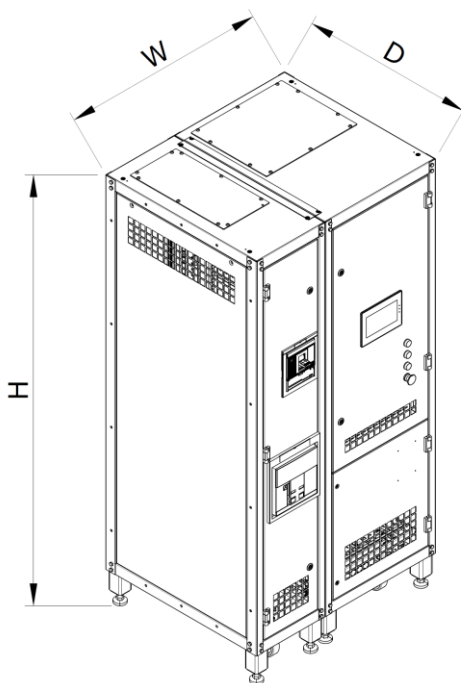




**DATASHEET EPX 320A**

**DESCRIPTION**



- KEY FEATURES:**
- UP TO 4 SAVING LEVELS
  - ON BOARD BYPASS
  - ON BOARD CONTROL SYSTEM
  - REMOTE CONTROL
  - DATA LOGGER
  - ETHERNET/4G MODEM CONNECTION
  - ELECTRICAL PARAMETERS MONITORING
  - ON BOARD 7" HMI (Optional)

**MAIN DATA**

|                           |  |                   |                              |
|---------------------------|--|-------------------|------------------------------|
| Rated Voltage (*)         | 400 Vac                                      | Load variation    | 100 %                        |
| Rated Frequency (*)       | 50 Hz  | Auxiliary voltage | 24Vdc                        |
| Recommended plant voltage | PH-N 235 V - PH-PH 407 V                     | Insulation Class  | Class I                      |
| Cabinet                   | Sheet metal RAL7042                          | IP/NEMA Type      | IP30/TYPE 1                  |
| IEC standards             | IEC/EN 61439-1: 2022<br>IEC/EN 61439-2: 2021 | UL/CSA standards  | UL1012<br>CSA C22.1 No.107.1 |

(\*) Different Voltage and Frequency can be offered on request.

**RATED DATA**

| CODE              | RATED CURRENT<br>[A] | RATED POWER (@400V)<br>[kVA] | I <sub>cw</sub> / I <sub>pk</sub><br>[kAx1s] / [kA] | RATED BYPASS CURRENT<br>[A] | EFFICIENCY | WEIGHT<br>[kg] | DIMENSIONS (W x D x H)<br>[mm] |
|-------------------|----------------------|------------------------------|---|-----------------------------|------------|----------------|--------------------------------|
| EPX0320C400I2NG00 | 320                  | 222                          | 10 / 17   | 320                         | 99,50%     | 360            | 910 x 760 x 1860               |
| EPX0320G400I2NG00 | 320                  | 222                          | 10 / 17   | 400                         | 99,50%     | 360            | 910 x 760 x 1860               |
| EPX0320C400I2NG02 | 320                  | 222                          | 15 / 30   | 320                         | 99,50%     | 360            | 910 x 760 x 1860               |
| EPX0320G400I2NG02 | 320                  | 222                          | 15 / 30   | 400                         | 99,50%     | 360            | 910 x 760 x 1860               |

**AMBIENT CHARACTERISTICS**

|                           |                |                |                  |
|---------------------------|----------------|----------------|------------------|
| Working Temperature Range | -5°C to +40°C  | Humidity       | 0%...97%         |
| Storage Temperature Range | -10°C to +65°C | Cooling system | Natural + Forced |
| Installation              | Indoor         |                |                  |

**SERVER CONNECTION**

|                                 |                                 |                        |                         |
|---------------------------------|---------------------------------|------------------------|-------------------------|
| Connection type                 | Ethernet<br>4G Modem (Optional) | Communication Protocol | TCP/IP v4<br>GPRS/3G/4G |
| Minimum upload connection speed | 800Kbps                         | Sampling time          | 1 min<br>2 sec          |

**NETWORK POWER ANALYZER ACCURACY**

|                       |   |                 |   |
|-----------------------|---|-----------------|---|
| Current               | 0,25 a 6A: $\pm(0,5\% \text{ FS} + 1\text{DGT})$<br>0,03 a 0,25A: $\pm(0,5\% \text{ FS} + 7\text{DGT})$ | Frequency       | $\pm 0,1 \text{ Hz}$ (48 to 62Hz)   |
| PH-PH Voltage         | $\pm(1,5\% \text{ FS} + 1 \text{ DGT})$   | PH-N Voltage    | $\pm(0,5\% \text{ FS} + 1 \text{ DGT})$   |
| Active/Apparent Power | 0,25 a 6A: $\pm(1\% \text{ FS} + 1\text{DGT})$<br>0,03 a 0,25A: $\pm(1\% \text{ FS} + 5\text{DGT})$     | Reactive Power  | 0,25 a 6A: $\pm(2\% \text{ FS} + 1\text{DGT})$<br>0,03 a 0,25A: $\pm(2\% \text{ FS} + 5\text{DGT})$ |
| Active Energy         | Class 2 (start-up "I": 30mA)  | Reactive Energy | Class 3 (start-up "I": 30mA)  |

**CURRENT TRANSFORMERS ACCURACY**

|                  |            |                     |                       |
|------------------|------------|---------------------|-----------------------|
| Precision class  | Class 0,5  | Dielectric strength | 3 kV - 50 Hz - 1 min. |
| Frequency range  | 50 - 60 Hz | Max overload        | 1,2 In                |
| Insulation Class | E (120°C)  |                     |                       |

**1 MINUTE SAMPLED PARAMETERS**

|                                 |   |                                 |  |
|---------------------------------|---|---------------------------------|--|
| Output PH-N Voltage [V]         | V L1-N<br>V L2-N<br>V L3-N              | Output PH-PH Voltage [V]        | VL1-L2<br>VL2-L3<br>VL3-L1                   |
| Current [A]                     | A-L1<br>A-L2<br>A-L3<br>A N             | Active Power [W]                | W L1<br>W L2<br>W L3<br>W total              |
| Reactive Power [VAR]            | VAR L1<br>VAR L2<br>VAR L3<br>VAR total | Power Factor                    | PF L1_L2_L3<br>PF-I L1_L2_L3<br>PFC L1_L2_L3 |
| Frequency [Hz]                  | Hz                                      | Temperature [°C]                | T°C  |
| Energy [kWh]                    | kWh                                     | Reactive Energy [kVARh]         | kVARh  |
| Voltage Harmonic Distortion [%] | THD V1<br>THD V2<br>THD V3              | Current Harmonic Distortion [%] | THD I1<br>THD I2<br>THD I3                   |

**2 SECONDS SAMPLED PARAMETERS**

|                         |                            |                         |                      |
|-------------------------|----------------------------|-------------------------|----------------------|
| Output PH-N Voltage [V] | V L1-N<br>V L2-N<br>V L3-N | Current [A]             | A-L1<br>A-L2<br>A-L3 |
| Active Power [W]        | W                          | Reactive Power [VAR]    | VAR total            |
| Energy [kWh]            | kWh                        | Reactive Energy [kVARh] | kVARh                |
| Power Factor            | PF                         |                         |                      |

**ALLOWED OVERLOADS**

|                 |                 |
|-----------------|-----------------|
| <b>OVERLOAD</b> | <b>MAX TIME</b> |
| 115%            | 5 min           |
| 106%            | 30 min          |
| 104%            | 60 min          |

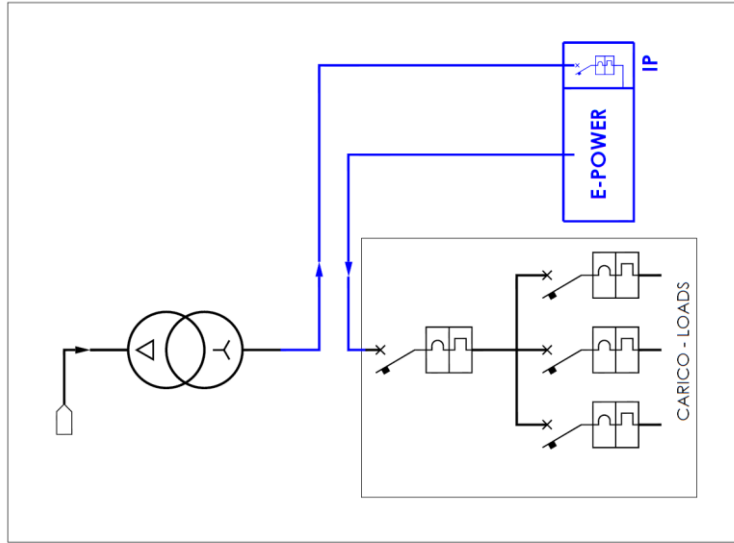
The overload values refer to the rated saving and bypass current.

The overload protection must be guaranteed by an upstream suitable circuit breaker.

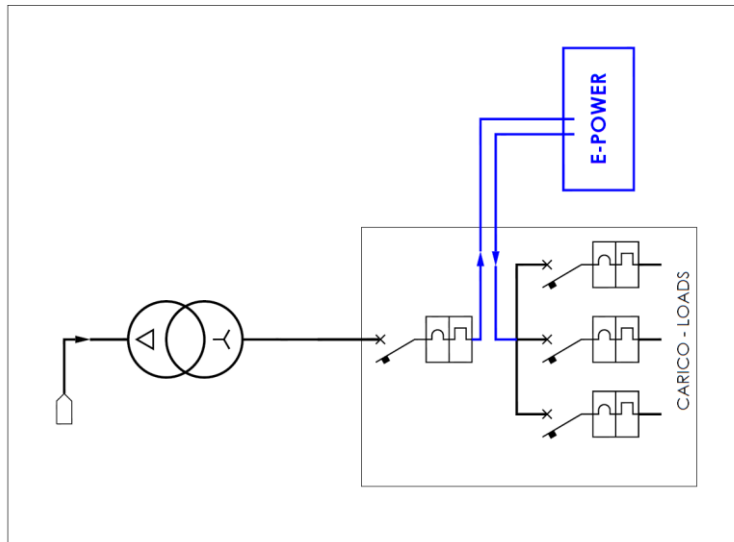


**INSTALLATION DIAGRAM EXAMPLES**

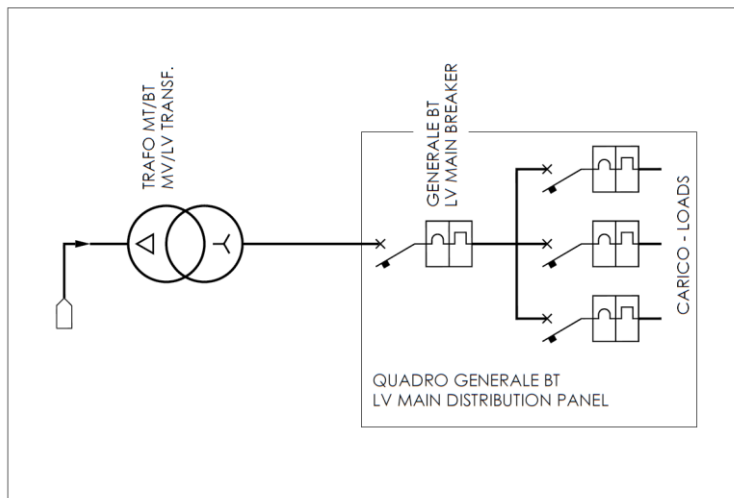
Configuration where the E-Power is installed upstream the LV Main Breaker (in this case it is necessary to insert the additional protection IP, or equivalent)



Configuration where the E-Power is installed downstream the main circuit breaker



Original plant diagram (where E-Power has to be installed)







**E-POWER FILTER TECHNICAL DATA**

|  |   |
|--|---|
| Phases                                   | 3ph   |
| Rated Voltage                            | 400 Vac   |
| Rated Frequency                          | 50 Hz   |
| Rated Current                            | 320 A   |
| Voltage Drop PH-N                        | Liv 1: approx. 9 V<br>Liv 2: approx. 13 V<br>Liv 3: approx. 16 V<br>Liv 4: approx. 20 V         |
| Voltage Drop PH-N<br>With reduced levels | Liv 1:-: approx. 8 V<br>Liv 2:-: approx. 11 V<br>Liv 3:-: approx. 13 V<br>Liv 4:-: approx. 15 V |
| Reference Standards                      | IEC 60076-1 IEC60076-11   |

|                                 |                              |
|---------------------------------|------------------------------|
| Primary Winding                 | Open Delta                   |
| Secondary Winding               | Open Delta                   |
| Vectorial Group                 | Dd0                          |
| Winding insulation class        | F                            |
| Impregnation                    | VPI                          |
| Insulation Class                | 1.1kV                        |
| Dielectric Strength test        | 3kV                          |
| Thermal Detectors               | Warning 110°C<br>Alarm 130°C |
| Primary wind. Resistance (20°C) | 250 mΩ                       |
| Second. wind. Resistance (20°C) | 1.1 mΩ                       |
| Vcc                             | 3.9 %                        |
| Cooling                         | AN                           |

**LOSSES AND EFFICIENCY**

|                      |       |
|----------------------|-------|
| No load Losses       | 200 W |
| Copper Losses        | 700 W |
| Other E-Power Losses | 100 W |

|                             |        |
|-----------------------------|--------|
| Total Losses (@full load)   | 1000 W |
| Rated plant Power (PF=0.95) | 210 kW |
| Efficiency (at rated power) | 99.5 % |

