# LIBRA USV-Anlagen von EBT (10 - 800KVA)

EBT
Euro-Batterietechnik

## LIBRA pro

online UPS

10-100 kVA three-phase / single-phase
10-800 kVA three-phase / three-phase

- LOCAL AREA NETWORKS (LAN)
- INTERNET CENTERS (ISP/ASP/POP)
- ELECTRO-MEDICAL DEVICES
- SERVERS
- INDUSTRIAL PLCS
- TELECOMMUNICATION DEVICES
- DATA CENTERS
- EMERGENCY DEVICES (LIGHTS, ALARM)
- INDUSTRIAL APPLICATION

# LIBRA PRO

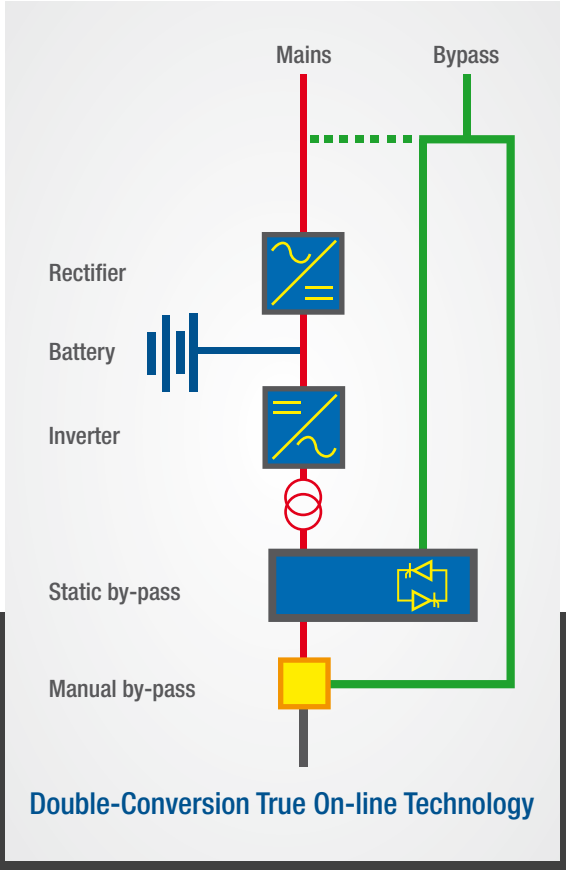
The **Libra Pro** series includes a power range from 10 to 100kVA threephase/singlephase and 10 to 800kVA threephase/threephase, using double conversion on-line technology (VFI) with inverter transformer based for output galvanic isolation. The load is powered continuously by the inverter with a filtered, stabilised and regulated sinewave supply. The input and output EMI filters considerably increase the immunity of the load to mains disturbances and surges.

The **standard Libra Pro** is designed with thyristor's rectifier 6Pulse up to 200kVA; the 12Pulse rectifier is available from 60 to 200kVA to improve the input current distortion performance, for the above the 12Pulse rectifier is standard.

The **Libra Pro IGBT** series is designed as low impact source solution, therefore with Power Factor Correction rectifier built with IGBT technology, available from 100 to 500kVA.

**Libra Pro** provides maximum protection for vital 'mission-critical' networks, security applications (electromedical) and industrial applications thanks to its outstanding mechanical and electrical design.

- isolation transformer on the inverter
- extremely high short-circuit current
- sinusoidal absorption
  (THDI% less than 3% for IGBT version)




Double-Conversion True On-line Technology

## Main Features

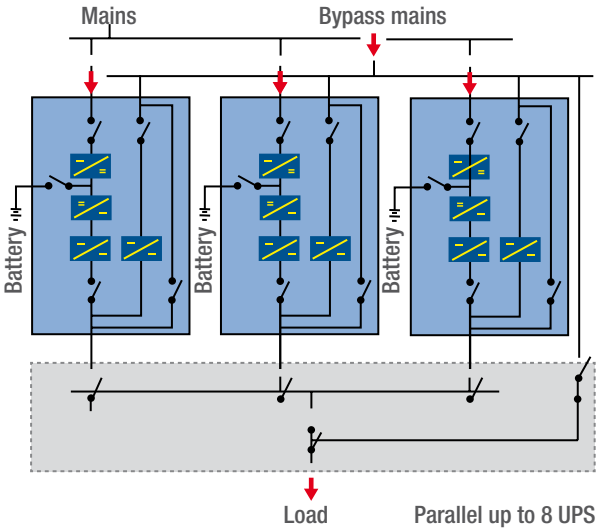
- Reliable, filtered, stabilised and regulated sinewave output (double conversion on-line technology VFI according to EN50091-3 specifications with filters for atmospheric disturbance suppression)
- High reliability: IGBT technology, full microprocessor control with no-break static and manual bypasses, extremely high short-circuit current to ensure compatibility with the most difficult applications (lighting, drives and industrial processes) and an isolation transformer on the inverter output
- Low impact on the mains supply: less than 3% input current distortion from 100 to 500kVA to prevent resonance problems for upstream applications. The distortion is unaffected by impedance or frequency, and allows economies when sizing power sources such as isolation transformers or generators for Libra Pro installations
- High level diagnostics: event log, states, measurements and alarms, available from the built-in LCD in several languages
- Selectable power walk-in allows to limit the input rushing current
- Maximum reliability and power availability (parallel up to 8 units for redundant (N+1) or parallel operation)
- EPO (Emergency Power Off) input for UPS shut-down using remote emergency button
- Front access
- Battery care system for Sealed, Wet, Ni-Cd battery type
- Back-feed protection fitted as standard

# SPECIFIC SOLUTIONS

Libra Pro can be adapted to your requirements. The operation mode is selectable by LCD display for various configurations:

- **Single operation**-online
- **Parallel operation** up to 8 units
- **Ecomode** for energy saving-offline
- **Smart Active**-Intelligent management for standby mode
- **Automatic Voltage Stabilizer** (without battery)
- **Frequency converter** (without battery)

Please contact G-TEC Europe to discuss specific applications and options.



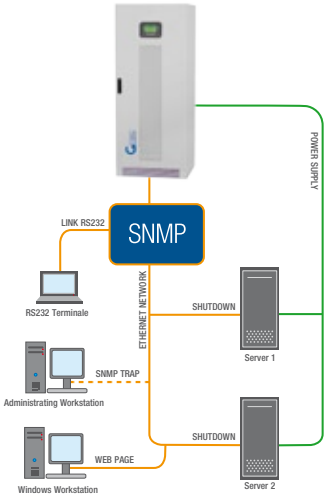

## Simplified Maintenance

Access for maintenance is entirely from the front of the unit. The power and electronic components are easily accessible for maintenance and repair work. This particular feature means that the MTTR (Mean Time To Repair) is typically less than 30 minutes. A large amount of maintenance information is available from the front mimic panel and LCD. In addition, system operating parameters are software configurable via a local PC to allow new functions to be added or adjustment made to operating specifications.

## Advanced Communication

- Compatible with TELEGUARD for remote maintenance
- Advanced, multi-platform communication, for all operating system and network environments: PowerShield2 supervision and shut-down software included, with SNMP agent, for Windows 95, 98, 2000, Me, XP, Mac OSx, 9.x, Linux, NT 4.0, Novell operating system. The UPS is equipped as standard with CD and cable for direct connection to the PC (Plug and Play).
- Can also provide shut-down software for: IBM AIX; Free BSD; BSDI UNIX; BSD/OS; Unixware; SCO Openserver; Solaris; SUN; DEC; Compaq True64; HP UNIX; SGI Irix MIPS; NCR UNIX.
- Double RS232 serial ports
- Network adapter slot for SNMP agent
- EPO (Emergency Power Off) shut down input contact
- SNMP card for Ethernet Network (optional)
- Remote LCD display panel (optional)
- Interfaces JBUS/ModBUS and ProfiBUS

Direct Connection with Ethernet Network



# LIBA PRO

| TECHNICAL SPECIFICATIONS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Model** | LB010MP[B] | LB015MP[B] | LB020MP[B] | LB030MP | LB040MP | LB060MP | LB080MP | LB100MP |
| Rated Power (kVA) | 10 | 15 | 20 | 30 | 40 | 60 | 80 | 100 |
| Efficiency | > 93% in AC/AC; up to 98% in Smart Active Mode | | | | | | | |
| Dimension (mm) LxDxH | 555x740x1400 | | | | | 800x740x1400 | | 800X 800X 1900 |
| Weight (kg) w/o batteries | 200 | 220 | 230 | 290 | 340 | 440 | 520 | 650 |
| Colour | Light Gray RAL 7035 (or RAL7016 on request) | | | | | | | |
| Protection Rating | IP20 | | | | | | | |
| Noise (dB at 1m) | 54 | | 62 | | | | | 63 |
| **INPUT** | | | | | | | | |
| Rated Voltage | 380-400-415Vac 3ph | | | | | | | |
| Voltage Tolerance | 300 ÷ 480 Vac | | | | | | | |
| Frequency | 45 ÷ 65 Hz | | | | | | | |
| Power walk-in | 0 ÷ 100% in 30sec. (selectable) | | | | | | | |
| Frequency Tolerance | ± 2% (selectable from 1% to 5%) | | | | | | | |
| Standard Features | Back Feed protection and splitted bypass line | | | | | | | |
| **OUTPUT** | | | | | | | | |
| Power (kVA) | 10 | 15 | 20 | 30 | 40 | 60 | 80 | 100 |
| Active Power (kW) | 9 | 13,5 | 18 | 27 | 36 | 54 | 72 | 90 |
| Nominal Voltage (V) | 220-230-240Vac 1phase | | | | | | | |
| Static Stability | ± 1% | | | | | | | |
| Dynamic Stability | ± 5% in 10msec | | | | | | | |
| Voltage Distortion | < 1% at linear load / < 3% at non-linear load | | | | | | | |
| Crest Factor | 3:1 | | | | | | | |
| Frequency stability on battery mode | 0.05% | | | | | | | |
| Frequency | 50 - 60 Hz (selectable) | | | | | | | |
| Overload Control | 110% for 60min.; 125% for 10min.; 150% for 1min. | | | | | | | |
| **BATTERIES** | | | | | | | | |
| Type | Pb Selead acid, Wet, Ni-Cd | | | | | | | |
| Ripple | < 1% | | | | | | | |
| Temperature Compens. | -500mV x °C | | | | | | | |
| Typical charging current | 0,2 x C10 | | | | | | | |
| N. cells for Pb Batteries | 192 | | | | | | | 198 |
| **COMMUNICATION** | | | | | | | | |
| Standard | Double RS232 ports with Monitoring Software CD; Dry contacts; 2 interface intellislots | | | | | | | |
| Remote Commands | EPO and INV. OFF | | | | | | | |
| Optional | SNMP card; JBUS/ModBUS converter RS485 port; ProfiBUS converter; Multilicence | | | | | | | |
| **ENVIRONMENTAL** | | | | | | | | |
| Room Temperature | 0 ÷ 40 °C | | | | | | | |
| Humidity | < 95% (non-condensing) | | | | | | | |
| Compliance | Standards LV 2006/95/EC - 2004/108/EC - Safety IEC EN 62040-1; EMC IEC EN 62040-2; Performance IEC EN 62040-3; VFI-SS-111 Classified as IEC 62040-3 | | | | | | | |

[B] Available also with internal batteries.
**Note:** product specifications are subject to change without further notice.

# LIBRA PRO

| TECHNICAL SPECIFICATIONS | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Model** | LB010TP[B] | LB015TP[B] | LB020TP[B] | LB030TP | LB040TP | LB060TP | LB080TP |
| Rated Power (kVA) | 10 | 15 | 20 | 30 | 40 | 60 | 80 |
| Efficiency | > 93% in AC/AC; up to 98% in Smart Active Mode | | | | | | |
| Dimension (mm) LxDxH | 555x740x1400 | | | | | 800x740x1400 | |
| Weight (kg) w/o batteries | 210 | 220 | 230 | 280 | 330 | 450 | 600 |
| Colour | Light Gray RAL 7035 (or RAL7016 on request) | | | | | | |
| Protection Rating | IP20 | | | | | | |
| Noise (dB at 1m) | 54 | | 60 | | 62 | | |
| **INPUT** | | | | | | | |
| Rated Voltage | 380-400-415Vac 3ph | | | | | | |
| Voltage Tolerance | 300 ÷ 480 Vac | | | | | | |
| Frequency | 45 ÷ 65 Hz | | | | | | |
| Power walk-in | 0 ÷ 100% in 30sec. (selectable) | | | | | | |
| Frequency Tolerance | ± 2% (selectable from 1% to 5%) | | | | | | |
| Standard Features | Back Feed protection and splitted bypass line | | | | | | |
| **OUTPUT** | | | | | | | |
| Power (kVA) | 10 | 15 | 20 | 30 | 40 | 60 | 80 |
| Active Power (kW) | 9 | 13,5 | 18 | 27 | 36 | 54 | 72 |
| Nominal Voltage (V) | 380-400-415Vac 3phase | | | | | | |
| Static Stability | ± 1% | | | | | | |
| Dynamic stability | ± 5% in 10msec | | | | | | |
| Voltage Distortion | < 1% at linear load / < 3% at non-linear load | | | | | | |
| Crest Factor | 3:1 | | | | | | |
| Frequency stability on battery mode | 0.05% | | | | | | |
| Frequency | 50 - 60 Hz (selectable) | | | | | | |
| Overload Control | 110% for 60min.; 125% for 10min.; 150% for 1min. | | | | | | |
| **BATTERIES** | | | | | | | |
| Type | Pb Selead acid, Wet, Ni-Cd | | | | | | |
| Ripple | < 1% | | | | | | |
| Temperature Compens. | -500mV x °C | | | | | | |
| Typical charging current | 0,2 x C10 | | | | | | |
| N. cells for Pb Batteries | 192 | | | | | | |
| **COMMUNICATION** | | | | | | | |
| Standard | Double RS232 ports with Monitoring Software CD; Dry contacts; 2 interface intellislots | | | | | | |
| Remote Commands | EPO and INV. OFF | | | | | | |
| Optional | SNMP card; JBUS/ModBUS converter RS485 port; ProfiBUS converter; Multilicence | | | | | | |
| **ENVIRONMENTAL** | | | | | | | |
| Room Temperature | 0 ÷ 40 °C | | | | | | |
| Humidity | < 95% (non-condensing) | | | | | | |
| Compliance | Standards LV 2006/95/EC - 2004/108/EC - Safety IEC EN 62040-1; EMC IEC EN 62040-2; Performance IEC EN 62040-3; VFI-SS-111 Classified as IEC 62040-3 | | | | | | |

[B] Available also with internal batteries
**Note:** product specifications are subject to change without further notice.

# LIBA PRO

| TECHNICAL SPECIFICATIONS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Model** | LB100GBT | LB120IGBT | LB160IGBT | LB200IGBT | LB250IGBT | LB300IGBT | LB400IGBT | LB500IGBT |
| Rated power (kVA) | 100 | 120 | 160 | 200 | 250 | 300 | 400 | 500 |
| Efficiency | > 93% in AC/AC; up to 98,5% in Smart Active Mode | | | | | | | |
| Dimension (mm) LxDxH | 800x850x1900 | | 1000x850x1900 | | | 1500x1000x1900 | | 2100x 1000x 1900 |
| Weight (kg) w/o batteries | 660 | 700 | 800 | 910 | 1000 | 1400 | 1700 | 2100 |
| Colour | Light Gray RAL 7035 (or RAL7016 on request) | | | | | | | |
| Protection Rating | IP20 | | | | | | | |
| Noise (dB at 1m) | 63 ÷ 68 | | | | 70 ÷ 72 | | | |
| **INPUT** | | | | | | | | |
| Rated Voltage | 380-400-415Vac 3ph | | | | | | | |
| Voltage Tolerance | 300 ÷ 480 Vac | | | | | | | |
| Frequency | 45 ÷ 65 Hz | | | | | | | |
| Power Factor | > 0,99 | | | | | | | |
| Current Distortion | < 3% THDi% | | | | | | | |
| Power walk-in | 0 ÷ 100% in 30sec. (selectable) | | | | | | | |
| Frequency Tolerance | ± 2% (selectable from 1% to 5%) | | | | | | | |
| Standard Features | Back Feed protection and splitted bypass line | | | | | | | |
| **OUTPUT** | | | | | | | | |
| Power (kVA) | 100 | 120 | 160 | 200 | 250 | 300 | 400 | 500 |
| Active Power (kW) | 80 | 96 | 128 | 160 | 200 | 270 | 360 | 450 |
| Nominal Voltage (V) | 380-400-415Vac 3phase | | | | | | | |
| Static Stability | ± 1% | | | | | | | |
| Dynamic Stability | ± 5% in 10msec | | | | | | | |
| Voltage Distortion | < 1% at linear load / < 3% at non-linear load | | | | | | | |
| Crest Factor | 3:1 | | | | | | | |
| Frequency stability on battery mode | 0.05% | | | | | | | |
| Frequency | 50 - 60 Hz (selectable) | | | | | | | |
| Overload Control | 110% for 60min.; 125% for 10min.; 150% for 1min. | | | | | | | |
| **BATTERIES** | | | | | | | | |
| Type | Pb Selead acid, Wet, Ni-Cd | | | | | | | |
| Ripple | < 1% | | | | | | | |
| Temperature Compens. | -500mV x °C | | | | | | | |
| Typical charging current | 0,2 x C10 | | | | | | | |
| N. cells for Pb Batteries | 240 | | | | | | | |
| **COMMUNICATION** | | | | | | | | |
| Standard | Double RS232 ports with Monitoring Software CD; Dry contacts (selectable); 2 interface intellislots | | | | | | | |
| Remote Commands | EPO and INV. OFF | | | | | | | |
| Optional | SNMP card; JBUS/ModBUS converter RS485 port; ProfiBUS converter; Multilicence | | | | | | | |
| **ENVIRONMENTAL** | | | | | | | | |
| Room Temperature | 0 ÷ 40 °C | | | | | | | |
| Humidity | < 95% (non-condensing) | | | | | | | |
| Compliance | Standards LV 2006/95/EC - 2004/108/EC - Safety IEC EN 62040-1; EMC IEC EN 62040-2; Performance IEC EN 62040-3; VFI-SS-111 Classified as IEC 62040-3 | | | | | | | |

**Note:** product specifications are subject to change without further notice.

# LIBA PRO

| TECHNICAL SPECIFICATIONS | | | | | | |
|---|---|---|---|---|---|---|
| **Model** | LB100TP | LB120TP | LB160TP | LB200TP | LB600P12 | LB800P12 |
| Rated Power (kVA) | 100 | 120 | 160 | 200 | 600 | 800 |
| Efficiency | > 93% in AC/AC; up to 98% in Smart Active Mode | | | | | |
| Dimension (mm) LxDxH | 800x800 x1900 | 800x800 x1900 | 800x800 x1900 | 800x800 x1900 | 3200x 980x1900 | 4400x1000 x1900 |
| Weight (kg) w/o batteries | 640 | 650 | 770 | 810 | 4000 | 5300 |
| Colour | Light Gray RAL 7035 (or RAL7016 on request) | | | | | |
| Protection Rating | IP20 | | | | | |
| Noise (dB at 1m) | 63 ÷ 68 | | | | 74 ÷ 77 | |
| **INPUT** | | | | | | |
| Rectifier Technology | 6 Pulse | 6 Pulse | 6 Pulse | 6 Pulse | 12 Pulse | 12 Pulse |
| Rated Voltage | 380-400-415Vac 3ph | | | | | |
| Voltage Tolerance | 300 ÷ 480 Vac | | | | 320 ÷ 480 Vac | |
| Frequency | 45 ÷ 65 Hz | | | | | |
| Power walk-in | 0 ÷ 100% in 30sec. (selectable) | | | | | |
| Frequency Tolerance | ± 2% (selectable from 1% to 5%) | | | | | |
| Standard Features | Back Feed protection and splitted bypass line | | | | | |
| **OUTPUT** | | | | | | |
| Power (kVA) | 100 | 120 | 160 | 200 | 600 | 800 |
| Active Power (kW) | 90 | 108 | 144 | 180 | 480 | 640 |
| Nominal Voltage (V) | 380-400-415Vac 3phase | | | | | |
| Static Stability | ± 1% | | | | | |
| Dynamic Stability | ± 5% in 10msec | | | | | |
| Voltage Distortion | < 1% at linear load / < 3% at non-linear load | | | | | |
| Crest Factor | 3:1 | | | | | |
| Frequency stability on battery mode | 0.05% | | | | | |
| Frequency | 50 - 60 Hz (selectable) | | | | | |
| Overload Control | 110% for 60min.; 125% for 10min.; 150% for 1min. | | | | | |
| **BATTERIES** | | | | | | |
| Type | Pb Selead acid, Wet, Ni-Cd | | | | | |
| Ripple | < 1% | | | | | |
| Temperature Compens. | -500mV x °C | | | | | |
| Typical charging current | 0,2 x C10 | | | | | |
| N. cells for Pb Batteries | 198 | | | | 240 | |
| **COMMUNICATION** | | | | | | |
| Standard | Double RS232 ports with Monitoring Software CD; Dry contacts; 2 interface intellislots | | | | | |
| Remote Commands | EPO and INV. OFF | | | | | |
| Optional | SNMP card; JBUS/ModBUS converter RS485 port; ProfiBUS converter; Multilicence | | | | | |
| **ENVIRONMENTAL** | | | | | | |
| Room Temperature | 0 ÷ 40 °C | | | | | |
| Humidity | < 95% (non-condensing) | | | | | |
| Compliance | Standards LV 2006/95/EC - 2004/108/EC - Safety IEC EN 62040-1; EMC IEC EN 62040-2; Performance IEC EN 62040-3; VFI-SS-111 Classified as IEC 62040-3 | | | | | |

Available also with input filter for CLEAN version.
**Note:** product specifications are subject to change without further notice.

**G-Tec Companies** are also present worldwide with Business Partners in several countries.

**G-Tec Europe Srl** in Vicenza – Italy

**G-Tec Asia Pacific Pte Ltd** in Singapore

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