

Pulsar

CODE: **EN54-5A17LCD** v.1.0/III TYPE: EN54 27,6V/5A/2x17Ah/LCD

power supply for fire alarm systems

**EN\*\*** 



"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 EN54-5A17LCD
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
230V AC mains supply voltage measurement	-	YES
LCD optical indication	-	YES
Tamper indicating enclosure opening	-	YES



#### **PSU features:**

- In accordance with standards: EN 54-4, EN12101-10
- 27,6V DC/ 5A uninterruptible power supply
- battery housing for two 17Ah/12V 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
- 230V AC mains voltage measurement
- "SERIAL" communication port with implemented MODBUS RTU protocol
- free program "PowerSecurity" to monitor the performance of the PSU
- remote control (options: WiFi, Ethernet, RS485, USB)
- remote battery test (required additional modules)

- cooperation with optional EN54-LB4 or EN54-LB8 fuse modules
- · optical indication of PSU overload OVL
- · acoustic indication of failure
- adjustable delay for 230V AC power loss indication
- · output of collective failure ALARM
- input of collective failure EXTi
- controlled relay output EXTo
- technical inputs/outputs with galvanic isolation
- EPS technical output indicating 230V AC power loss
- · PSU technical output indicating PSU failure
- APS technical output indicating battery failure
- internal memory of PSU operating status
- optical indication LCD panel
  - readings of electrical parameters, including: voltage, current, resistance of the circuit, mains supply voltage
  - failure indication
  - configuration of the PSU settings from the control panel
  - two levels of password protected access
  - operation memory of the PSU
  - failure memory
  - real time clock with battery backup
- 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 24V 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=4A

Instantaneous operation Output current Imax b=5A

In case of power loss, the PSU switches to battery power, providing uninterruptible power supply. The PSU is enclosed in a metal casing (color: RAL 3001 - red) with battery housing for two 17Ah/12V batteries. The PSU works with maintenance-free lead acid batteries made with AGM technology or gel technology.

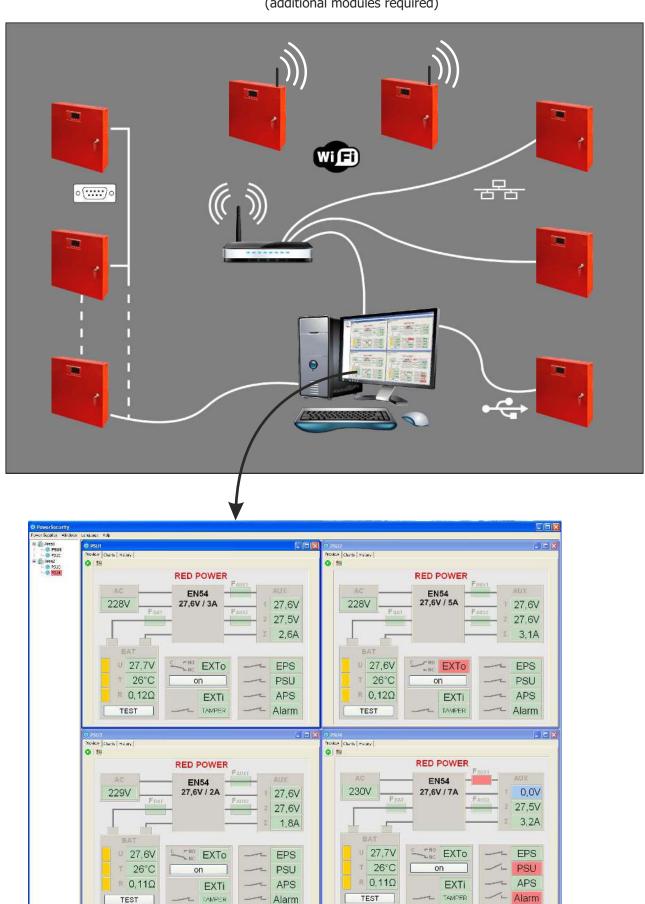


Current consumption 0.056 ag 230 AC (-15%-110%) Current consumption 0.056 ag 230 AC (-15%-110%) Current consumption 0.056 ag 230 AC (-15%-110%) Efficiency 5.6% 22.0% - 2.	Functional class EN 42404 40:2007	I A	
Current consumption    Display   Service   Solidar	Functional class EN 12101-10:2007	A 230\/ AC (-15%/+10%)	
Power frequency   50Hz			
FSUs power   138W   1			
Biffigure   Biff			
Output voltage at 22,0% 27,80 DC - butler operation 20,00 27 DC - butlery voltage at 20,00 27 DC - butlery voltage at 20,00 DC - butlery voltage and 20,00 DC - butlery voltage at 20,00 DC - butlery voltage and 20,00 DC - butlery voltage at 20,00 DC - butlery voltage and 20,00 DC - butlery voltage at 20,00		* *	
20 °C		7 17	
Output current  Continuous operation: Inax a 44A Instantaneous operation: Inax b =5A  Maximal resistance of the battery circuit  Maximal resistance of the battery circuit  300m Ohm  Some Current consumption by the PSU during battery-assisted operation  Eartery charging current  1A  Coefficient of temperature compensation of the battery vottage (and the power supply) is connected with the communication interface or fuse module, additional current consumption should be considered.  1A  Coefficient of temperature compensation of the battery vottage indication  Ubat < 23V, during battery mode  Uvervottage indication  Ubat < 23V, during battery mode  Uvervottage protection OVP  3Nort-circuit protection SCP  FS.3A Fair, Fa			
Instantaneous operation: Imax b=SA		Continuous operation: Imax a=4A	
Maximal resistance of the battery circuit  Som Ohm Ripple vottage  Som Op P max  Le 55mA − LCD panel backlight off Caution If the power supply is connected with the communication interface or fuse models additional current consumption should be considered.  **AC Caution If the power supply is connected with the communication interface or fuse models additional current consumption should be considered.  **AC Caution If the power supply is connected with the communication interface or fuse models additional current consumption should be considered.  **AC Caution If the power supply is connected with the communication interface or fuse models additional current consumption should be considered.  **AC Caution If the power supply is connected with the communication interface or fuse models additional current consumption should be considered.  **AC Caution If the power supply is connected with the communication interface or fuse models.  **Destroy Caution Control Caution Control Caution Control Caution Control Caution C	Output current		
Simple voltage	Maximal resistance of the battery circuit	·	
Current consumption by the PSU during battery-assisted operation  Battery charging current  Coefficient of temperature compensation of the battery voltage (Low battery voltage)  Low battery voltage indication  Overvoltage protection OVP  Short-circuit protection SCP  F53A - E30C Flux melting fuse (failure requires fuse replacement)  Battery corticuit protection SCP  F53A - E30C Flux melting fuse (failure requires fuse replacement)  Battery circuit protection SCP  F53A - E30C Flux melting fuse (failure requires fuse replacement)  Battery circuit protection SCP  F53A - E30C Flux melting fuse (failure requires fuse replacement)  Battery circuit protection SCP and reverse polarity connection  Deep discharge battery protection UVP  TAMPER output indicating enclosure opening  Tachnical outputs:  - EPS FLT; indicating AC power failure  - PSP FLT; indicating AC power failure  - PSP FLT; indicating battery failure  - PSP FLT; indicating policitive failure  - PSP FLT; indicati	•		
Current consumption by the PSU   1 = 55mA – LCD panel backlight off   Caution if the power supply is connected with the communication interface or fuse module, additional current consumption should be considered.    AdmWINC (5 °C + 40 °C)   Adm			
during battery-assisted operation  Battery charging current  ACOMVI PC (5 ° C + 40 ° C)  ACOMVI PC (5 ° C + 40 ° C)  Ubat < 23V, during battery mode  4.0PWV Politage Indication  Ubat < 23V, during battery mode  4.0PWV Politage Protection OVP  Ubat < 23V, during battery mode  Ubatter < 24V, during battery disconsection  Ubatter < 24V, during battery mode  Ubatter < 24V, during battery disconsection of the output voltage (alure requires fuse replacement)  Ubatter < 24V, during battery disconsection  Ubatter < 24V, during battery disconsection  Ubatter < 24V, during battery disconsection of the output voltage (alure requires fuse replacement)  Ubatter < 24V, during battery disconsection of the output voltage (alure requires fuse replacement)  Ubatter < 24V, during battery disconsection  Ubatter < 24V, during battery disconsection of the output voltage (alure requires fuse replacement)  Ubatter < 24V, during battery disconsection  Ubatter < 24V, during	Current consumption by the PSU		
fuse module, additional current consumption should be considered.			
Coefficient of temperature compensation of the hattery voltage indication			
Date   234, during battery workings   Date   234, during battery mode   Date   234, during battery mode   Date   234, during battery mode   Date	Battery charging current	1A	
Dattery votage indication  Ubst < 23V, during battery mode  Uv30,5V26,5V - disconnection of the output voltage ( AUX+ disconnection), automatic return  Short-circuit protection SCP  Fig.3A. Fig.3D, Fig.3D, and thing fuse (failure requires fuse replacement)  Poero discharge buttery protection SCP and reverse polarity connection SCP and reverse polarity scale	Coefficient of temperature compensation of the	40m)// °C ( 5 °C ÷ 40 °C)	
U-30,5V-0,5V- disconnection of the output voltage (AUX+ disconnection), automatic return voltage (Taux+ disconnection).	, ,	-40111V/ C (-3 C + 40 C)	
Submatic return   Submatic return	Low battery voltage indication		
Short-circuit protection SCP Overload protection OLP Hardware - Software Battery 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 - PSU FLT; indicating AC power failure - PSU FLT; indicating battery failure - PSU FLT; indicating PSU failure - PSU FLT; indicating PSU failure - APS FLT; indicating PSU failure - PSU FLT; indicating PSU failure - APS FLT; indicating PSU failure - TSU FLT; indicating PSU Flt; indicat	Overvoltage protection OVP		
Pardware - Software   Pardware - Software - Pardware - Software - Pardware - Software   Pardware - Software - Pardware	<u> </u>		
Fattery circuit protection SCP and reverse polarity connection   F10A - F <sub>BAT</sub> melting fuse (failure requires fuse replacement)			
polarity connection Deep discharge battery protection UVP Deep discharge battery protection UVP TAMPER output indicating enclosure opening Technical outputs: - PPS FLT; indicating AC power failure - PS FLT; indicating battery failure - PS FLT; indicating battery failure - PSU FLT; indicating battery failure - PSU FLT; indicating PSU failure - ALARM; indicating collective failure  - Voltage . ON" - 10+30V DC Voltage . ON" - 10+30V DC Voltage . ON" - 10+30V DC Voltage . OFF" - 0+2V DC Level of galvarian isolation isolation 1500V <sub>RMS</sub> EXTO relay output  - LEDs on the PCB of the power supply unit, - LCD panel - readings of electrical parameters, including: voltage, current, resistance of the circuit, mains supply voltagefailure indication  - onifiguration of the PSU settings from the control panel - 2 levels of password protected access - operation memory of the PSU settings from the control panel - 2 levels of password protected access - operation memory of the PSU settings from the control panel - 2 levels of password protected access - operation memory of the PSU settings from the control panel - 2 levels of password protected access - operation memory of the PSU settings from the control panel - 2 levels of password protected access - operation memory of the PSU settings from the control panel - 2 levels of password protected access - operation memory of the PSU settings from the control panel - 2 levels of password protected access - operation memory of the PSU settings from the control panel - 2 levels of password protected access - operation memory of the PSU settings from the control panel - 2 levels of password protected access - operation memory of the PSU settings from the control panel - 2 levels of password protected access - operation memory of the PSU settings from the control panel - 2 levels of password protected access - operation memory of the PSU settings from the control panel - 2 levels of password protected access - operation memory of the PSU settings from the control panel - 2 levels of pa		Hardware - Software	
Deep discharge battery protection UVP	Battery circuit protection SCP and reverse	F10A - F <sub>RAT</sub> melting fuse (failure requires fuse replacement)	
TAMPER output indicating enclosure opening Technical outputs: -EPS FLT; indicating AC power failure -ABS FLT; indicating BAI failure -PSU FLT; indicating PSU failure -PSU FLT; indicating PSU failure -ALARM; indicating collective failure -PSU FLT; indicating PSU failure -ALARM; indicating collective failure  EXTI technical input  Voltage .ON" – 10+30V DC Voltage .OFF" – 0+2V DC Level of galavanic isolation 1500V <sub>RMS</sub> EXTO relay output  1A@ 30V DC .750V AC - LEDs on the PCB of the power supply unit, - LCD panel - readings of electrical parameters, including: voltage, current, resistance of the circuit, mains supply voltagefailure indication:  Optical indication:  Optical indication:  - LeDs on the PSU – 6144 values - failure memo - 2048 events - real time clock with battery backup - Flavar - Fl			
Technical outputs:			
- Leps FLT; indicating AC power failure - APS FLT; indicating battery failure - PSU FLT; indicating PSU failure - ALARM; indicating collective failure  EXTi technical input  EXTi technical input    Voltage OFF		MICROSWITCH LAMPER	
- APS FLT; indicating battery failure - PSU FLT; indicating PSU failure - ALARM; indicating collective failure  - ALARM; indicating collective failure  EXTi technical input  EXTo relay output  INDICATE:  EXTo relay output  Optical indication:  Optical indication:  Optical indication:  - Example of substance of the circuit, mains supply voltage failure indication:  - Configuration of the PSU settings from the control panel - readings of electrical parameters, including: voltage, current, resistance of the circuit, mains supply voltagefailure indication - configuration of the PSU settings from the control panel - readings of electrical parameters, including: voltage, current, resistance of the circuit, mains supply voltagefailure indication - configuration of the PSU settings from the control panel		tune electronic may F0m A/201/ D0 material in latter 45001/	
- APS FLT; indicating PSU failure - PSU FLT; indicating PSU failure - ALARM; indicating collective failure  - XLARM; indicating collective failure  - XLARM; indicating collective failure  - XLARM; indicating collective failure  - XVoltage .ON" - 10+30V DC - Voltage .ON" - 22V DC - Voltage .ON" - 10+30V DC - Voltage .	- EPS FLI; indicating AC power failure		
- APS FLT; indicating battery failure - PSU FLT; indicating PSU failure - PSU FLT; indicating PSU failure - ALARM; indicating collective failure  EXTi technical input  EXTo relay output  EXTo relay output  EXTo relay output  Description:  EXTo relay output  EXTo relay output  Description:  Description:  Optical indication:  Optical indication:  Optical indication:  Optical indication:  - configuration of the PSU estings from the control panel - 2 levels of password protected access - operation memory of the PSU estings from the control panel - 2 levels of password protected access - operation memory of the PSU estings from the control panel - 2 levels of password protected access - operation memory of the PSU estings from the control panel - 2 levels of password protected access - operation memory of the PSU estings from the control panel - 2 levels of password protected access - operation memory of the PSU estings from the control panel - 2 levels of password protected access - operation memory of the PSU estings from the control panel - 2 levels of password protected access - operation memory of the PSU estings from the control panel - 2 levels of password protected access - operation memory of the PSU estings from the control panel - 2 levels of password protected access - operation memory of the PSU estings from the control panel - 2 levels of password protected access - operation memory of the PSU estings from the control panel - 2 levels of password protected access - operation memory of the PSU estings from the control panel - 2 levels of password protected access - operation memory of the PSU estings from the control panel - 2 levels of password protected access - operation memory of the PSU estings from the control panel - 2 levels of password protected access - operation the			
- PSU FLT; indicating PSU failure - ALARM; indicating collective failure    Voltage _ON" = 10+30V DC	- APS FLT: indicating battery failure		
ALARM; indicating collective failure  EXTi technical input  EXTo relay output  1A@ 30V DC /50V AC  - LEDs on the PCB of the power supply unit, - LCD panel - readings of electrical parameters, including: voltage, current, resistance of the circuit, mains supply voltage/adiative indication.  Optical indication:  Optical indication:  Optical indication:  - configuration of the PSU settings from the control panel - 2 levels of password protected access operation memory of the PSU - 6144 values - failure memo - 2048 events - failure memo - 2048 events - real time clock with battery backup  Acoustic indication:  - piezoelectric indicator ~75dB /0,3m  LCD screen battery  - Fauxi - Fau		- type - electronic, max comploor Do, garranic isolation 10007 RMS	
Voltage _ON" - 10+30V DC Voltage _OFF" - 0+2V DC Level of galvanic isolation 1500V <sub>RMS</sub> EXTo relay output  1A@ 30V DC _550V AC  -LEDs on the PCB of the power supply unit, -LCD panel -readings of electrical parameters, including: voltage, current, resistance of the circuit, mains supply voltagefailure indication - configuration of the PSU settings from the control panel -2 levels of password protected access - operation memory of the PSU – 6144 values -failure memo - 2048 events - real time clock with battery backup  - piezoelectric indicator - 75dB 70,3m  Acoustic indication: piezoelectric indicator - 75dB 70,3m  SV lithium battery, CR2032  Fuses: - Fams			
EXT relay output	,	Voltage ON" – 10÷30V DC	
Level of galvanic isolation 1500V <sub>RMS</sub>	EXTi technical input		
EXTo relay output  1A@ 30V DC /50V AC  - LEDs on the PCB of the power supply unit, - LCD panel - readings of electrical parameters, including: voltage, current, resistance of the circuit, mains supply voltagefailure indication - configuration of the PSU settings from the control panel - 2 levels of password protected access - operation memory of the PSU – 6144 values - failure memo - 2048 events - real time clock with battery backup  - piezoelectric indicator - 75dB /0,3m  Acoustic indication: - piezoelectric indicator - 75dB /0,3m  LCD screen battery - Fauxa			
- LEDs on the PCB of the power supply unit, - LCD panel - readings of electrical parameters, including: voltage, current, resistance of the circuit, mains supply voltagefalture indication - configuration of the PSU strings from the control panel - 2 levels of password protected access - operation memory of the PSU – 6144 values - failure memo - 2048 events - real time clock with battery backup - piezoelectric indicator - 75dB /0,3m  LCD screen battery  3V lithium battery, CR2032  T 6,3A / 250V - F_BAXT - F_AUX1 - F_BAXT - F_AUX2 - F_BAXT	EXTo relay output		
Optical indication:  Optical i	· · • • · · · · · ·		
optical indication:  Optical indication:  Optical indication:  • readings of electrical parameters, including: voltage, current, resistance of the circuit, mains supply voltagefallure indication • configuration of the PSU settings from the control panel • 2 levels of password protected access • operation memory of the PSU − 6144 values • failure memo - 2048 events • real time clock with battery backup  Acoustic indication:  LCD screen battery  3 Vi lithium battery, CR2032  Fuses:  • Faar • Faa			
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• 2 levels of password protected access   • operation memory of the PSU − 6144 values		the circuit, mains supply voltagefailure indication  configuration of the PSU settings from the control panel	
• 2 levels of password protected access   • operation memory of the PSU – 6144 values   • failure memo - 2048 events   • real time clock with battery backup   • piezoelectric indicator ~75dB /0,3m   • Piezoelectric indicator ~15dB /0,3m   • Pi	Optical indication:		
• failure memo - 2048 events • real time clock with battery backup - piezoelectric indicator - 75dB /0,3m  LCD screen battery  3V lithium battery, CR2032  Fuses:  - FMAINS - FBAT - FAUX1 - FAUX2 - F6,3A / 250V - SABS communication - RS485 ,INTR' interface; USB-TTL communication - RS485 sabs communication - R			
e real time clock with battery backup  Acoustic indication: - piezoelectric indicator ~75dB /0,3m  LCD screen battery  7 6,3A / 250V Fuses: - FMAINS - FBAT - FAUX1 - FAUX2 - FAUX2 - F6,3A / 250V F 6,3A / 250V F 6,3B / 250V F			
Acoustic indication:  LCD screen battery  3V lithium battery, CR2032  Fuses:  -FMAINS -FBAT -FAUX1 -FAUX2  Additional equipment (not included)  - USB-TTL "INTU" interface; USB-TTL communication - RS485 "INTUR" interface; USB-RS485 communication - USB-RS485 "INTUR" interface; USB-RS485 communication - WiFi "INTW" interface; USB-RS485 communication - WiFi "INTR" interface; Ethernet communication - WiFi "INTRE" interface; Ethernet communication - WiFi "INTRE" interface; RS485 communication - WiFi "INTRE" interface; RS485-UFI wireless communication - RS485-WiFi "INTRE" interface; RS485-WiFi wireless communication - RS485-WiFi "INTRE" interface; WiFi wireless communication - RS485-WiFi "INTR" interface; WiFi wireless communication - RS485-WiFi "INTR" interface; WiFi wireless communication - RS485-WiFi "INTR" interface; WiFi wiFi wiFi wiFi wiFi wiFi wiFi wiFi			
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Fuses:  - F <sub>MAINS</sub> - F <sub>BAT</sub> - F <sub>AUX1</sub> - F <sub>AUX2</sub> - USB-TTL ,  NTU" interface; USB-TTL communication - RS485 ,  NTP" interface; RS485 communication - RS485 ,  NTP" interface; USB-RS485 communication - USB-RS485 ,  NTUR" interface; USB-RS485 communication - Ethernet ,  NTE" interface; WiFi wireless communication - RS485-Ethernet "INTRE" interface; RS485-Ethernet communication - RS485-WiFi "INTRW" interface; RS485-WiFi wireless communication - RS485-			
F MAINS	•	3V lithium battery, CR2032	
F 10A / 250V F 6,3A / 250V F 6,3A / 250V F 6,3A / 250V  - FAUXZ  - USB-TTL _INTU" interface; USB-TTL communication - RS485 _INTR" interface; RS485 communication - RS485 _INTR" interface; USB-RS485 communication - USB-RS485 _INTUR" interface; USB-RS485 communication - Ethernet _INTE" interface; WiFi wireless communication - WiFi "INTW" interface; WiFi wireless communication - RS485-Ethernet "INTRE" interface; RS485-WiFi wireless communication - RS485-WiFi "INTRW" interface; RS485-Ethernet communication - RS485-WiFi "INTRW" interface; RS485-WiFi wireless communication - RS485-WiFi "INTRW" interface; RS485-WiFi wireless communication - RS485-WiFi "INTRW" interface; WiFi wireless communication - RS485-WiFi "INTRW" interface; WiFi wireless communication - RS485-Ethernet "INTR" interface; WiFi wireless communication - RS485-Ethernet "INTR" interface; WiFi wireless communication - RS485-WiFi "INTR" interface; WiFi wireless communication - RS485-Ethernet "INTR" interface; RS485-WiFi wireless communication - RS485-WiFi "INTR" interface; RS485-WiFi wireless communication -		T 0 04 (0F0)/	
- F <sub>AUX1</sub> - F <sub>AUX2</sub> - F <sub>AUX2</sub> - F <sub>6,3A / 250V</sub> F 6,3A / 250V F 6,3A / 250V F 6,3A / 250V F 6,3A / 250V - USB-TTL _,  NTU" interface; USB-TTL communication - RS485 _,  NTR" interface; RS485 communication - USB-RS485 _,  NTUR" interface; USB-RS485 communication - USB-RS485 _,  NTUR" interface; USB-RS485 communication - Ethernet _,  NTE" interface; Ethernet communication - WiFi "  NTRW" interface; WiFi wireless communication - RS485-WiFi "  NTRW" interface; RS485-WiFi wireless communication - RS485-WiFi "  NTRW" interface; RS485-Ethernet communication - RS485-WiFi "  NTRW" interface; RS485-Ethernet communication - RS485-WiFi wireless communication - RS485-WiFi wirele			
F 6,3A / 250V  - USB-TTL "INTU" interface; USB-TTL communication - R\$485 "INTR" interface; R\$485 communication - USB-R\$485 "INTR" interface; USB-R\$485 communication - WiFi "INTRW" interface; USB-R\$485 communication - WiFi "INTRW" interface; USB-R\$485 communication - R\$485 communication - R\$485 communication - R\$485 communication - R\$485 communication - WiFi "INTRW" interface; USB-R\$485 communication - R\$485 communication - WiFi "INTRW" interface; USB-R\$485 communication - WiFi "INTRW" interface; USB-R\$485 communication - WiFi "INTRW" interface; USB-R\$485 communication - WiFi "INTW" interface; USB-R\$485 communication - R\$485 communication - WiFi "INTW" interface; USB-R\$485 communication - R\$485 communication - WiFi "INTW" interface; USB-R\$485 communication - WiFi "INTW" interface; USB-R\$485 communication - WiFi "INTW" interface; USB-R\$485 communication - R\$485 communication - R\$485 communication - R\$485 communication - WiFi "INTW" interface; WiFi wireless communication - R\$485 communication - R\$485 communication - R\$485 communication - WiFi "INTW" interface; WiFi wireless communication - R\$485 communication - R\$485	<del>=</del> ***		
- USB-TTL "INTU" interface; USB-TTL communication - RS485 "INTR" interface; RS485 communication - USB-RS485 "INTUR" interface; USB-RS485 communication - USB-RS485 "INTUR" interface; USB-RS485 communication - USB-RS485 (INTUR" interface; USB-RS485 communication - Ethernet "INTE" interface; USB-RS485 communication - WiFi "INTW" interface; WiFi wireless communication - RS485-Ethernet "INTRE" interface; RS485-Ethernet communication - RS485-WiFi "INTRW" interface; RS485-WiFi wireless communication - RS485-WiFi "INTRW" interface; USB-RS45-WiFi wireless communication - RS485-WiFi "INTRW" interface; USB-RS485-WiFi wireless communication - RS485-WiFi WiFi wireless communication - RS485-W	_		
Additional equipment (not included)  - RS485 "INTR" interface; RS485 communication - USB-RS485 "INTUR" interface; USB-RS485 communication - Ethernet "INTE" interface; Ethernet communication - WiFi "INTW" interface; RS485-Ethernet communication - RS485-Ethernet "INTRE" interface; RS485-Ethernet communication - RS485-WiFi "INTRW" interface; RS485-WiFi wireless communication - RS485-WiFi interface; RS485-WiFi wireless communication - RS485-WiFi interface; RS485-WiFi wireless communication  Operating conditions  2nd environmental class (EN12101-10:2007), -5 °C+75 °C  Enclosure  Steel plate DC01 1,2mm, color: RAL 3001 (red)  Enclosure dimensions  420 x 420 x 102 (WxHxD) [mm] (+/- 2)  Net/gross weight  9,8/11,3 kg  2x17Ah/12V (SLA) max. 370 x 180 x 95mm (WxHxD) max  Fitting battery  Closing  Key lock  Certificate of constancy of performance CNBOP-PIB No 1438-CPR-0385, certificate of approval CNBOP-PIB No 2174/2014, CE, ROHS, 5 years from the production date  Notes  Notes  The enclosure does not adjoin the mounting surface so that cables can be led.	- I AUX2		
Additional equipment (not included)  - USB-RS485 "INTUR" interface; USB-RS485 communication - Ethernet "INTE" interface; Ethernet communication - WiFi "INTW" interface; WiFi wireless communication - RS485-Ethernet "INTRE" interface; RS485-Ethernet communication - RS485-WiFi "INTRW" interface; RS485-WiFi wireless communication - RS485-WiFi "INTRW" interface; RS485-WiFi wireless communication  Operating conditions  2nd environmental class ( EN12101-10:2007 ), -5 °C÷75 °C  Enclosure  Steel plate DC01 1,2mm, color: RAL 3001 (red)  Enclosure dimensions  420 x 420 x 102 (WxHxD) [mm] (+/- 2)  Net/gross weight  9,8/11,3 kg  2x17Ah/12V (SLA) max. 370 x 180 x 95mm (WxHxD) max  Closing  Key lock  Certificates, declarations, warranty  Certificate of constancy of performance CNBOP-PIB No 1438-CPR-0385, certificate of approval CNBOP-PIB No 2174/2014, CE, RoHS, 5 years from the production date  Notes  Notes  The enclosure does not adjoin the mounting surface so that cables can be led.			
- Ethernet "INTE" interface; Ethernet communication - WiFi "INTW" interface; WiFi wireless communication - RS485-Ethernet "INTRE" interface; RS485-Ethernet communication - RS485-WiFi "INTRW" interface; RS485-WiFi wireless communication - RS485-WiFi "INTRW" interface; RS485-Ethernet communication - RS485-WiFi wireless communication - RS485-W	Added		
- WiFi "INTW" interface; WiFi wireless communication - RS485-Ethernet "INTRE" interface; RS485-Ethernet communication - RS485-WiFi "INTRW" interface; RS485-WiFi wireless communication - RS485-WiFi "INTRW" interface; RS485-WiFi wireless communication - RS485-WiFi "INTRW" interface; RS485-WiFi wireless communication  Operating conditions  2nd environmental class (EN12101-10:2007 ), -5 °C+75 °C  Enclosure dimensions  420 x 420 x 102 (WxHxD) [mm] (+/- 2)  Net/gross weight  9,8/11,3 kg  2x17Ah/12V (SLA) max. 370 x 180 x 95mm (WxHxD) max  Fitting battery  Closing  Key lock  Certificate of constancy of performance CNBOP-PIB No 1438-CPR-0385, certificate of approval CNBOP-PIB No 2174/2014, CE, ROHS, 5 years from the production date  Notes  Notes			
- RS485-Ethernet "INTRE" interface; RS485-Ethernet communication - RS485-WiFi "INTRW" interface; RS485-WiFi wireless communication  Operating conditions  2nd environmental class (EN12101-10:2007), -5 °C+75 °C  Enclosure  Steel plate DC01 1,2mm, color: RAL 3001 (red)  Enclosure dimensions  420 x 420 x 102 (WxHxD) [mm] (+/- 2)  Net/gross weight  9,8/11,3 kg  2x17Ah/12V (SLA) max. 370 x 180 x 95mm (WxHxD) max  Fitting battery  Closing  Key lock  Certificate of constancy of performance CNBOP-PIB No 1438-CPR-0385, certificate of approval CNBOP-PIB No 2174/2014, CE, RoHS, 5 years from the production date  Notes  Notes	(not included)	- WiFi "INTW" interface; WiFi wireless communication	
Operating conditions       2nd environmental class (EN12101-10:2007 ), -5 °C+75 °C         Enclosure       Steel plate DC01 1,2mm, color: RAL 3001 (red)         Enclosure dimensions       420 x 420 x 102 (WxHxD) [mm] (+/- 2)         Net/gross weight       9,8/11,3 kg         Eitting battery       2x17Ah/12V (SLA) max. 370 x 180 x 95mm (WxHxD) max         Closing       Key lock         Certificates, declarations, warranty       Certificate of constancy of performance CNBOP-PIB No 1438-CPR-0385, certificate of approval CNBOP-PIB No 2174/2014, CE, RoHS, 5 years from the production date         Notes       The enclosure does not adjoin the mounting surface so that cables can be led.		- RS485-Ethernet "INTRE" interface; RS485-Ethernet communication	
Enclosure dimensions  Enclosure dimensions  420 x 420 x 102 (WxHxD) [mm] (+/- 2)  Net/gross weight  9,8/11,3 kg  2x17Ah/12V (SLA) max. 370 x 180 x 95mm (WxHxD) max  Closing  Key lock  Certificates, declarations, warranty  Certificate of constancy of performance CNBOP-PIB No 1438-CPR-0385, certificate of approval CNBOP-PIB No 2174/2014, CE, RoHS, 5 years from the production date  Notes  Steel plate DC01 1,2mm, color: RAL 3001 (red)  420 x 420 x 102 (WxHxD) [mm] (+/- 2)  Possible 1,2mm, color: RAL 3001 (red)  420 x 420 x 102 (WxHxD) [mm] (+/- 2)  Possible 2,2mm, color: RAL 3001 (red)  420 x 420 x 102 (WxHxD) [mm] (+/- 2)  Possible 2,2mm, color: RAL 3001 (red)  Enclosure dimensions  420 x 420 x 102 (WxHxD) [mm] (+/- 2)  Possible 2,2mm, color: RAL 3001 (red)  420 x 420 x 102 (WxHxD) [mm] (+/- 2)  Possible 2,2mm, color: RAL 3001 (red)  420 x 420 x 102 (WxHxD) [mm] (+/- 2)  Possible 2,2mm, color: RAL 3001 (red)  Enclosure dimensions  The enclosure does not adjoin the mounting surface so that cables can be led.			
Enclosure dimensions  420 x 420 x 102 (WxHxD) [mm] (+/- 2)  Net/gross weight  9,8/11,3 kg  2x17Ah/12V (SLA) max. 370 x 180 x 95mm (WxHxD) max  Closing  Key lock  Certificates, declarations, warranty  Certificate of constancy of performance CNBOP-PIB No 1438-CPR-0385, certificate of approval CNBOP-PIB No 2174/2014, CE, RoHS, 5 years from the production date  Notes  12x17Ah/12V (SLA) max. 370 x 180 x 95mm (WxHxD) max  Certificate of constancy of performance CNBOP-PIB No 1438-CPR-0385, certificate of approval CNBOP-PIB No 2174/2014, CE, RoHS, 5 years from the production date  The enclosure does not adjoin the mounting surface so that cables can be led.			
Net/gross weight       9,8/11,3 kg         Fitting battery       2x17Ah/12V (SLA) max. 370 x 180 x 95mm (WxHxD) max         Closing       Key lock         Certificates, declarations, warranty       Certificate of constancy of performance CNBOP-PIB No 1438-CPR-0385, certificate of approval CNBOP-PIB No 2174/2014, CE, RoHS, 5 years from the production date         Notes       The enclosure does not adjoin the mounting surface so that cables can be led.			
Fitting battery  2x17Ah/12V (SLA) max. 370 x 180 x 95mm (WxHxD) max  Closing  Key lock  Certificates, declarations, warranty  Certificate of constancy of performance CNBOP-PIB No 1438-CPR-0385, certificate of approval CNBOP-PIB No 2174/2014, CE, RoHS, 5 years from the production date  Notes  Notes  1x17Ah/12V (SLA) max. 370 x 180 x 95mm (WxHxD) max  Certificate of constancy of performance CNBOP-PIB No 1438-CPR-0385, certificate of approval CNBOP-PIB No 2174/2014, 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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Closing  Key lock  Certificates, declarations, warranty  Certificate of constancy of performance CNBOP-PIB No 1438-CPR-0385, certificate of approval CNBOP-PIB No 2174/2014, CE, RoHS, 5 years from the production date  Notes  Notes  The enclosure does not adjoin the mounting surface so that cables can be led.			
Certificates, declarations, warranty  Certificate of constancy of performance CNBOP-PIB No 1438-CPR-0385, certificate of approval CNBOP-PIB No 2174/2014, CE, RoHS, 5 years from the production date  The enclosure does not adjoin the mounting surface so that cables can be led.		370 x 180 x 95mm (WxHxD) max	
Certificates, declarations, warranty  Certificate of constancy of performance CNBOP-PIB No 1438-CPR-0385, certificate of approval CNBOP-PIB No 2174/2014, CE, RoHS, 5 years from the production date  The enclosure does not adjoin the mounting surface so that cables can be led.	Fitting battery		
Certificates, declarations, warranty       certificate of approval CNBOP-PIB No 2174/2014, CE, RoHS, 5 years from the production date         Notes       The enclosure does not adjoin the mounting surface so that cables can be led.	Fitting battery	D	
CE, RoHS, 5 years from the production date  The enclosure does not adjoin the mounting surface so that cables can be led.			
Notes The enclosure does not adjoin the mounting surface so that cables can be led.	Closing	Certificate of constancy of performance CNBOP-PIB No 1438-CPR-0385,	
	Closing	Certificate of constancy of performance CNBOP-PIB No 1438-CPR-0385, certificate of approval CNBOP-PIB No 2174/2014,	
Convection cooling.	Closing	Certificate of constancy of performance CNBOP-PIB No 1438-CPR-0385, certificate of approval CNBOP-PIB No 2174/2014, CE, RoHS, 5 years from the production date	
	Closing  Certificates, declarations, warranty	Certificate of constancy of performance CNBOP-PIB No 1438-CPR-0385, certificate of approval CNBOP-PIB No 2174/2014, CE, RoHS, 5 years from the production date  The enclosure does not adjoin the mounting surface so that cables can be led.	



### Parameters remote control system.

(additional modules required)



TEST

- Alarm

TAMPER

TEST

TAMPER



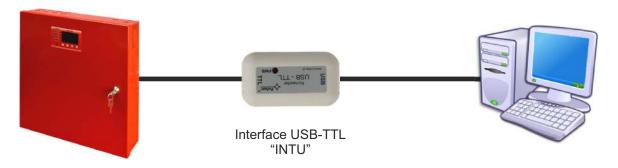
#### Remote monitoring (options: Wi-Fi, Ethernet, RS485, USB).

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 Wi-Fi, Ethernet or RS485 standard. It is possible to connect the PSU and the computer via the USB –TTL interface.

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.

#### Communication via the USB-TTL interface.

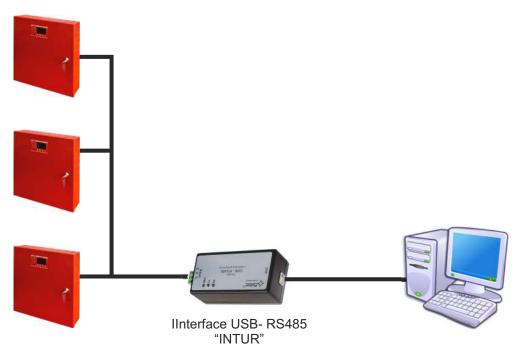
The easiest way of communication between the PSU and the computer is provided by the USB-TTL "INTU" interface. This interface allows direct connection between the computer and the PSU and is recognizable by the operating system as a virtual COM port.



USB-TTL communication using the USB-TTL "INTU" interface.

#### RS485 network communication.

Another type of network communication is the RS485 communication using two-wire transmission path. To achieve this kind of data exchange, the PSU should be equipped with the additional RS485 TTL "INTR" interface, converting data from the PSU into the RS485 standard and the USB-RS485 "INTUR" interface, converting data from the RS485 network to the USB. Offered interfaces are galvanically isolated and protected against surges.



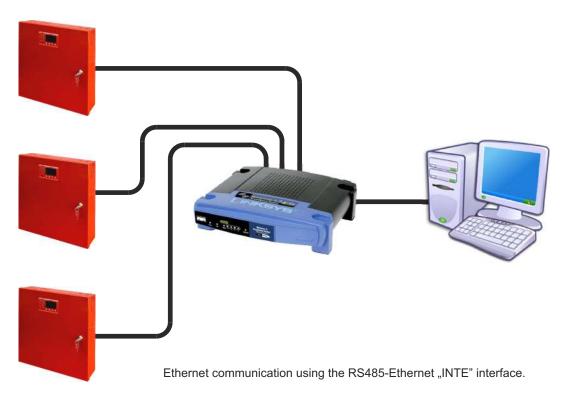
RS485 communication using the "INTR" and "INTUR" interfaces.



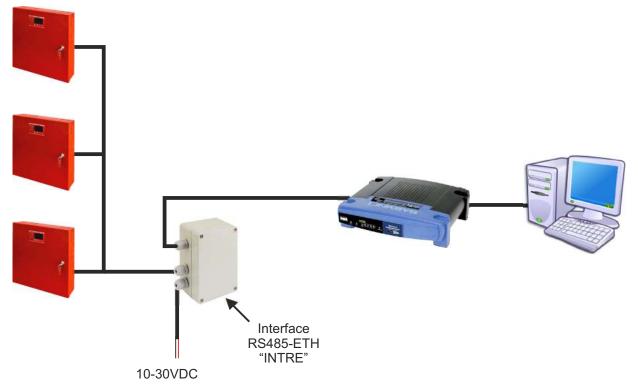
#### ETHERNET network communication.

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.



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÷30V 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.

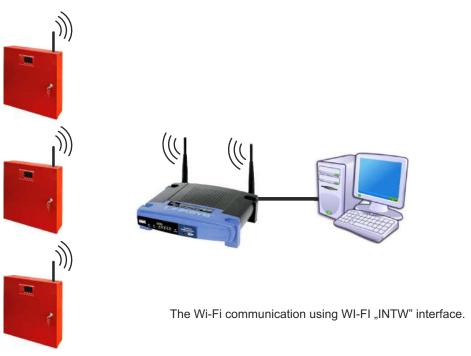


Ethernet communication using the RS485-Ethernet "INTRE" interface.

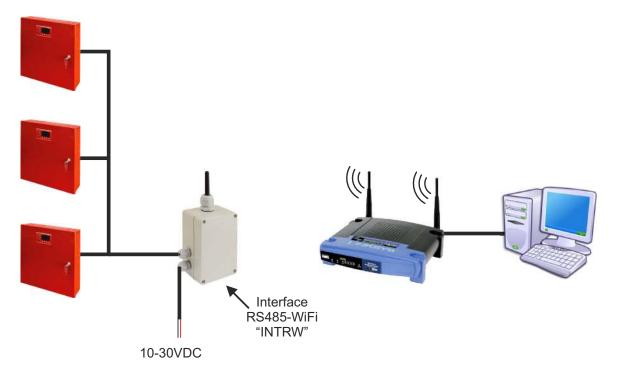


#### The Wi-Fi wireless communication.

The Wi-Fi wireless communication can be implemented on the basis of additional interfaces: WI-Fi 'INTW' and RS485-WiFi, operating within 2,4GHz frequency band, according to the IEEE 802.11 bgn standard. The WiFi 'INTW' interface shall be mounted in a selected location inside the enclosure so that the antenna is exposed to the outside.



The RS485-WiFi "INTRW" interface is a device used to convert signals between the RS485 bus and the WiFi network. For proper operation, the unit requires an external power supply in the range of 10÷30V 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.



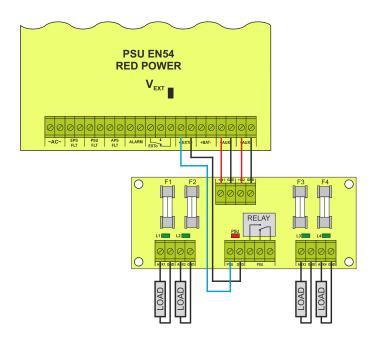
The The Wi-Fi communication using the RS485-WIFI "INTRW" interface.



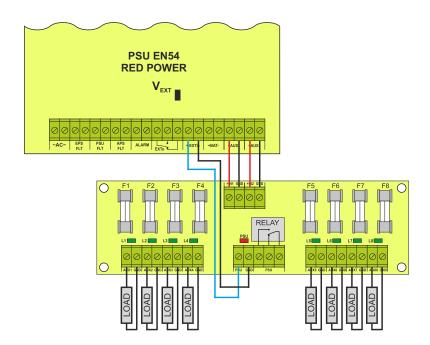
#### Fuse modules EN54-LB4 end EN54-LB8

Fuse modules EN54-LB4 end 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.