



general catalog

2012 - 01



GENERAL CATALOGUE

2012 - 01

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ENERGY DATA MANAGER

Type Description Part Number

X3M 96

ENERGY DATA MANAGER

Large high-contrast LCD display with backlight. Single-phase, 2-phase, balanced or unbalanced 3-phase (max. 500V ph-ph), 2, 3 & 4 wire LT and HT systems, ..1-5A CT input. Class 1 accuracy on energies (EN61036), RMS measurement up to the 31st harmonic. Built-in non-volatile flash memory for data storage (over 60-day power profiling) & events logging. Battery-backed real time calendar/clock. Equipped with 2 digital outputs programmable for Alarm or Pulse transmission (or as remote Output devices) and with 2 expansion ports for connection of external transmission modules. Modbus protocol. Field upgradeable firmware. Suitable for harsh environment. Temperature range -20+60°C. Flush mount 96x96 mm.



X3M 96 85÷265V	Over 60 readings including phase THD-I, THD-U, average, peak and import/export powers, 2-4 quadrant energies (Ea, Er), TOU handling possibility upon calendar upload. Events logging to memory (sags, swells/dips, mains failures, min/max values, etc). 85-265 Vac/100-374 Vdc power supply.....	PFE411-00
X3M 96 15÷40V	As above but 15-40 Vac/18-60 Vdc power supply	PFE411-04
X3M 96 H 85÷265V	As X3M 96 but including FFT harmonics readings per phase of U, I & P up to 31 st order + direction of flow. 85-265 Vac/100-374 Vdc power supply	PFE418-00
X3M 96 H 15÷40V	As above but 15-40 Vac/18-60 Vdc power supply	PFE418-04

Accessories & options



Expansion modules for all X3M 96 and FLASH 96 types

Rear panel plug-in, self powered, connection cable included.

- Option module 96 RS485	RS 485 port	PFE420-00
- Option module 96 RS232	RS 232 port	PFE421-00
- Option module 96 2AO4-20mA	2 x 4-20 mA programmable output.....	PFE422-00
- Option module 96 2DI 2RO	2 digital Inputs + 2 relay Outputs 30V 2A	PFE425-00
- Adapter DIN/96	Cable for use of "DIN" options into "96" meters	PCADL00-00

FFT harmonics readings option

It enables the FFT harmonics readings per phase of U, I & P up to 31st order + direction of flow. It converts the X3M 96, X3M D6, Flash 96 and Flash D6 meters into the corresponding "...H.." types

- Performed by field PUK code entry via instrument keyboard	PFSW399-00
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**FFT
HARMONICS**

X3M D6

ENERGY DATA MANAGER

Dot-matrix display with backlight. Single-phase, 2-phase, balanced or unbalanced 3-phase (max. 500V ph-ph), 2, 3 & 4 wire LT and HT systems, ..1-5A CT input. Class 1 accuracy on energies (EN61036), RMS measurement up to the 31st harmonic. Built-in non-volatile flash memory for data storage (over 60-day power profiling) & events logging. Battery-backed real time calendar/clock. Equipped with 2 digital outputs programmable for Alarm or Pulse transmission (or as remote Output devices) and with 2 expansion ports for connection of external transmission module. Modbus protocol. Field upgradeable firmware. Suitable for harsh environment. Temperature range -20+60°C. DIN rail mount 6 modules.



X3M D6 85÷265V	Over 60 readings including phase THD-I, THD-U, average, peak and import/export powers, 2-4 quadrant energies (Ea, Er), TOU handling possibility upon calendar upload. Events logging to memory (sags, swells/dips, mains failures, min/max values, etc). 85-265 Vac/100-374 Vdc power supply.....	PFE840-00
X3M D6 15÷40V	As above but 15-40 Vac/18-60 Vdc power supply	PFE840-04
X3M D6 H 85÷265V	As X3M D6 but including FFT harmonics readings per phase of U, I & P up to 31 st order + direction of flow. 85-265 Vac/100-374 Vdc power supply	PFE842-00
X3M D6 H 15÷40V	As above but 15-40 Vac/18-60 Vdc power supply	PFE842-04

Accessories & options



Expansion modules for all X3M D6, FLASH D6 and FAST D6 types

2 DIN modules size, self powered, connection cable included.

- Option module D2 RS485	RS 485 port	PFE830-00
- Option module D2 RS232	RS 232 port	PFE825-00
- Option module D2 2AO4-20mA	2 x 4-20 mA programmable output	PFE835-00
- Adapter 96/DIN	Cable for use of "96" options into "DIN" meters.	

For example to connect **Option module 96 2DI 2RO** to 'DIN' meter.

FFT harmonics readings option

It enables the FFT harmonics readings per phase of U, I & P up to 31st order + direction of flow. It converts the X3M 96, X3M D6, Flash 96 and Flash D6 meters into the corresponding "...H.." types

- Performed by field PUK code entry via instrument keyboard	PFSW399-00
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**FFT
HARMONICS**

X3M Kits

EB4KIT X3M 96 H RS232	X3M 96 H meter, RS232 option, Energy Brain 4 software, PC cable.....	PFE861-00
EB4KIT X3M D6 H RS232	X3M D6 H meter, RS232 option, Energy Brain 4 software, PC cable	PFE865-00
EB4KIT X3M 96 H RS485 / NET 2DI 2DO WEB	X3M 96 H RS485 + Yocto net 2DI 2DO WEB + p. supplier. + sw EB 4.	PFA5C13-92
EB4KIT X3M D6 H RS485 / NET 2DI 2DO WEB	X3M D6 H RS485 + Yocto net 2DI 2DO WEB + p. supplier. + sw EB 4.	PFA5613-92

New X3M Kits

EB 4 KIT X3M D6 H RS485 / NET 2DI 2DO WEB MAIL CALENDAR X3M D6 H RS485 + Yocto Net D4 9÷36V 2DI 2DO Network Bridge with upgrade WEB PFSW940-05, PFSW940-15 Upgrade Mail Alarm, PFSW940-20 Upgrade Calendar, + p. supplier. + sw
EB 4..... **NEW** [PFA5613-93](#)

PORTABLE UNITS

X3M H BOX NET 2DI 2DO WEB 85-265V

PORTABLE ENERGY DATA MANAGER

Plastic box with 1 X3M D6 H energy data manager including FFT harmonics readings and a YOCTO NET 2DI 2DO WEB including measures and photovoltaic web pages; 6 voltage cables (banana plugs + crocodiles), 3 current cables (banana plugs + stripped end for CT connection), Ethernet cable, RS485 cable (banana plugs + stripped end), RS232 cable; RJ45, RS485 e RS232 port, Energy Brain 4 software, hard plastic carry case.

X3M H BOX NET 2DI 2DO WEB 85-265V Size 280x270x100mm. Weight Portable 1450g.; Carry Case
4650g.....

NEW



[PKAR091-00](#)

ENERGY ANALYZERS (HARMONICS)

FLASH 96

ENERGY ANALYZER (HARMONICS)

Large high-contrast LCD display with backlight. Single-phase, 2-phase, balanced or unbalanced 3-phase (max. 500V ph-ph), 2, 3 & 4 wire LT and HT systems, ..1-5A CT input. Class 1 accuracy on energies (EN61036), RMS measurement up to the 31st harmonic. Equipped with 2 digital outputs programmable for Alarm or Pulse transmission (or as remote Output devices) and with 2 expansion ports for connection of external transmission modules Modbus protocol. Field upgradeable firmware Suitable for harsh environment. Temperature range -20+60°C. Flush mount 96 x 96 mm.



FLASH 96 85÷265V Over 60 readings including phase THD-I, THD-U, average peak import/export powers, 2-4 quadrant energies (Ea, Er). 85-265Vac/100-374Vdc power supply [PFA2C10-82](#)

FLASH 96 H 85÷265V As FLASH 96 N but including **FFT harmonics readings** per phase of U, I & P up to 31st order + direction. 85-265Vac/100-374Vdc power supply [PFA4C10-82](#)

Accessories & options



Expansion modules for all X3M 96 and FLASH 96 types

Rear panel plug-in, self powered, connection cable included.

- **Option module 96 RS485** RS 485 port [PFE420-00](#)
- **Option module 96 RS232** RS 232 port [PFE421-00](#)
- **Option module 96 2AO4-20mA** 2 x 4-20 mA programmable output..... [PFE422-00](#)
- **Option module 96 2DI 2RO** 2 digital Inputs + 2 relay outputs 30V 2A.... [PFE425-00](#)
- **Adapter DIN/96** Cable for use of "DIN" options into "96" meters [PCADL00-00](#)

FFT HARMONICS

FFT harmonics readings option - It enables the FFT harmonics readings per phase of U, I & P up to 31st order. It converts the X3M 96, X3M D6, Flash 96 and Flash D6 meters into the corresponding "...H.." types.

- Performed by field PUK code entry via instrument keyboard..... [PFSW399-00](#)

FLASH D6

ENERGY ANALYZER (HARMONICS)

Dot matrix LCD display with backlight. Single-phase, 2-phase, balanced or unbalanced 3-phase (max. 500V ph-ph), 2, 3 & 4 wire, LT and HT systems, ..1-5A CT input. Class 1 accuracy on energies (EN61036). RMS measurement up to the 31st harmonic. Equipped with 2 digital outputs programmable for Alarm or Pulse transmission (or as remote Output devices) and with 2 expansion ports for connection of external transmission modules. Modbus protocol. Field upgradeable firmware. Suitable for harsh environment. Temperature range -20+60°C. DIN rail mount 6 modules.



FLASH D6 85÷265V Over 60 readings including phase THD-I, THD-U, average peak import/export powers, 2-4 quadrant energies (Ea, Er). 85-265Vac/100-374Vdc power supply [PFE430-00](#)

FLASH D6 H 85÷265V As FLASH D6 but including **FFT harmonic readings** per phase of U, I & P up to 31st order + direction of flow. 85-265Vac/100-374Vdc power supply [PFE432-00](#)

Accessories & options



Expansion modules for all X3M D6, FLASH D6 and FAST D6 types

2 DIN modules size, self powered, connection cable included.

- **Option module D2 RS485** RS 485 port..... [PFE830-00](#)
- **Option module D2 RS232** RS 232 port..... [PFE825-00](#)
- **Option module D2 2AO4-20mA** 2 x 4-20 mA programmable output..... [PFE835-00](#)
- **Adapter 96/DIN** Cable for use of "96" options into "DIN" meters.
For example to connect **Option module 96 2DI 2RO** to "DIN" meter. [PCACL00-00](#)

FFT harmonics readings option - It enables the FFT harmonics readings per phase of U, I & P up to 31st

order + direction of flow. It converts the X3M 96, X3M D6, Flash 96 and Flash D6 meters into the corresponding "...H.." types

- Performed by field PUK code entry via instrument keyboard..... [PFSW399-00](#)

FFT HARMONICS


ENERGY METERS / ENERGY ANALYZERS

FEMTO 96 and FEMTO 96 E-Wi

ENERGY METERS / ENERGY ANALYZER

Over 60 readings including min-max voltage, max. current, thermal current, neutral current, phase THD-I, THD-U, peak power, max. demand, rolling demand, import/export demand, phase, partial and total active energy, 2-4 quadrant energies (Ea, Er). RMS measurement to 31st harmonic. 0,5 % accuracy on V and I. Class 1 accuracy on active energy and class 2 on reactive energy (EN62053-21). Dot matrix LCD display with backlight. Single-phase, 2-phase, balanced or unbalanced 3-phase (max. 500V ph-ph), 2, 3 & 4 wire, LT and HT systems, ..1-5A CT input. Temp. range -10+50°C. 230-240Vac power supply (others on request). Flush mount 96 x 96 mm.



FEMTO 96 RS485 230-240V	Type with built-in RS485 serial port (Modbus protocol).....	PFA6C11-02
FEMTO 96 RS485 230-240V 1DI 2DO	Type with built-in RS485 serial port (Modbus protocol), 1 digital Input and 2 isolated digital outputs (programmable for Pulse or Alarm transmission or as remote Output devices)	PFA6C11-12
FEMTO 96 RS485 230-240V 2AO4-20mA	Type with built-in RS485 serial port (Modbus protocol), 2 active 4-20mA analogue outputs (for load up to 250 Ohm, over a 12Vdc external power supply is needed (PFTP100-Q2)	PFA6C11-62
FEMTO 96 E-WI HI 230-240V	<u>Transceives</u> the data through radio waves (wireless) using the E-Wi protocol. (Equipped with RS485 port).....	 PFA6C1H-02


FEMTO D4 and FEMTO D4 E-Wi

ENERGY METERS / ENERGY ANALYZER

Over 60 readings including min-max voltage, max. current, thermal current, neutral current, phase THD-I, THD-U, peak power, max. demand, rolling demand, import/export demand, phase, partial and total active energy, 2-4 quadrant energies (Ea, Er). RMS measurement to 31st harmonic. 0,5 % accuracy on V and I. Class 1 accuracy on active energy and class 2 on reactive energy (EN62053-21). Dot matrix LCD display with backlight. Single-phase, 2-phase, balanced or unbalanced 3-phase (max. 500V ph-ph), 2, 3 & 4 wire, LT and HT systems. Temperature range -10+50°C. 230-240Vac power supply (others on request). DIN rail mount 4 modules.





Types with input for external ..1-5A Current Transformers

FEMTO D4 RS485 230-240V	Type with built-in RS485 serial port (Modbus protocol).....	PFA6411-02
FEMTO D4 RS485 230-240V 1DI 2DO	Type with built-in RS485 serial port (Modbus protocol), 1 digital Input and 2 isolated digital outputs (programmable for Pulse or Alarm transmission or as remote Output devices)	PFA6411-12
FEMTO D4 RS485 230-240V 2AO4-20mA	Type with built-in RS485 serial port (Modbus protocol), 2 active 4-20mA analogue outputs (for load up to 250 Ohm, over a 12Vdc external power supply is needed (PFTP100-Q2)	PFA6411-62
FEMTO D4 RS485 230-240V 1DI 2DO SELF POWERED	Type with built-in RS485 serial port (Modbus protocol), active self-powered 1 digital Input and 2 isolated digital outputs (programmable for Pulse or Alarm transmission or as remote Output devices).....	PFA6411-E2
FEMTO D4 E-WI HI 230-240V	<u>Transceives</u> the data through radio waves (wireless) using the E-Wi protocol. (Equipped with RS485 port).....	 PFA641H-02

Types with 70 A direct input (via dedicated external CTs)

Supplied with 1 external 70A CT (9 mm. hole diam.) and ready for single phase wiring. For 3-phase systems it is necessary to separately order 1 or 2 **additional CTs type TA 70A** depending upon the wiring configuration. (part number [PFAE000-00](#)).



FEMTO D4 70A RS485 230-240V	Type with built-in RS485 serial port (Modbus protocol).....	PFA6431-02
FEMTO D4 3I 70A RS485 230-240V	With built-in RS485 serial port (Modbus); suitable for measuring up to 3 different single phase loads (nearby) up to 6kW each.....	 PFA6491-02
FEMTO D4 70A RS485 230-240V 1DI 2DO	Type with built-in RS485 serial port (Modbus protocol), 1 digital Input and 2 isolated digital outputs (programmable for Pulse or Alarm transmission or as remote Output devices).....	PFA6431-12
FEMTO D4 70A RS485 230-240V 1DI 2DO SELF POWERED	Type with built-in RS485 serial port (Modbus protocol), active self-powered 1 digital Input and 2 isolated digital outputs (programmable for Pulse or Alarm transmission or as remote Output devices).....	PFA6431-E2
FEMTO D4 70A E-WI HI 230-240V	<u>Transceives</u> the data through radio waves (wireless) using the E-Wi protocol. (Equipped with RS485 port).....	 PFA643H-02
TA 70A	Dedicated 70A CT for FEMTO D4 70A meters. Voltage output secondary with superior metering accuracy also for low current/power signals. Plastic body with 9mm. hole diameter....	PFAE000-00



MULTIMETERS, POWER & ENERGY ANALYZERS

ZEPTO 96 and ZEPTO 96 E-Wi


MULTIMETER, POWER & ENERGY ANALYZER

Over 50 readings including neutral current, THD-I, THD-U, rolling demand, maximum demand, partial and total active energy (Ea), reactive energy (Er). RMS measurement to 31st harmonic. 0,5% accuracy on V and I. Class 1 accuracy on active energy and class 2 on reactive energy (EN62053-21). 3 x 3 digit high visibility LED displays. Single-phase, 2-phase, balanced or unbalanced 3-phase (max. 500V ph-ph), 2, 3 & 4 wire, LT and HT systems, ..1-5A CT input. Temperature range -10+50°C. 230-240Vac power supply (others on request). Flush mount 96 x 96 mm.



ZEPTO 96 RS485 230-240V Type with built-in RS485 serial port (Modbus protocol)..... [PFA8C11-02](#)

ZEPTO 96 RS485 230-240V 1DI 2DO Type with built-in RS485 serial port (Modbus protocol), 1 digital Input and 2 isolated digital outputs (programmable for Pulse or Alarm transmission or as remote Output devices) [PFA8C11-12](#)

ZEPTO 96 E-Wi HI 230-240V Transceives the data through radio waves (wireless) using the E-Wi protocol. (Equipped with RS485 port).....  [PFA8C1H-02](#)

ZEPTO D6 and ZEPTO D6 E-Wi


MULTIMETER, POWER & ENERGY ANALYZER

Over 50 readings including neutral current, THD-I, THD-U, rolling demand, maximum demand, partial and total active energy (Ea), reactive energy (Er). RMS measurement to 31st harmonic. 0,5% accuracy on V and I. Class 1 accuracy on active energy and class 2 on reactive energy (EN62053-21). 3 x 3 digit high visibility LED displays. Single-phase, 2-phase, balanced or unbalanced 3-phase (max. 500V ph-ph), 2, 3 & 4 wire, LT and HT systems, ..1-5A CT input. Temperature range -10+50°C. 230-240Vac power supply (others on request). DIN rail mount 6 modules.



ZEPTO D6 RS485 230-240V Type with built-in RS485 serial port (Modbus protocol)..... [PFA8611-02](#)

ZEPTO D6 RS485 230-240V 1DI 2DO Type with built-in RS485 serial port (Modbus protocol), 1 digital Input and 2 isolated digital outputs (programmable for Pulse or Alarm transmission or as remote Output devices) [PFA8611-12](#)

ZEPTO D6 E-Wi HI 230-240V Transceives the data through radio waves (wireless) using the E-Wi protocol. (Equipped with RS485 port).....  [PFA861H-02](#)

ENERGY METERS

ETTO D2

ENERGY METER

Provided with a tamper proof kit to be sealed. 7-digit electromechanical indicator, kWh reading (1/100 resolution), class 2 accuracy (EN61036), 1 digital pulse output (Ea). Self powered. DIN rail mount 2 modules..



ETTO D2 230-240V Single phase 230-240Vac, direct current input up to 32A (6 kW) [PFAA280-C2](#)

INTELLIGENT TRANSDUCERS

FAST

TRANSDUCER & ENERGY ANALYZER

Up to 60 readings including phase THD-I, THD-U, average, peak and import/export powers, 2-4 quadrant energies (Ea, Er). Including **FFT harmonics readings** per phase of U, I & P up to 31st order + direction of flow. RMS measurement to 31st harmonic. Suitable for harsh environment. Class 1 accuracy on energies (EN61036). Single-phase, 2-phase, balanced and unbalanced 3-phase (max. 500Vph-ph). 2, 3 & 4 wire LT/ HT systems, ..1-5A CT input, Modbus protocol. Temperature -20+60°C. 2 expansion ports for external transmission modules. 2 digital outputs programmable for Alarm or Pulse transmission or for remote output. DIN rail mount 6 modules.



FAST D6 H 85-265V 85-265Vac/100-374Vdc power supply [PFA1610-82](#)
Add-on options RS 485 output, RS 232 output, 2 x 4-20 mA output, etc. (see X3M-D6 / FLASH-D6 sections)

ATTO and ATTO E-Wi

TRANSDUCER & ENERGY ANALYZER

Over 60 readings available on serial port including min-max U, max., thermal & neutral current, phase THD-I, THD-U, peak power, maximum demand, rolling demand, import/export demand, phase, partial and total active energy, 2-4 quadrant energies (Ea, Er) RMS measurement to 31st harmonic. 0,5 % accuracy on V and I. Class 1 accuracy on active energy and cl. 2 on reactive energy (EN62053-21). Single-phase, 2-phase, balanced or unbalanced 3-phase (max. 500V ph-ph), 2, 3 & 4 wire, LT and HT systems, ..1-5A CT input. Temp. range -10+50°C. DIN rail mount 4 modules. 230-240Vac power supply (others on request).



Types with input for external ..1-5A Current Transformers

ATTO D4 RS485 230-240V Type with built-in RS485 serial port (Modbus protocol).. [PFA7411-02](#)
ATTO D4 RS485 230-240V 1DI 2DO Type with built-in RS485 serial port (Modbus protocol), 1 digital Input and 2 isolated digital Outputs (programmable for Pulse or Alarm transmission or as remote Output devices).. [PFA7411-12](#)
ATTO D4 RS485 230-240V 2AO4-20mA Type with built-in RS485 serial port (Modbus protocol), 2 active 4-20mA analogue outputs (for load up to 250 Ohm, over a 12Vdc external power supply is needed (PFTP100-Q2)) [PFA7411-62](#)
ATTO D4 E-Wi HI 230-240V Transceives the data through radio waves (wireless) using the E-Wi protocol. (Equipped with RS485 port) [PFA741H-02](#)

NEW
E-Wi

Types with 70 A direct input (via dedicated external CTs)

Supplied with 1 external 70A CT (9 mm. hole diam.) and ready for single phase wiring. For 3-phase systems it is necessary to separately order 1 or 2 **additional CTs type TA 70A** depending upon the wiring configuration. (part number [PFAE000-00](#)).



ATTO D4 70A RS485 230-240V Type with built-in RS485 serial port (Modbus protocol).. [PFA7431-02](#)
ATTO D4 70A RS485 230-240V 1DI 2DO Type with built-in RS485 serial port (Modbus protocol), 1 digital Input and 2 isolated digital outputs (programmable for Pulse or Alarm transmission or as remote Output devices).. [PFA7431-12](#)
ATTO D4 70A RS485 230-240V 1DI 2DO SELF POWERED Type with built-in RS485 serial port (Modbus protocol), active self-powered 1 digital Input and 2 isolated digital outputs (programmable for Pulse or Alarm transmission or as remote Output devices) [PFA7431-E2](#)
ATTO D4 70A E-Wi HI 230-240V Transceives the data through radio waves (wireless) using the E-Wi protocol. (Equipped with RS485 port) [PFA743H-02](#)
TA 70A Dedicated 70A CT for FEMTO D4 70A meters. Voltage output secondary with superior metering accuracy also for low current/power signals. Plastic body with 9mm. hole diameter... . [PFAE000-00](#)

NEW
E-Wi



DC TRANSDUCERS & COUNTERS / ANALYZERS

FEMTO DC and FEMTO DC E-Wi

DC TRANSDUCERS & COUNTERS / ANALYZERS

Instrument suitable for DC measurement, direct voltage input, current input via external commercial 60mVdc or 100mVdc shunts with programmable ratio (not included, e.g. part number PFARQ70010). Readings of voltage, current, power, energy, min-max voltage, max current, max power. Built in RS485 serial port (Modbus protocol). Temp. range -10+50°C. DIN rail mount 4 modules.

FEMTO D4 DC RS485 230-240V 1DI 2DO	230-240Vac power supply. Backlighted LCD graphic display, 1 active digital input and 2 digital outputs (programmable)	PFA6471-12
FEMTO D4 DC RS485 18÷60Vdc 1DI 2DO	18÷60Vdc power supply. Backlighted LCD graphic display. 1 active digital input and 2 digital outputs (programmable)	PFA6471-18
FEMTO D4 DC E-Wi HI 230-240V	Transceives the data through radio waves (wireless) using the E-Wi protocol. (Equipped with RS485 port)	NEW E-Wi PFA647H-02



ATTO DC and ATTO DC E-Wi

ATTO D4 DC RS485 230-240V	230-240Vac power supply	PFA7471-02
ATTO D4 DC RS485 230-240V 1DI 2DO	230-240Vac power supply. 1 active digital input and 2 digital outputs (programmable)	PFA7471-12
ATTO D4 DC RS485 18÷60Vdc 1DI 2DO	18÷60Vdc power supply. 1 active digital input and 2 digital outputs (programmable)	PFA7471-18
ATTO D4 DC E-Wi HI 230-240V	Transceives the data through radio waves (wireless) using the E-Wi protocol. (Equipped with RS485 port)	NEW E-Wi PFA747H-02
ATTO D4 DC 3I RS485 230-240V	Suitable for measuring simultaneously 3 strings in the Photovoltaic systems. 230-240 Vac power supply.	NEW PFA7481-02
ATTO D4 DC 3I RS485 230-240V 1DI 2DO	Suitable for measuring simultaneously 3 strings in the Photovoltaic systems. 230-240 Vac power supply. 1 active digital input and 2 digital outputs (programmable)	NEW PFA7481-12
ATTO D4 DC 3I RS485 230-240V 1DI 2DO SELF POWERED	Suitable for measuring simultaneously 3 strings in the PV systems.. 230-240 Vac power supply. 1 active digital input self powered and 2 digital outputs. (programmable for Pulse or Alarm transmission or as remote Output devices)	NEW PFA7481-E2
ATTO D4 DC 3I RS485 230-240V 2DI 1RO	Suitable for measuring simultaneously 3 strings in the Photovoltaic systems.. 230-240 Vac power supply. 2 active digital input self powered and 1 relay output	NEW PFA7481-22
ATTO D4 DC 3I RS485 customized other versions on request.		



ATTO D4 DC ECOALARM D4 DC 900V/300V	Anti-theft system with verification of the presence of photovoltaic panels and a voltage divider up to 900Vdc to be used together with the Atto DC 3I. Generates an alarm e-mail if connected to an Yocto net with the Mail Alarm option. 3/1 ratio (e.g. 900Vdc in input >> 300Vdc in output). Built in RS485 port. DIN rail mount type, 4 DIN modules size.	NEW PFAT401-02
ATTO D4 DC ECOALARM D4 DC 6I 900V/300V	Anti-theft system with verification of the presence of photovoltaic panels and a voltage divider up to 900Vdc to be used together with 2 Atto DC 3I. Generates an alarm e-mail if connected to an Yocto net with the Mail Alarm option. 3/1 ratio (e.g. 900Vdc in input >> 300Vdc in output). Built in RS485 port. DIN rail mount type, 4 DIN modules size.	NEW PFAT4G1-02
VOLTAGE DIVIDER D2 DC 900V/300V	Voltage divider for FEMTO DC and ATTO DC up to 900 V. 3:1 ratio (e.g. 900Vdc in input >> 300Vdc in output). 2 DIN modules size.	PFAQ280-00



PROGRAMMABLE MULTIFUNCTIONAL INPUT-OUTPUT DEVICE

YOCTO I-O

PROGRAMMABLE MULTIFUNCTIONAL INPUT-OUTPUT DEVICE

Programmable multifunctional I/O device for RS485 networks. Built-in clock and data retention memory. Equipped with analogue inputs, digital inputs and , depending on the type, relay outputs and digital outputs. Designed to log the average value (in a programmable integration time) of analogue parameters from external sensors (e.g. temperature, humidity, etc.), for pulse counting (e.g. electrical energy, gas, water, etc.) or ON/OFF state detection. The outputs can be configured for alarm mode or remote control via Modbus. 1 slave RS485 port (Modbus). DIN rail mount 4 modules. 8-32Vac/12-45Vdc power supply



YOCTO I-O D4 8÷32V 2AI 2DI 2RO 2DO	Type with 2 digital inputs (for pulse count), 2 analogue inputs (for external sensors), 2 digital outputs and 2 relay outputs (internal alarm, remote output)	PFA9401-G6
YOCTO I-O D4 8÷32V 2AI 4DI 2RO	Type with 4 digital inputs (for pulse count), 2 analogue inputs (for external sensors) and 2 relay outputs (internal alarm, remote output)	PFA9401-H6
YOCTO I-O D4 8÷32V 2AI 6DI	Type with 6 digital inputs (for pulse count), 2 analogue inputs (for external sensors)	PFA9401-M6
YOCTO I-O LED PULSE COUNTER	Optional probe for the multifunction device Yocto I-O. Pulse counter from the LEDs of electrical energy meters. Available also specific bracket for the measurement of reactive and active energy on GEM e GET counter series, cod. PFAT000-01, not included.. . . .	PFAT0IS-02
LED PULSE COUNTER MOUNTING BRACKET	Specific mounting bracket for the GEM e GET counter series. Suitable for mounting 1 or 2 cod. PFAT0IS-01 Deca Sensor Led Pulse Counter or cod. PFAT0IS-02 Yocto I-O Led Pulse Counter.	NEW PFAT000-01



MULTIFUNCTIONAL SENSORS

DECA SENSOR

MULTIFUNCTIONAL SENSORS FOR ENVIRONMENTAL MONITORING

The multifunctional sensors, DECA SENSOR E-Wi and RS485, are the best solution for environmental parameters measuring and management, in residential, tertiary and industrial sector. The DECA SENSORS can be integrated into ELECTREX energy monitoring networks as well as can be used in many applications like: remote control, alarms management, building automation. Available in wireless and rs485 versions. 2 years warranty.



DECA SENSOR E-WI HI T BATTERY

Multifunction sensor for measuring the environmental temperature. Wall mount for internal/external (adequately protected) environments. Transcieves the data in RFD mode via radio waves (wireless) using the E-Wi protocol based on IEEE802.15.4. Size: 80 x 80 x 25 mm. Power supply: battery (PFAT000-0B) not included.

NEW [PFATUTH-0B](#)

DECA SENSOR E-WI HI T H BATTERY

Same features of the previous item but measuring environmental temperature and humidity

NEW [PFATUHH-0B](#)

DECA SENSOR E-WI HI T H L BATTERY

Same features of the previous item but measuring environmental temperature, humidity and luminosity.

NEW [PFATULH-0B](#)

DECA SENSOR E-WI HI T 4DI TE BUS BATTERY 5V

Multifunction sensor for measuring environmental temperature and pulse counter (up to 4 meters, eg. water, gas, etc.). Internal or external wall mount (suitably protected). Transcieves the data in RFD mode via radio waves (wireless) using the E-Wi protocol based on IEEE802.15.4. Expandable with Deca Sensor Bus Unit and Deca Sensor External TE. Size: 80 x 80 x 25 mm. Power supply: battery (PFAT000-0B) or switching power supply 5Vdc (PFTP000-R2) not included.



NEW [PFATUTH-NB](#)

DECA SENSOR E-WI HI T H 4DI TE BUS BATTERY 5V

Same features of the PFATUTH-NB but measuring environmental temperature and humidity.

NEW [PFATUHH-NB](#)

DECA SENSOR E-WI HI T H L 4DI TE BUS BATTERY 5V

Same features of the PFATUTH-NB but measuring environmental temperature, humidity and luminosity.

NEW [PFATULH-NB](#)

DECA SENSOR E-WI HI T H L 2DI 2DO TE BUS BATTERY 5V

Same features of the PFATUTH-NB but adding 2 digital inputs for pulse counting up to 2 counters, e.g. water/gas meter and 2 digital outputs checking states (e.g. on/off) for alarm

NEW [PFATULH-QB](#)

DECA SENSOR E-WI HI T H L 4DO TE BUS BATTERY 5V

Same features of the PFATUTH-NB but adding 4 digital outputs checking states (e.g. on/off) for alarm.

NEW [PFATULH-PB](#)

ENVIRONMENTAL PARAMETERS KIT E-Wi THL TE1

Includes 1 Yocto Net Coordinator Web E-Wi 2DI 2DO with WEB pages displaying measures online and power supplier 24V, 1 Deca Sensor E-Wi THL 4DI TE Bus with a Lithium 5V battery, 1 Deca Sensor External TE1, 1 Deca Sensor Bus Unit Box L and 1 copy of Energy Brain Configurator software.



NEW [PKA0011-00](#)

NOTE: all the Deca Sensor E-Wi may be equipped with a RS485 port adding the option Cod. PFATV01-00 Deca Sensor Option Module RS485 5Vdc.

NOTE: other customized versions on request.

DECA SENSOR RS485 T 5V

Multifunction sensor for measuring environmental temperature. Internal or external wall mount (suitably protected). Equipped with the RS485 Option Cod. PFATV01-00 Deca Sensor option module RS485 5V. Size: 80 x 80 x 25 mm. Power supply 5Vdc. Battery (PFAT000-0B) or switching power supply 5Vdc (PFTP000-R2) not included.



NEW [PFATUT1-0C](#)

DECA SENSOR RS485 T H 5V

Same features of the PFATUT1-0C but measuring environmental temperature and humidity..

NEW [PFATUH1-0C](#)

DECA SENSOR RS485 T H L 5V

Same features of the PFATUT1-0C but measuring environmental temperature, humidity and luminosity... ..

NEW [PFATUL1-0C](#)

DECA SENSOR RS485 T 4DI TE BUS 5V

Multifunction sensor for measuring environmental temperature and pulse counter (up to 4 meters, eg. water, gas, etc.). Internal or external wall mount (suitably protected). Equipped with the RS485 Option Cod. PFATV01-00 Deca Sensor option module RS485 5V. Expandable with Deca Sensor Bus Unit and Deca Sensor External TE. Size: 80 x 80 x 25 mm. Power supply 5Vdc. Battery (PFAT000-0B) or switching power supply 5Vdc (PFTP000-R2) not included.....



NEW [PFATUT1-NC](#)

DECA SENSOR RS485 T H 4DI TE BUS 5V

Same features of the PFATUT1-NC but measuring environmental temperature and humidity

NEW [PFATUH1-NC](#)

DECA SENSOR RS485 T H L 4DI TE BUS 5V.....

Same features of the PFATUT1-NC but measuring environmental temperature, humidity and luminosity.

NEW [PFATUL1-NC](#)

DECA SENSOR RS485 T H L 2DI 2DO TE BUS 5V

Same features of the PFATUL1-NC but adding 2 digital inputs for pulse counting up to 2 counters, e.g. water/gas meter and 2 digital outputs checking states (e.g. on/off) for alarm.

NEW [PFATUL1-QC](#)

DECA SENSOR RS485 T H L 4DO TE BUS 5V

Same features of the PFATUL1-NC but adding 4 digital outputs checking states (e.g. on/off) for alarm.....

NEW [PFATUL1-PC](#)


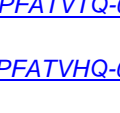
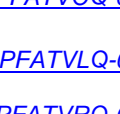
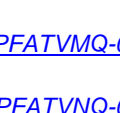



ENVIRONMENTAL PARAMETERS KIT RS485 THL TE1


Including 1 Yocto Net 2DI 2DO Web with WEB pages displaying measures online and a 24V power supplier, 1 Deca Sensor RS485 THL 4DI TE Bus with a 5V power supplier, 1 Deca Sensor External TE 1, 1 Deca Sensor Bus Unit Box L and 1 copy of the Energy Brain Configurator software.





NEW [PKA0010-00](#)


NOTE: other customized versions on request.

DECA SENSOR BUS UNIT BOX T	External BUS Unit Box for the multifunction Deca Sensor versions 4DI TE BUS. Measures: environmental temperature. Box size: 40x60x20 mm. Already wired with: 1 mt. Cat. 5E cable		NEW ... PFATVTQ-00
DECA SENSOR BUS UNIT BOX T H	Same features of the PFATVTQ-00 but measuring environmental temperature and humidity		NEW ... PFATVHQ-00
DECA SENSOR BUS UNIT BOX T L	Same features of the PFATVTQ-00 but measuring environmental temperature and luminosity.		NEW ... PFATVOQ-00
DECA SENSOR BUS UNIT BOX T H L	Same features of the PFATVTQ-00 but measuring environmental temperature, humidity and luminosity.		NEW ... PFATVLQ-00
DECA SENSOR BUS UNIT BOX T H L B	Same features of the PFATVTQ-00 but measuring environmental temperature, humidity, luminosity and pressure.....		NEW ... PFATVRQ-00
DECA SENSOR BUS UNIT BOX L	Same features of the PFATVTQ-00 but measuring environmental luminosity.		NEW ... PFATVMQ-00
DECA SENSOR BUS UNIT BOX B	Same features of the PFATVTQ-00 but measuring environmental pressure.		NEW ... PFATVNQ-00










DECA SENSOR BUS UNIT BOX CO2	External BUS Unit Box for the multifunction Deca Sensor versions 4DI TE BUS. Measures: CO2 concentration in air. Can be connected even if other Unit Boxes are present. NOT suitable for battery powered Deca Sensor. Counter feature not available. Box size: 40x60x20 mm. Already wired with: 1 mt. Cat. 5E cable..		NEW ... PFATVCQ-00
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DECA SENSOR BUS UNIT T 1	External BUS Unit Box for the multifunction Deca Sensor versions 4DI TE BUS. Measures: environmental temperature. Sensor bracket: cylindrical. Already wired with: 1 mt. Cat. 5E cable.		NEW ... PFAT0TQ-00
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DECA SENSOR BUS UNIT T 2	Same features of the PFATVTQ-00 but measuring environmental temperature on contact.		NEW ... PFAT0TQ-01
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DECA SENSOR BUS UNIT L	Same features of the PFATVTQ-00 but measuring environmental luminosity. Cylindrical bracket.....		NEW ... PFAT0MQ-00
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NOTE: in the standard configuration it is possible to manage on the BUS of the Deca Sensors up to 4 Deca Sensor Bus Unit and up to 4 different parameters (temperature, humidity, luminosity, pressure). Other customized versions on request (e.g. 4 Deca Sensor Bus Unit measuring 4 temperatures).

DECA SENSOR EXTERNAL TE 1	Optional temperature probe Deca Sensor in the 4DI TE BUS versions. Measures: contact temperature. Already wired with: 1 mt. Cat. 5E cable. Mounting bracket: aluminium profile box (to be mounted on the contact surface).....		NEW PFAT0TS-01
DECA SENSOR EXTERNAL TE 2	Same features of the PFAT0TS-01 but measuring environmental temperature on contact. Mounting bracket: eyelet termina.		NEW PFAT0TS-02
DECA SENSOR EXTERNAL TE 3	Same features of the PFAT0TS-01 but measuring environmental temperature. No mounting bracket.		NEW PFAT0TS-03
NOTE: to each multifunction Deca Sensor 4DI TE BUS can be connected 1 Deca Sensor External TE. Other customized versions on request.			
DECA SENSOR LED PULSE COUNTER	Optional probe for the multifunction Deca Sensor in the 4DI TE BUS versions. Pulse counter from the LEDs of electrical energy meters. Available also specific bracket for the measurement of reactive and active energy on GEM e GET counter series, cod. PFAT000-01, not included. Already wired with: 1 mt. Mounting bracket not included (available specific mounting bracket for the GEM e GET counter series, cod. PFAT000-01, for measuring active and reactive energy).		NEW PFAT0IS-01
LED PULSE COUNTER MOUNTING BRACKET	Specific mounting bracket for the GEM e GET counter series. Suitable for mounting 1 or 2 cod. PFAT0IS-01 Deca Sensor Led Pulse Counter or cod. PFAT0IS-02 Yocto I-O Led Pulse Counter.		NEW PFAT000-01
DECA SENSOR OPTION MODULE RS485 5V	RS485 port option for the multifunction Deca Sensor series. Galvanically insulated. 38400 bps baudrate . Size: 40x60x20 mm. Power supply: 5V. Through an external power supplier 5Vdc cod. PFAT000-0B (not included) supplies power also to Deca Sensor....		NEW PFATV01-00
DECA SENSOR LITHIUM BATTERY	AA Lithium Battety for the multifunction Deca Sensor series. Not rechargeable. Operating voltage 3,6 V. Operating temperature -55 + 85°C.....		NEW PFAT000-0B
SWITCHING POWER SUPPLY 5VDC 600mA	Switching power supply 230Vac, output 5Vdc. Size 54,5x54,5x32 mm.		NEW PFAT000-R2
DECA SENSOR EXTERNAL ENCLOSURE	ABS container for installing the multifunction Deca Sensor series in external environments and not protected from the weather effects. Snap-fit without the use of screws. Equipped with a galvanized metal bracket for installation on pole.		NEW PFAT0T0-01

ETHERNET / INTERNET & GSM ENERGY MONITORING NETWORKS AND REMOTE MANAGEMENT

YOCTO NET

GATEWAY AND MULTIFUNCTIONAL LOGGERS






- YOCTO NET D4 9÷36V 2DI 2DO NETWORK BRIDGE**
Network bridge between the Ethernet port and Modbus ports used to communicate with the Electrex instruments via RS485 and TTL. LCD backlighted graphic display. 2 digital inputs and 2 digital outputs. Configuration and status control through web pages. DIN rail mount 4 modules. Power supply 9÷36Vac / 12÷60Vdc or taken from an X3M or FLASH through a cable (code PCAFL00-00). **NEW**... [PFA94D3-96](#)
- YOCTO NET WEB D4 9÷36V 2DI 2DO NETWORK BRIDGE**
Same features as the YOCTO NET 2DI 2DO but including also the PFSW940-05 Upgrade Web. **NEW**... [PFA94D3-97](#)
- YOCTO NET WEB LOG 8 MAIL CALENDAR D4 9÷36V 2DI 2DO NET. BR.**
Same features as the YOCTO NET 2DI 2DO but including also the PFSW940-05 Upgrade Web, PFSW940-01 Upgrade Log 8, PFSW940-15 Upgrade Mail Alarm, PFSW940-20 Upgrade Calendar. **NEW**... [PFA94D3-98](#)
- YOCTO NET LOG D4 9÷36V 2DI 2DO NETWORK BRIDGE DATA LOGGER - 8 o 16 o 24 o 32 o 40....**
Same features as the YOCTO NET 2DI 2DO but including also the memory function for logging data and load profiles from the meters of the RS485 network. DIN rail mount 4 modules. Power supply 9÷36Vac / 12÷60Vdc.
Version 8 – Data logging of up to 8 channels (1 service for 8 meters)..... [PFA94D4-16](#)
Version 16 – Data logging of up to 16 channels (2 services for 16 meters)..... [PFA94D4-26](#)
Version 24 – Data logging of up to 24 channels (3 services for 24 meters)..... [PFA94D4-36](#)
Version 32 – Data logging of up to 32 channels (4 services for 32 meters)..... [PFA94D4-46](#)
Version 40 – Data logging of up to 40 channels (5 services for 40 meters)..... [PFA94D4-56](#)
- YOCTO NET MASTER D4 9÷36V 2DI 2DO NETWORK BRIDGE**.....
Network bridge for the supervision and for sending email alerts (and SMS if connected to one yocto Gate) collected by all the Electrex power meters connected to the Ethernet network by two or more Yocto Net and Yocto Net Log. LCD backlighted graphic display. 2 digital inputs and 2 digital outputs. Size 4 DIN modules. 9÷36 vac / 12÷60 vdc power supply..... **NEW**... [PFA94D4-96](#)
- YOCTO NET UPGRADE LOG 8 (PUK)**
Software upgrade through a PUK code. It adds 8 channels to the (1 service of 8 instruments), to the Yocto net log (which can log up to 40 channels). [PFSW940-01](#)
- YOCTO NET UPGRADE WEB (PUK)**.....
Software upgrade through a PUK code. It adds to the Yocto net and Yocto net log WEB pages displaying real time measures from the Electrex meters connected. [PFSW940-05](#)
- YOCTO NET UPGRADE WEB OPEN (PUK)**.....
Software upgrade through a PUK code. It adds to the Yocto net and Yocto net log (already including the PFSW940-05) the possibility to upload customized WEB pages displaying real time measures from the Electrex meters connected. On request the pages can be developed by Electrex [PFSW940-10](#)
- YOCTO NET UPGRADE MAIL ALARM (PUK)**
Performed by field PUK code entry, it adds to the Yocto Net and to the Yocto Net Log the possibility to send an e-mail with various user programmable alarms and alerts (and SMS if connected to a Yocto Gate)..... [PFSW940-15](#)
- YOCTO NET UPGRADE CALENDAR (PUK)**.....
Software implementation using PUK code. Adds to the Yocto Net and the Yocto Net Log the ability to manage functions of Energy Automation such as ON/OFF switching, alarms/notifications and actions conditioned from events and/or from a annual calendar based on minutes/hours/days/months..... **NEW**... [PFSW940-20](#)
- YOCTO NET UPGRADE BUNDLE MAIL ALARM + CALENDAR (PUK)**
Bundle software including the options cod. PFSW940-15 Upgrade Mail Alarm and PFSW940-20 Upgrade Calendar.. **NEW**... [PFSW940-21](#)
- YOCTO NET UPGRADE CHARTS (PUK)**
Performed by field PUK code entry. It allows to display on an HTML WEB page, the daily charts of electrical energy, temperature, humidity, luminosity, etc. retrieving the data from the logging files of the Yocto Net log **NEW**... [PFSW940-30](#)
- YOCTO NET UPGRADE 4YOU (PUK)**
Performed by field PUK code entry. It allow, through a memory optimizer, to modify the existing log & storage services of a Yocto Net Log. For example it allows to change the sampling frequency and the days of storage of a load profiles survey. Every Yocto Net can handle up to 5 different services.... [PFSW940-25](#)



- YOCTO NET UPGRADE NEW FEATURES**
Upgrade alle nuove versioni del firmware dello Yocto net che aggiungono nuove funzionalità allo strumento **NEW** [PFSW940-40](#)
- POWER CABLE YOCTO NET / X3M D6 – FLASH D6**.....
TTL cable that allows to feed the Yocto Net through the instruments X3M D6 and FLASH D6. [PCAFL00-00](#)

E-WI - NETWORK BRIDGE FOR WIRELESS MONITORING NETWORKS

YOCTO NET E-WI, YOCTO E-WI, GATEWAY AND MULTIFUNCTIONAL LOGGERS

- YOCTO NET COORDINATOR D4 E-WI HI 9÷36V 2DI 2DO**.....
Coordinator node of the E-Wi wireless network. Transcieves the data via radio waves at 250kbs and on 2.4GHz frequency rate. Network bridge between the Ethernet port and Modbus ports used to communicate with the Electrex instruments via RS485 and TTL.LCD backlight display. 2 digital inputs and 2 digital outputs. Configuration and status control through web pages. DIN rail mount 4 modules. Power supply 9÷36Vac / 12÷60Vdc..... **NEW**  [PFA94DH-06](#)
- YOCTO NET COORDINATOR WEB D4 E-WI HI 9÷36V 2DI 2DO**
Same features as the PFA94DH-06 YOCTO NET COORDINATOR 2DI 2DO but including also the software upgrade PFSW940-05 Upgrade Web. **NEW**  [PFA94DH-97](#)
- YOCTO NET COORDINATOR WEB LOG8 MAIL CALENDAR D4 E-WI HI 9÷36V 2DI 2DO**
Same features as the PFA94DH-06 YOCTO NET COORDINATOR 2DI 2DO but including also the software upgrade PFSW940-05 Upgrade Web, the PFSW940-01 Upgrade Log 8, the PFSW940-15 Upgrade Mail Alarm, the PFSW940-20 Upgrade Calendar. **NEW**  [PFA94DH-98](#)
- YOCTO NET ROUTER D4 E-WI HI 9÷36V 2DI 2DO**
Router node of the E-Wi wireless network with expandable functions. Transcieves the data via radio waves at 250kbs and on 2.4GHz frequency rate. Network bridge between the Ethernet port and Modbus ports used to communicate with the Electrex instruments via RS485 and TTL.LCD backlight display. 2 digital inputs and 2 digital outputs. Configuration and status control through web pages. DIN rail mount 4 modules. Power supply 9÷36Vac / 12÷60Vdc..... **NEW**  [PFA94DH-16](#)
- YOCTO BRIDGE D4 E-WI HI 230-240V**.....
Bridge node of the E-Wi wireless network with not expandable functions. Transcieves the data via radio waves at 250kbs and on 2.4GHz frequency rate. Network bridge between the Ethernet port and Modbus ports used to communicate with the Electrex instruments via RS485 and TTL.LCD backlight display. 2 digital inputs and 2 digital outputs. Configuration and status control through web pages. DIN rail mount 4 modules. Power supply 9÷36Vac / 12÷60Vdc..... **NEW**  [PFA94DH-22](#)



GSM - DEVICES FOR WIRELESS MONITORING NETWORKS AND REMOTE MANAGEMENT

YOCTO GATE GATEWAY AND MULTIFUNCTIONAL LOGGERS

- YOCTO GATE D4 8÷32V GSM**
Multifunctional GSM gateway. 4 inputs (2 digital, 2 analogue) 4 outputs (2 digital, 2 relay), 1 RS485 serial port (Modbus). Built in GSM modem. Independent supervision of alarms of RS485 sub meters network with automatic SMS messaging and mail/fax where supported. RS485/GSM interface. DIN rail mount 4 modules. 8÷32Vac/12÷45Vdc power supply. Antenna and SIM card not included (see accessories). [PFA9409-06](#)
- YOCTO GATE MASTER D4 8÷32V GSM**.....
Multifunctional GSM gateway for the supervision and for sending SMS alerts collected by all the Electrex meters connected to the Ethernet network by two or more Yocto Net and Yocto Net Log. It requires the Yocto Net Master. DIN rail mount 4 modules. 8÷32Vac/12÷45Vdc power supply. Antenna and SIM card not included (see accessories). [PFA9409-96](#)



ACCESSORIES

Switching Power Supply - SPS

SPS D1 230Vac 24Vdc

230Vac switching power supply, 24Vdc - 400mA output. 1 DIN module size.



[PFTP100-Q2](#)

SPS BATTERY Charger D8 230Vac 13,8Vdc Switching power supply unit 230Vac and battery charge 13,8 Vdc 5A. With double output terminals: one dedicated to the load and one for the connection of an external battery pack in buffer (use hermetic lead batteries). 8 DIN modules size.



[PFTP800-P2](#)

Pulse output repeater

RPT

Pulse output repeater, for duplication of GMC or GME meter outputs to two different users. 12V 15mA inputs, dual optoisolators (250 Vac/dc 100 mA). DIN rail mount 6 modules. 200-240 Vac power supply.



[PFE170-00](#)

Electrex kit for digital output equipped instruments

RELE' 2 OUT KIT Includes 2 relay and 1 stabilized power supply. To be used with the two digital outputs of X3M D6, Flash D6, Fast and the types 1DI 2DO of Femto D4, Atto, Zepto D6.

[PIT0000-92](#)

Plastic adapters

C4 DIN

Plastic adapter for panel mounting of DIN rail instruments size 4 DIN.....

[PFE940-00](#)

C9 DIN


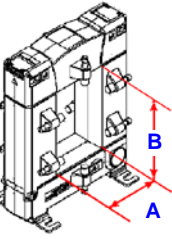
Plastic adapter for panel mounting of DIN rail instruments size 9 DIN.....

[PFE930-00](#)

Firmware upgrade kit for Atto Femto Zepto

FW upgrade kit Firmware upgrade kit (probe cable, software) for FEMTO, ZEPTO and ATTO (all types).. [PFA0902-00](#)

SPLIT CORE CTs

	Type	Rating (Amp)	Burden (VA)	Internal A x B size (mm)		Weight (kg)	
Class 1 Fast snap-on system	CTS 23-100	100 / 5 <	1,25	20	30	0,85	PFC0200
	CTS 23-150	150 / 5 <	1,5	"	"	"	PFC0202
	CTS 23-200	200 / 5 <	1,5	"	"	"	PFC0204
	CTS 23-250	250 / 5 <	1,5	"	"	"	PFC0206
	CTS 23-300	300 / 5 <	3,75	"	"	"	PFC0208
	CTS 23-400	400 / 5 <	5	"	"	"	PFC0210
	CTS 58-250	250 / 5	1,5	50	80	1,10	PFC0212
	CTS 58-300	300 / 5 <	2,5	"	"	"	PFC0214
	CTS 58-400	400 / 5 <	2,5	"	"	"	PFC0216
	CTS 58-500	500 / 5	5	"	"	"	PFC0218
	CTS 58-600	600 / 5 <	5	"	"	"	PFC0220
	CTS 58-750	750 / 5	5	"	"	"	PFC0222
	CTS 58-800	800 / 5 <	7,5	"	"	"	PFC0224
	CTS 58-1000	1000 / 5 <	10	"	"	"	PFC0226
	CTS 812-250	250 / 5	1,5	80	120	1,35	PFC0230
	CTS 812-300	300 / 5	2,5	"	"	"	PFC0232
	CTS 812-400	400 / 5	2,5	"	"	"	PFC0234
	CTS 812-500	500 / 5	5	"	"	"	PFC0236
	CTS 812-600	600 / 5 <	5	"	"	"	PFC0238
	CTS 812-750	750 / 5	5	"	"	"	PFC0240
	CTS 812-800	800 / 5 <	7,5	"	"	"	PFC0242
	CTS 812-1000	1000 / 5 <	10	"	"	"	PFC0244
	CTS 812-1200	1200 / 5	10	"	"	"	PFC0246
	CTS 812-1250	1250 / 5 <	15	"	"	"	PFC0248
	CTS 812-1500	1500 / 5 <	15	"	"	"	PFC0250
	CTS 816-2000	2000 / 5 <	10	80	160	1,35	PFC0260
	CTS 816-2500	2500 / 5 <	15	"	"	"	PFC0264

(<) Preferential types

External dimensions (mm): CTS 23 base 93 height 106; CTS 58 base 125 height 158;
CTS 812 base 155 height 198; CTS 816 base 195 height 243.

SHUNT

0,5% Class. 60mV voltage drop. All models are conform to the DIN 43703 standard.

SHUNT 10A 60mV WITH SOCKET 10A electric current, 60mV voltage drop, 0,5% accuracy class. With plastic socket, size. 135 x 30 x 15 mm. Shunt size 90 x 20 x 8 mm. Provided with screws.....[PFARQ70010](#)



SHUNT 25A 60mV WITH SOCKET 25A electric current, 60mV voltage drop, 0,5% accuracy class. With plastic socket, size. 135 x 30 x 15 mm. Shunt size 90 x 20 x 8 mm. Provided with screws.....[PFARQ70025](#)

SHUNT 50A 60mV 50A electric current, 60mV voltage drop, 0,5% accuracy class. Without plastic socket. Shunt size 100 x 20 x 8 mm. Provided with screws.....[PFAR070050](#)



SHUNT 100A 60mV 100A electric current, 60mV voltage drop, 0,5% accuracy class. Without plastic socket. Shunt size 100 x 20 x 8 mm. Provided with screws.....[PFAR070100](#)

Note: shunts are available also with 100mV voltage drop and with electric current from 1A to 15000A.

RS 485 line cable (shielded twisted pair)

RS485 cable (100 m)	2-pairs, double shield, 100 m roll..	CE00103
RS485 cable (500 m)	2-pairs, double shield, 500 m roll..	CE00105
RS485 cable U (100m)	2-pairs, double shield, for underground installation, 100 m roll.	CE00107
RS485 cable U (500m)	2-pairs, double shield, for underground installation, 500 m roll.	CE00109



INDUSTRIAL MODEM & ACCESSORIES FOR YOCTO GATE

MODEX GSM-GPRS USB	
GSM / GPRS modem for internet connections with Data / Fax / SMS / Voice characteristics	<i>PFC3516</i>
GSM INDUSTRIAL PLUS	
GSM industrial modem for Data/Fax/SMS/Voice. Self test, remote setup and remote maintenance.	<i>PFC3505</i>
POWER SUPPLY 12V 1A INDUSTRIAL PLUS	
Power supply for GSM/GPRS industrial Plus modem.....	<i>PFC3525</i>
ANTENNA DUAL BAND STILO	
SMA dual band stilo antenna. Suitable for direct connection to the Yocto Gate or through an extension cable (PFC3565).	<i>PFC3530</i>
ANTENNA MAGNETIC BASE WITH CABLE EXTENSION	
Dual Band antenna with magnetic socket and with a 2.5 m cable. To be connected to the Yocto Gate it requires the adapter PFC3555.	<i>PFC3420</i>
ANTENNA MOUNTING PANEL WITH CABLE EXTENSION	
Dual Band Antenna with 2.5 m cable for panel mount. To be connected to the Yocto Gate it require the adapter PFC3555	<i>PFC3535</i>
CABLE EXTENSION 2,5 M	
2.5 m antenna extension cable. To be connected to the Yocto Gate it requires the adapter PFC3555. Suitable for antennas PFC3545 and PFC3420.	<i>PFC3420-1</i>
CABLE EXTENSION 8 M	
8 m antenna extension cable. To be connected to the Yocto Gate it requires the adapter PFC3555. Suitable for antennas PFC3545 and PFC3420.	<i>PFC3565</i>
CABLE EXTENSION 0,15 M	
0.15 m antenna extension cable. To be connected to the Yocto Gate it requires the adapter PFC3555. Suitable for antennas PFC3545 and PFC3420.....	<i>SL00350</i>
ADAPTER CABLE	
Mandatory adapter cable to be used with PFC3420 and PFC 3545 antennas.	<i>PFC3555</i>



SOFTWARE

CONFIGURATION AND ENERGY MANAGEMENT SOFTWARE

Energy Brain Configurator

SW dedicated only to the configuration of remote instruments and RS485 networks. Instruments' advanced functions programming. Suitable for all the Electrex instruments and devices with RS485 com. port. Duplication permitted. Released for W00(SP4), XP, Vista.



[PFSW300-00](#)

Energy Brain Master (Hardware key protection)

Full-featured software for data acquisition, storage and presentation suitable for Local and for Wide area networks. Main functions: configuration, communication, on-line readings display, location download, agenda, graphs, events logging, TOU tariff handling, virtual channels and formulas, TOU tariff editor. It also operates as "master" SW for "client" SW versions. Types available depending on the total number of channels required (physical field meters + virtual channels). Released for W00(SP4), XP, Vista .



Energy Brain 4	Suitable for up to max. 4 channels (expandable), ACCESS [®] data base	PFSW312-00
Energy Brain 8	Suitable for up to max. 8 channels (expandable), ACCESS [®] data base	PFSW310-00
Energy Brain 16	Suitable for up to max. 16 channels (expandable), ACCESS [®] data base	PFSWEBF-E0
Energy Brain 32	Suitable for up to max. 32 channels (expandable), ACCESS [®] data base	PFSW200-00
Energy Brain 300	Suitable for up to max. 300 channels, ACCESS [®] data base	PFSW190-00

Energy Brain Client (Hardware key protection)

Software for "client" access, by other PC, to the Energy Brain Master versions. Installation as "client instruments" or "client data base" software respectively for instruments or data base access. Other general functions same of the Energy Brain with the exception of instruments configuration (disabled). Versions available depending on the total number of channels required (physical field meters + virtual channels). Released for W00(SP4), XP, Vista .



EB 8 client	Suitable for up to max. 8 channels, ACCESS [®] data base	PFSW320-00
EB 32 client	Suitable for up to max 32 channels, ACCESS [®] data base	PFSW250-00
EB 300 client	Suitable for up to max 300 channels, ACCESS [®] data base	PFSW240-00

Energy Brain Master (Software key protection)

Full-featured software for data acquisition, storage and presentation suitable for Local and for Wide area networks. Main functions: configuration, communication, on-line readings display, location download, agenda, graphs, events logging, TOU tariff handling, virtual channels and formulas, TOU tariff editor. It also operates as "master" SW for "client" SW versions. Types available depending on the total number of channels required (physical field meters + virtual channels). Released for W00(SP4), XP, Vista .



Energy Brain 4	Suitable for up to max. 4 channels (expandable), ACCESS [®] data base	NEW PFSW312-SK
Energy Brain 8	Suitable for up to max. 8 channels (expandable), ACCESS [®] data base	NEW PFSW310-SK
Energy Brain 16	Suitable for up to max. 16 channels (expandable), ACCESS [®] data base	NEW PFSW315-SK
Energy Brain 32	Suitable for up to max. 32 channels (expandable), ACCESS [®] data base	NEW PFSW200-SK
Energy Brain 300	Suitable for up to max. 300 channels, ACCESS [®] data base	NEW PFSW190-SK

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EB 8 client	Suitable for up to max. 8 channels, ACCESS [®] data base	NEW PFSW320-SK
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EB 300 client	Suitable for up to max 300 channels, ACCESS [®] data base	NEW PFSW240-SK

Software options & expansions

Energy Brain Counters

It supports the generation of a report indicating the energy counters values (kWh and kvarh) of all the sub meters of a given location (HTML format draggable in Excel[®]). for W00(SP4), XP, Vista



EB Counters SK	Opzione Add-on option to an existing EB master.	PFSW410-SK
EB Counters H.K.	Stand alone program, suitable for up to 300 channels.	PFSWEBE-E0

Option Energy Brain Log Report

Add-on option to the Energy Brain software supporting the automatic transmission of an e-mail message with the channels status and anomalies during data download (e.g. error indication in case of instruments powered off or not reachable).

[PFSW430-00](#)

Option Energy Brain Personal Report

Add-on option to the Energy Brain software supporting the periodic and automatic generation of a customizable report with data retrieved from data base of Energy Brain, divided by channel and saved as Excel[®] file. The file can be sent as attached of an e-mail or saved in a folder of a PC and/or sent to an FTP address.

[PFSW400-00](#)

Channel expansion

For expanding the number of channels handled by an existing Energy Brain software

Upg. EB 4-8	Expansion of E.B. 4 Master to E.B.8 Master (4 to 8 channels)	PFSW332-00
Upg. EB 8-16	Expansion of E.B. 8 Master to E.B.16 Master (8 to 16 channels)	PFSW335-00
Upg. EB 16-32	Expansion of E.B. 16 Master to E.B.32 Master (16 to 32 channels)	PFSW337-00
Upg. EB 32-300	Expansion of E.B. 32 Master to E.B.300 Master (32 to 300 channels)	PFSW350-00
Upg. EB cl. 8-32	Expansion of E.B. 8 Client to E.B.32 Client	PFSW340-00
Upg. EB cl. 32-300	Expansion of E.B. 32 Client to E.B.300 Client	PFSW355-00

Data base expansion

Required when handling large size Data Bases. It is strongly recommended in the case of Energy Brain 300 or EB 32 expansion to 300 channels.

Upg. EB-Postgres	It replaces the ACCESS [®] database of the Energy Brain with the PostgreSQL [®] database. Suitable for <i>master</i> or for <i>client</i> versions	PFSW395-00
Upg. EB-MySQL	It replaces the ACCESS [®] database of the Energy Brain with the MySQL [®] database. Suitable for <i>master</i> or for <i>client</i> versions	PFSW390-00

SOFTWARE PROTECTION KEY CHANGE SK - HK

Software key protection system change to hardware key USB system, or vice-versa.....

NEW [PFAS000-05](#)

Technical support (telephonic and on line)

Yearly fee for the telephonic, remote support and for providing free Energy Brain software Updates from Electrex technical dept. Do not includes the free providing of eventual Energy Brain software Upgrades which are quoted in the Price List..



[PFAS000-01](#)