# **LEONICS**<sub>®</sub>



- Parallel configuration up to 8 units of inverter
- Capable to operate in N+1 redundancy configuration for very high reliability in remote area

### APOLLO MTP-610pH

#### Three Phase Bidirectional Parallel Inverter

- High efficiency bidirectional inverter with built-in output transformer
- Capable to use with multiple renewable energy sources in both DC coupling and AC coupling such as PV panel, wind turbine generator and micro hydro generator
- Generator connected signal when the generator provide as other energy source of the system
- Seperate DC Bus for multiple source charging
- No master unit required
- Expandle power by adding inverter from 1 to 8 units without master controller
- Digital input to select operation between inverter mode or charge mode
- Operate with Hybrid System Control and Command Unit (HCCU)
- Capable to interact with utility grid line (option)
- IP41 protection enclosure
- ISO 9001 and ISO 14001 certified factory



## LEONICS<sub>®</sub>



#### APOLLO MTP-610pH series Three Phase Bidirectional Parallel Inverter

| MODEL                |                                   | MTP-613FpH   | MTP-614FpH        |
|----------------------|-----------------------------------|--|-------------------|
| RATED POWER          |                                   | 25 kVA / 25 kW   | 30 kVA / 30 kW    |
| BATTERY              | Nominal Voltage                   | 240 Vdc  |                   |
|                      | Maximum charging current          | 72 A   | 84 A              |
|                      | Maximum battery current           | 142 A  | 170 A             |
| AC SOURCE            | Recommended generator power       | 38 kVA   | 45 kVA            |
| (GRID LINE OR        | Voltage                           | 380 / 400 / 415 Vac (L-L), 220 / 230 / 240 Vac (L-N)                                     |                   |
| GENERATOR)           | Phase                             | Three phase  |                   |
| ,                    | Frequency                         | 50 / 60 Hz ± 3 Hz  |                   |
|                      | Max. AC current (for charge mode) | 37.9 A   | 45.4 A            |
|                      | Start / stop generator            | Relay dry contact 1  | 0 A (ACC contact) |
| AC OUTPUT            | Voltage                           | 380 / 400 / 415 Vac (L-L), 220 / 230 / 240 Vac (L-N)                                     |                   |
|                      | Voltage regulation                | $\pm$ 3% (steady load), < 7% at 100% step load within 0.1 sec.                           |                   |
|                      | Phase                             | Three phase  |                   |
|                      | Frequency                         | 50 / 60 Hz ± 0.1% (auto sensing)   |                   |
|                      | Wave form                         | Pure sine wave   |                   |
|                      | Total harmonic distortion         | total < 3%   |                   |
|                      | Maximum surge current             | 200%   |                   |
|                      | Maximum AC current                | 37.9 A   | 45.4 A            |
| ISOLATION            | Galvanic isolation                | yes  |                   |
| EFFICIENCY           | Inverter peak efficiency          | > 96%  |                   |
| PROTECTION           |                                   | Over current, over load, short circuit, over temperature, over voltage, under voltage    |                   |
|                      | Battery temperature sensor        | option   |                   |
| DIGITAL INPUT SIGNAL | -                                 | Auxillary inverter circuit breaker, Auxillary generator circuit breaker,                 |                   |
|                      |                                   | Auxillary Bypass circuit breaker / Load transfer switch                                  |                   |
| INDICATOR            | LED                               | Stand by/Run, AC, Full battery/Low battery, Alarm  |                   |
|                      | LCD display                       | Inverter (voltage, current, frequency, power, reactive power),                           |                   |
|                      |                                   | AC Bus (voltage, frequency), Battery (voltage, current, state of charge(%)),             |                   |
|                      |                                   | External DC charging current, Charging status, Battery charging voltage set points,      |                   |
|                      |                                   | Equalization charge date, Heat sink temperature, Battery temperature (option),           |                   |
|                      |                                   | Today AC inverter energy (input / output), Today DC inverter energy (input / output),    |                   |
|                      |                                   | Accumlated AC inverter energy (input / output), Accumlated DC inverter energy            |                   |
|                      |                                   | (input / output), System status, Load transfer switch signal status, Digital input signa |                   |
|                      |                                   | status, Time, Date, Data and Event log   |                   |
| AUDIABLE ALARM       | Buzzer                            | Low battery, inverter fault, overload, short circuit, over temperature                   |                   |
| COOLING              |                                   | Automatic cooling fan  |                   |
| ENVIRONMENT          | Temperature                       | 0 - 45°C   |                   |
|                      | Relative humidity                 | 0 - 95 % (Non - condensing)  |                   |
| DESIGN               | Standard                          | AS/NZ 3100:2002, IEC 61683 (for efficiency test)   |                   |
| REGULATION           | Enclosure                         | IP41   |                   |
| DIMENSION            | Control unit                      | 80 x 80 x 65   |                   |
| (W x H x D) in cm    | Transformer unit                  | 80 x 103 x 65  |                   |
| WEIGHT               | Control unit                      | 141 kg   | 141 kg            |
| (Approximate in kg)  | Transformer unit                  | 305 kg   | 310 kg            |

Continuous product development is our commitment. In that manner, the above specifications may be changed without prior notice.





Authorized Distributor

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Authorized Dealer

Control Unit

Transformer Unit