indicating Battery failure  - ALARM; indicating collective failure  - ALARM; indicating collective failure  - ALARM; indicating policetive failure  - ALARM; indicating policetive failure  - ALARM; indicating policetive failure  - ALARM; indicating POLICETION (AUX)  - Type - relay: 1 A@ 30 V DC/50 V AC  CAUTION! In Fig. 2 the set of contacts shows a potential-free status of the relay, which corresponds to power supply failure.  Voltage, ONT - 10-30 V DC  Voltage, ONT -	Current consumption by the PSU	
Eattery charging current   2.A	during battery-assisted operation	
Coefficient of temperature compensation of the battery voltage indication		·
Section   Sect		2 A
Ubat < 23 V, during battery mode   Ubat < 23 V, disconnection of the output voltage (AUX+ disconnection), automatic return   Short-circuit protection SCP   F6,3 A - current limit, F <sub>Max</sub> melting fuse (failure requires fuse replacement)   Deveload protection OLP   Hardware - Software     Battery circuit protection SCP and reverse polarity connection   UPP   Hardware - Software     Battery circuit protection SCP and reverse polarity connection   UPP   U-20 V (£ 2%) - disconnection (FBAT) of the batteries,     TAMPER output indicating enclosure opening   Urc20 V (£ 2%) - disconnection (FBAT) of the batteries,     Leps + LT; indicating pattery failure   - type - electronic, max 50mA/30 V DC, galvanic isolation 1500 V <sub>RMS</sub>     Leps + LT; indicating battery failure   - type - electronic, max 50mA/30 V DC, galvanic isolation 1500 V <sub>RMS</sub>     Leps + LT; indicating pattery failure   - type - electronic, max 50mA/30 V DC, galvanic isolation 1500 V <sub>RMS</sub>     Leps + LT; indicating pattery failure   - type - electronic, max 50mA/30 V DC, galvanic isolation 1500 V <sub>RMS</sub>     Leps + LT; indicating pattery failure   - type - electronic, max 50mA/30 V DC, galvanic isolation 1500 V <sub>RMS</sub>     Leps + LT; indicating pattery failure   - type - electronic, max 50mA/30 V DC, galvanic isolation 1500 V <sub>RMS</sub>     Leps + LT; indicating pattery failure   - type - relay: 1 A@ 30 V DC/50 V AC     CAUTION! In Fig. 2 the set of contacts shows a potential-free status of the relay, which corresponds to power supply failure.    - type - relay: 1 A@ 30 V DC/50 V AC    - type - relay: 1 A@ 30 V DC/50 V AC    - type - relay: 1 A@ 30 V DC/50 V AC    - type - relay: 1 A@ 30 V DC/50 V AC    - type - relay: 1 A@ 30 V DC/50 V AC    - type - relay: 1 A@ 30 V DC/50 V AC    - type - relay: 1 A@ 30 V DC/50 V AC    - type - relay: 1 A@ 30 V DC/50 V AC    - type - relay: 1 A@ 30 V DC/50 V AC    - type - relay: 1 A@ 30 V DC/50		-40m\// °C (-5 °C ÷ 40 °C)
U=30.5 V, disconnection of the output voltage (AUX+ disconnection), automatic return		
Section   Sect	Low battery voltage indication	
Section   Sect	Overvoltage protection OVD	U>30,5 V, disconnection of the output voltage ( AUX+ disconnection), automatic
Short-circuit protection SCP	Overvoitage protection OVP	
Hardware - Software	Short-circuit protection SCP	
Battery circuit protection SCP and reverse polarity connection   Deep discharge battery protection UVP   U-20 V (± 2%) — disconnection (+BAT) of the batteries.		
Dolarity connection		
Deep discharge battery protection UVP		F10 A- current limit, F <sub>BAT</sub> melting fuse (failure requires fuse replacement)
TAMPER output indicating enclosure opening   Microswitch TAMPER   Technical outputs: - EPS FLT; indicating AC power failure - PSU FLT; indicating PSU failure - PSU FLT; indicating PSU failure - ALARM; indicating PSU failure - ALARM; indicating pSU failure - ALARM; indicating collective failure - ALARM; indicating pSU failure - ALARM; indicating collective failure  - ALARM; indicating pSU failure - ALARM; indicating collective failure  EXTI technical input  EXTI technical input  EXTO relay output  I Alaga OV DC/SD V DC Level of galvanic isolation 1500 V <sub>RMS</sub> - Voltage ON → 10+30 V DC		LIC20 V (+ 2%) — disconnection (+PAT) of the betteries
Technical outputs: - EPS FLT; indicating AC power failure - PSU FLT; indicating battery failure - PSU FLT; indicating battery failure - PSU FLT; indicating PSU failure - ALARM; indicating collective failure - ALARM; indicating to collective failure - ALARM; indication: - Type - electronic, max 50mA/30 V DC, galvanic isolation 1500 V <sub>RMS</sub> - Vpe - electronic, max 50mA/30 V DC - CAUTION! in Fig.2 the set of contacts shows a potential-free status of the relay, which corresponds to power supply failure Votage, CPF* - 0*2 V DC - Leve of galvanic isolation 1500 V <sub>RMS</sub> - Votage, CPF* - 0*2 V DC - Level of galvanic isolation 1500 V <sub>RMS</sub> - Votage, CPF* - 0*2 V DC - Votage, CPF* - 0*2 V DC - Level of galvanic isolation 1500 V <sub>RMS</sub> - 1 A@ 30 V DC/50 V AC - CAUTION! in Fig.2* the set of contacts shows a potential-free status of the relay, which corresponds to power supply failure.  - Votage, CPF* - 0*2 V DC - Level of galvanic isolation 1500 V <sub>RMS</sub> - votage collective failure - votage collective fail		
- EPS FLT; indicating AC power failure - APS FLT; indicating battery failure - PSU FLT; indicating PSU failure - ALARM; indicating pSU failure - Type - relay; 1 A@ 30 V DC/50 V AC - LYpe - relay; 1 A@ 30 V DC/50 V AC - ALATION! In Fig. 2 the set of contacts shows a potential-free status of the relay, which corresponds to power supply failure.  EXTI technical input  EXTO relay output - The Supply su		
APS FLT; indicating battery failure - PSU FLT; indicating PSU failure - ALARM; indicating collective failure  - REXTI technical input  EXTI technical input    Pye		
- APS FLT; indicating PSU failure - ALARM; indicating PSU failure - ALARM; indicating collective failure  - Type - relay; 1 A@ 30 ∨ DC/50 ∨ AC CAUTION! In Fig. 2 the set of contacts shows a potential-free status of the relay, which corresponds to power supply failure.  - Voltage , OPF − 0+2 ∨ DC Voltage , OPF − 0+2 ∨ DC Voltage , OPF − 0+2 ∨ DC Level of galvanic isolation 1500 ∨ <sub>RMS</sub> EXTo relay output  - LEDs on the PCB of the power supply unit, - LED panel  - output current readings - output voltage readings: AUX1, AUX2 - resistance of the battery circuit - mains supply voltage - failure codes and history  - FMANS - FMANS - FMANS - FMANS - FMANS - FRAIX - FAUX2 - FAUX2 - FAUX2 - FAUX2 - FAUX3 - FAUX3 - FAUX3 - FAUX3 - FAUX3 - FAUX3 - FAUX4 - FAUX5 - FAUX5 - FAUX5 - FAUX6 - FRAIX5 - FAUX7 - FAUX7 - FAUX7 - FAUX7 - FAUX8 - FAUX8 - FAUX9 - FA	- EPS FL1; indicating AC power failure	
- PSU FLT; indicating PSU failure - ALARM; indicating collective failure  - ALARM; indicating collective failure  EXTi technical input    Voltage ,ON* - 10+30 V DC	ADO ELT. In disease in the second St. 11	
- ALARM; indicating collective failure  - type - relay: 1 A@ 30 V DC/50 V AC  CAUTION! In Fig. 2 the set of contacts shows a potential-free status of the relay, which corresponds to power supply failure.  Voltage , ON* - 10+30 V DC  Voltage , ON* - 0+2 V DC  Level of galvanic isolation 1500 V <sub>RMS</sub> EXTo relay output  1 A@ 30 V DC/50 V AC  - LEDs on the PCB of the power supply unit, - LED panel  • output current readings • output voltage readings: AUX1, AUX2 • resistance of the battery circuit • mains supply voltage • failure codes and history  Acoustic indication:  - piezoelectric indicator ~75dB /0,3m  Fuses: - F_MAINS - F_BAT - F_AUX1 - F_BAT - F_AUX1 - CHARMS - CHARM		- type – electronic, max 50mA/30 V DC, galvanic isolation 1500 V <sub>RMS</sub>
CAUTION! In Fig. 2 the set of contacts shows a potential-free status of the relay, which corresponds to power supply failure.  Voltage ,OFF - 10+30 V DC Voltage ,OFF - 0+2 V DC Level of galvanic isolation 1500 V <sub>RMS</sub> EXTo relay output		tupo rolay: 1 A@ 20 V DC/50 V AC
Which corresponds to power supply failure.	- ALAKM; indicating collective failure	
Voltage _ON" - 10+30 V DC		
EXTo relay output  EXTo relay output  1 A@ 30 V DC /50 V AC  - LEDs on the PCB of the power supply unit, - LED panel  output current readings output voltage readings: AUX1, AUX2 - resistance of the battery circuit - mains supply voltage - failure codes and history  Acoustic indication:  - piezoelectric indicator ~75dB /0,3m  Fuses: - FMAINS - FBAT - F10 A /250 V - FBAX - FAUX1 - FAUX2 - F6,3 A /250 V - F6,3 A /		
Level of galvanic isolation 1500 V <sub>RMS</sub>   EXTo relay output	EVT! 4 - a land and down t	
EXTo relay output  1 A@ 30 V DC /50 V AC  - LEDs on the PCB of the power supply unit, - LED panel  • output current readings • output voltage readings: AUX1, AUX2 • resistance of the battery circuit • mains supply voltage • failure codes and history  Acoustic indication:  - piezoelectric indicator ~75dB /0,3m  Fuses:  - FMAINS - FBAT - F AUX1 - F AUX1 - F AUX2 - F 6,3 A / 250 V - SA / 250 V - F 6,3 A / 250 V - SA	EX II technical input	
- LEDs on the PCB of the power supply unit, - LED panel		
Optical indication:  - LED panel - output current readings - output voltage readings: AUX1, AUX2 - resistance of the battery circuit - mains supply voltage - failure codes and history  - Acoustic indication: - piezoelectric indicator ~75dB /0,3m  Fuses: - FMAINS - FBAT - FAUX1 - FAUX1 - FAUX2 - F6,3 A / 250 V - FAUX2 - F6,3 A / 250 V - F, AUX2 - F6,3 A / 250 V - F, AUX1 - F	EX I o relay output	$\sim$
Optical indication:  • output voltage readings: AUX1, AUX2 • resistance of the battery circuit • mains supply voltage • failure codes and history  Acoustic indication:  - piezoelectric indicator ~75dB /0,3m  Fuses:  - F <sub>MAINS</sub> - F <sub>BAT</sub> - F 10 A / 250 V - F <sub>BAIX</sub> - F 3 A / 250 V - F 4 1		
Optical indication:  - output voltage readings: AUX1, AUX2 - resistance of the battery circuit - mains supply voltage - failure codes and history  - piezoelectric indicator ~75dB /0,3m  Fuses:  - FMAINS - FBAT - F 10 A / 250 V - FAUX1 - FAUX1 - FAUX2 - F 6,3 A / 250 V - FAUX1 - FO AUX1		· ·
e resistance of the battery circuit e mains supply voltage failure codes and history  Acoustic indication:  - piezoelectric indicator ~75dB /0,3m  Fuses:  - FMAINS - FBAT - FOLIXI - FAUXI - FAUXI - FAUXI - FAUXI - FAUXI - FAUXI - TAUXI -		
e resistance of the battery circuit e mains supply voltage failure codes and history  Acoustic indication:  - piezoelectric indicator ~75dB /0,3m  Fuses:  - FMAINS - FBAT - FOLIXI - FAUXI - FAUXI - FAUXI - FAUXI - FAUXI - FAUXI - TAUXI -	Optical indication:	<ul> <li>output voltage readings: AUX1, AUX2</li> </ul>
• mains supply voltage • failure codes and history  Acoustic indication:  - piezoelectric indicator ~75dB /0,3m  Fuses:  - F <sub>MAINS</sub> - F <sub>BAIT</sub> - F 10 A / 250 V - F <sub>BAIX</sub> - F <sub>AUX2</sub> - F <sub>AUX3</sub> - F <sub>AUX4</sub> - F <sub>AUX5</sub> - F <sub>AUX6</sub> - F <sub>AUX7</sub> - F <sub>AUX7</sub> - F <sub>AUX7</sub> - F <sub>AUX7</sub> - F <sub>AUX8</sub> - F <sub>AUX9</sub> - F <sub>AU</sub>		
Failure codes and history		
Acoustic indication:  - piezoelectric indicator ~75dB /0,3m  Fuses:  - FMAINS - FBAT - F 10 A / 250 V - F 6,3 A / 250 V - FAUX2 - FAUX		
Fuses:  - F <sub>MAINS</sub> - F <sub>BAT</sub> - F 10 A / 250 V F 6,3 A / 250 V  Additional equipment (not included) - RS485 "INTR" interface; RS485 communication - Ethernet "INTE" interface; Ethernet communication - RS485-Ethernet "INTRE" interface; RS485-Ethernet communication Operating conditions - RS485-Ethernet "INTRE" interface; RS485-Ethernet communication  RS485-Ethernet "INTRE" interface; RS485-Ethernet communication - RS485-Ethern	Acoustic indication:	
- F <sub>MAINS</sub> - F <sub>BAT</sub> - F <sub>AUX1</sub> - F <sub>AUX1</sub> - F <sub>AUX2</sub> - RS485 "INTR" interface; RS485 communication - Ethernet "INTE" interface; Ethernet communication - Ethernet "INTRE" interface; RS485-Ethernet communication - RS485-Ethernet "INTRE" interface; Ethernet communication - RS485-Ethernet communication - RS485-Ethernet "INTRE" interface; Ethernet communication - RS485-Ethernet "INTRE" interface; Ethernet communication - RS485-Ethernet "INTRE" interface; Ethernet communication - RS485-Ethernet communication - RS485-Ethernet "INTRE" interface; Ethernet communication - RS485-Ethernet communication		p.o.255.55316 Indicator Tous Populi
- F <sub>BAT</sub> F 10 A / 250 V - F <sub>AUX1</sub> F 6,3 A / 250 V F 6,3 A / 250 V Additional equipment (not included) - RS485 "INTR" interface; RS485 communication - Ethernet "INTE" interface; Ethernet communication - RS485-Ethernet "INTRE" interface; RS485-Ethernet communication - RS485-Ethernet "INTRE" interface; RS485-Ethernet communication - RS485-Ethernet "INTRE" interface; RS485-Ethernet communication  Operating conditions - RS485-Ethernet "INTRE" interface; RS485-Ethernet communication - RS		T 6 3 A / 250 V
- F <sub>AUX1</sub> - F <sub>AUX2</sub> - F <sub>A,3</sub> A / 250 V F 6,3 A / 250 V  Additional equipment (not included) - RS485 "INTR" interface; RS485 communication - Ethernet "INTE" interface; Ethernet communication - Ethernet "INTRE" interface; RS485-Ethernet communication - RS485-Ethernet "INTRE" interface; RS485-Ethernet communication  Operating conditions - RS485-Ethernet "INTRE" interface; RS485-Ethernet communication  2nd environmental class (EN12101-10:2007), -5 °C+75 °C  Enclosure - Steel plate DC01 1,2mm, color: RAL 3001 (red)  W=420 H=420 D+D₁=182 + 8 [+/- 2mm] W₁=425 H₁=425 [+/- 2mm]  Net/gross weight - 10,2/11,5 kg - 2x40 Ah/12 V (SLA) max 400 x 180 x 175mm (WxHxD) max  Closing - Key lock - Certificates, declarations, warranty - Certificate of constancy of performance CNBOP-PIB, - Certificate of approval CNBOP-PIB, - CE, RoHS, 5 years from the production date  Notes  The enclosure does not adjoin the mounting surface so that cables can be led.		
Additional equipment (not included)  Additional equipment (not included)  Operating conditions  Enclosure  Enclosure  Enclosure dimensions  Net/gross weight  Closing  Certificates, declarations, warranty  F 6,3 A / 250 V  - RS485 "INTR" interface; RS485 communication - Ethernet "INTE" interface; Ethernet communication - Ethernet "INTRE" interface; RS485-Ethernet communication - RS485-Ethernet "INTRE" interface; RS485-Ethernet communication - RS485-Ethernet "INTRE" interface; RS485-Ethernet communication - RS485-Ethernet "INTRE" interface; Ethernet communication - RS485-Ethernet "INTRE" interface; RS485-Ethernet communication - RS485-Ethernet "INTRE" interface; Ethernet communication - RS485-Ethernet "Operation in terface; RS485-Ethernet communication - RS485-Ethernet "Operation in terface; Ethernet "Operation in terface; Ethernet "INTRE" interface; Ethernet "Operation in terface; Ethernet "INTRE" interface; Ethernet "Operation" in terface; Ethernet "Ope		
Additional equipment (not included)  - RS485 "INTR" interface; RS485 communication - Ethernet "INTE" interface; Ethernet communication - RS485-Ethernet "INTRE" interface; RS485-Ethernet communication - RS485-Ethernet "INTRE" interface; RS485-Ethernet communication  Operating conditions  2nd environmental class (EN12101-10:2007), -5 °C+75 °C  Enclosure  Steel plate DC01 1,2mm, color: RAL 3001 (red)  W=420 H=420 D+D <sub>1</sub> =182 + 8 [+/- 2mm]  W <sub>1</sub> =425 H <sub>1</sub> =425 [+/- 2mm]  Net/gross weight  10,2/11,5 kg  2x40 Ah/12 V (SLA) max. 400 x 180 x 175mm (WxHxD) max  Fitting battery  Closing  Key lock  Certificates, declarations, warranty  Certificate of constancy of performance CNBOP-PIB, Certificate of approval CNBOP-PIB, CE, RoHS, 5 years from the production date  Notes  The enclosure does not adjoin the mounting surface so that cables can be led.	_	
- Ethernet "INTE" interface; Ethernet communication - RS485-Ethernet "INTRE" interface; RS485-Ethernet communication - RS485-Ethernet "INTRE" interface; RS485-Ethernet communication - RS485-Ethernet "INTRE" interface; RS485-Ethernet communication  2nd environmental class (EN12101-10:2007), -5 °C+75 °C  Enclosure - Steel plate DC01 1,2mm, color: RAL 3001 (red)  W=420 H=420 D+D₁=182 + 8 [+/- 2mm] - W₁=425 H₁=425 [+/- 2mm]  Net/gross weight - 10,2/11,5 kg - 2x40 Ah/12 V (SLA) max 400 x 180 x 175mm (WxHxD) max  Closing - Key lock - Certificate of constancy of performance CNBOP-PIB, - Certificate of approval CNBOP-PIB, - CEROBOR-PIB, - CEROBOR-P		- PS/85 INTP" interface: PS/85 communication
(not included)  - Etherhet "INTRE" interface, Etherhet communication - RS485-Ethernet "INTRE" interface; RS485-Ethernet communication  2nd environmental class (EN12101-10:2007), -5 °C+75 °C  Enclosure  Enclosure dimensions  W=420 H=420 D+D₁=182 + 8 [+/- 2mm] W₁=425 H₁=425 [+/- 2mm]  Net/gross weight  10,2/11,5 kg  2x40 Ah/12 V (SLA) max. 400 x 180 x 175mm (WxHxD) max  Fitting battery  Closing  Key lock  Certificates, declarations, warranty  Certificate of constancy of performance CNBOP-PIB, Certificate of approval CNBOP-PIB, CE, RoHS, 5 years from the production date  Notes  The enclosure does not adjoin the mounting surface so that cables can be led.		
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Enclosure dimensions  W=420 H=420 D+D₁=182 + 8 [+/- 2mm]  W₁=425 H₁=425 [+/- 2mm]  Net/gross weight  10,2/11,5 kg  2x40 Ah/12 V (SLA) max. 400 x 180 x 175mm (WxHxD) max  Closing  Key lock  Certificates, declarations, warranty  Certificate of constancy of performance CNBOP-PIB, Certificate of approval CNBOP-PIB, CE, RoHS, 5 years from the production date  Notes  W=420 H=420 D+D₁=182 + 8 [+/- 2mm]  W₁=425 H₁=425 [+/- 2mm]  Cylonia		
Net/gross weight   10,2/11,5 kg   2x40 Ah/12 V (SLA) max.   400 x 180 x 175mm (WxHxD) max   W   D   D   D		
Net/gross weight  10,2/11,5 kg  2x40 Ah/12 V (SLA) max. 400 x 180 x 175mm (WxHxD) max  Closing  Key lock  Certificates, declarations, warranty  Certificate of constancy of performance CNBOP-PIB, Certificate of approval CNBOP-PIB, CE, RoHS, 5 years from the production date  Notes  10,2/11,5 kg  2x40 Ah/12 V (SLA) max. 400 x 180 x 175mm (WxHxD) max  Certificate of constancy of performance CNBOP-PIB, Certificate of approval CNBOP-PIB, The enclosure does not adjoin the mounting surface so that cables can be led.	Enclosure dimensions	
Fitting battery  2x40 Ah/12 V (SLA) max. 400 x 180 x 175mm (WxHxD) max  Closing  Key lock  Certificates, declarations, warranty  Certificate of constancy of performance CNBOP-PIB, Certificate of approval CNBOP-PIB, CE, RoHS, 5 years from the production date  Notes  The enclosure does not adjoin the mounting surface so that cables can be led.		
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Fitting battery  400 x 180 x 175mm (WxHxD) max  Closing  Key lock  Certificates, declarations, warranty  Certificate of constancy of performance CNBOP-PIB, Certificate of approval CNBOP-PIB, CE, RoHS, 5 years from the production date  Notes  Notes  A00 x 180 x 175mm (WxHxD) max  D  The enclosure does not adjoin the mounting surface so that cables can be led.		
Closing  Key lock Certificates, declarations, warranty  Certificate of constancy of performance CNBOP-PIB, Certificate of approval CNBOP-PIB, CE, RoHS, 5 years from the production date  The enclosure does not adjoin the mounting surface so that cables can be led.	Fitting battery	
Closing  Key lock Certificates, declarations, warranty Certificates, declarations, warranty Certificate of constancy of performance CNBOP-PIB, Certificate of approval CNBOP-PIB, CE, RoHS, 5 years from the production date The enclosure does not adjoin the mounting surface so that cables can be led.		
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Certificates, declarations, warranty  Certificate of approval CNBOP-PIB, CE, RoHS, 5 years from the production date  The enclosure does not adjoin the mounting surface so that cables can be led.	Olosing	
CE, RoHS, 5 years from the production date  The enclosure does not adjoin the mounting surface so that cables can be led.	Cartificatos declarations warrant:	
Notes The enclosure does not adjoin the mounting surface so that cables can be led.	Germicates, deciarations, warranty	
Convection cooling.	Notes	
		Convection cooling.



## Parameters remote control system.

(additional modules required)



## EN54/LED series power supply unit Power supply for fire alarm systems 27,6 V DC



### Remote monitoring (options: Ethernet, RS485).

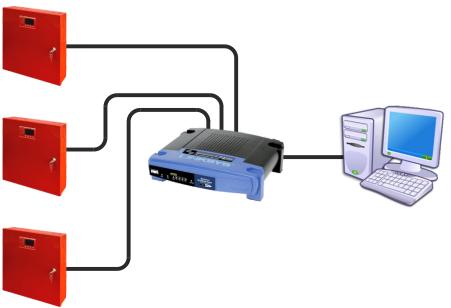
The PSU has been adjusted to operate in a system that requires a remote control of the parameters in a monitoring centre. Transmitting data concerning PSU status is possible due to an additional, external communication module responsible for communication in Ethernet or RS485 standard.

Different connection topologies, presented later in this chapter, are only a part of possible communication schemes. More examples can be found in the manuals dedicated to individual interfaces.

#### ETHERNET network communication.

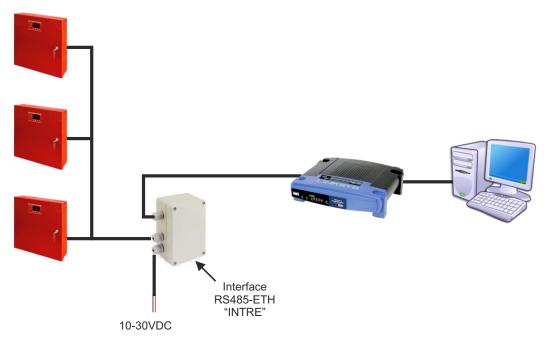
Communication in the Ethernet network is possible due to the additional interfaces: Ethernet "INTE" and RS485-ETH "INTRE", according to the IEEE802.3 standard.

The Ethernet "INTE" interface features full galvanic isolation and protection against surges. It should be mounted inside the enclosure of the PSU.



Ethernet communication using the RS485-Ethernet "INTE" interface.

The RS485-ETHERNET "INTRE" interface is a device used to convert signals between the RS485 bus and the Ethernet network. For proper operation, the unit requires an external power supply in the range of 10÷30 V DC e.g. drawn from a PSU of the EN54 series. The physical connection of the interface takes place under galvanic isolation. The unit is mounted in a hermetic enclosure protecting against adverse environmental conditions.



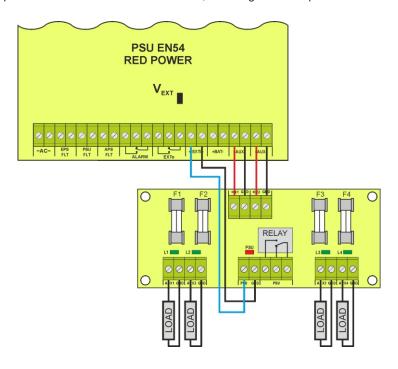
## EN54/LED series power supply unit Power supply for fire alarm systems 27,6 V DC



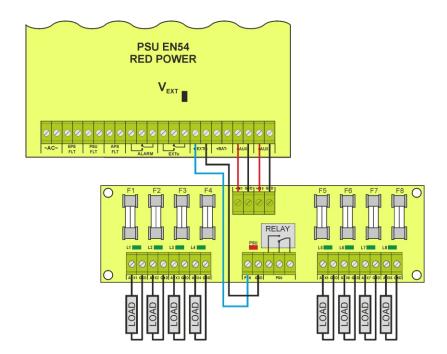
#### Fuse modules EN54-LB4 and EN54-LB8.

Fuse modules EN54-LB4 and EN54-LB8 allow to connect 4 or 8 receivers to the PSU. Output state is indicated by green LEDs.

Blown fuse signal is transmitted to the input of collective failure EXTi (ALARM) and saved in the internal memory of PSU. The PSU's relay output can also be used for remote control, including external optical indication.



The connection of fuse module: EN54-LB4.



The connection of fuse module: EN54-LB8.