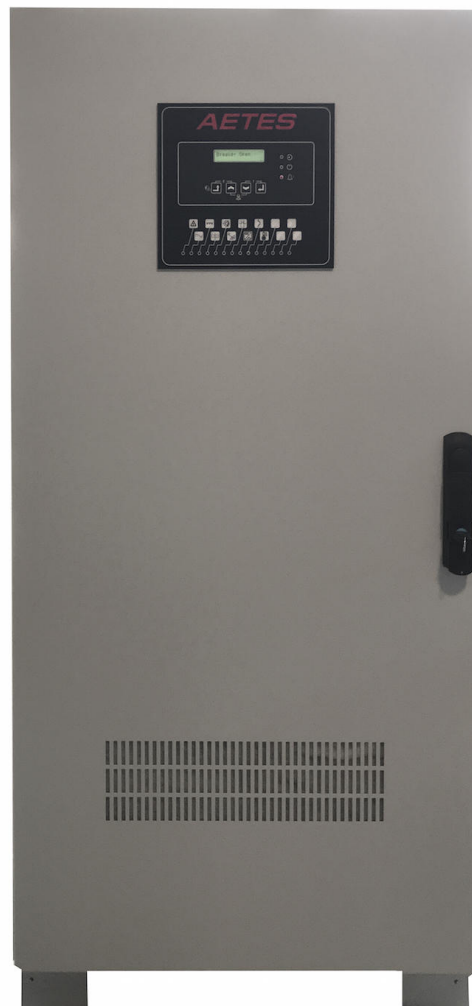


# AETES

## 110VDC INVERTER 1PH

*Internal Isolation Transformer  
Industrial-Grade Enclosure  
Advanced User Panel*



*"...power alliance..."*

## DESCRIPTION

AETES DC to AC Inverter is a high technology equipment, including all protection and control systems, which is designed and manufactured to convert an DC voltage to pure sinus and regulated AC voltage with a predefined frequency. It provides AC power, which is especially important for Industrial, Telecom and Defence applications.

This equipment contains an output isolation transformer, it provides full electrical isolation between DC input supply and AC output, and uses all advantages of Digital Signal Processor control. It provides handy user interface and advanced communication features.

## FEATURES

- Single Phase Full Sinus AC Output
- Internal Isolation Transformer at Output
- Full Bridge IGBT / IPM / Mosfet Inverter Block
- Smart Control and High Reliability With Digital Signal Processor
- Low Output Voltage Harmonics
- High Efficiency
- Wide DC Input Range
- Functionality at Low DC Voltages
- LCD Display Front Panel, Showing Measurements, Status and Alarm Messages
- Led Displays and Audible Alarm for Easy Observation of Inverter Status
- Calibration of Measurements from Front Panel
- Language Selection from Front Panel
- DC Low / High / Too Low, Over Temperature, Short Circuit protections
- Battery Deep Discharge Protection
- Ability to program all operation parameters (password protection)

# GENERAL SPECIFICATION

**Models:**      **110-230-20K**      **110-230-30K**      **110-230-40K**

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## DC Input

|            |  |
|------------|--|
| Voltage    | 88V...132V DC                                      |
| Protection | Fuse and DC Breaker                                |
| Efficiency | >85% (full linear load),<br>110VDC I/P, 220VAC O/P |

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## AC Output

|                    |                     |              |              |
|--------------------|---------------------|--------------|--------------|
| Capacity           | 20kVA / 16kW        | 30kVA / 24kW | 40kVA / 32kW |
| Voltage            | 220V/ 230V/ 240V AC |              |              |
| Voltage Regulation | ±2%                 |              |              |
| Frequency          | 50Hz / 60Hz ± 0.2Hz |              |              |
| Wave Form          | Pure Sine Wave      |              |              |
| THD (linear load)  | 3% 220 V/100%       |              |              |
| THD (SPS load)     | 5% 220 V/100%       |              |              |
| Crest Factor       | 3:1                 |              |              |

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## Bypass

|            |                    |
|------------|--------------------|
| Voltage    | Nominal 230 VAC    |
| Frequency  | 50/ 60 ± 5 Hz      |
| Protection | AC Circuit Breaker |

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## Protection

|          |  |
|----------|--|
| Short    | For 1 second; Switch to Bypass, then shutdown                  |
| Overload | 105-125% for 3 seconds<br>>125% for 1 second; Switch to bypass |

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|                   |               |
|-------------------|---------------|
| Temperature Range | -10°C... 50°C |
|-------------------|---------------|

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## Compatibility

|               |          |
|---------------|----------|
| Safety        | IEC60204 |
| EMC/ EMI/ RFI | IEC61000 |

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## Mechanical

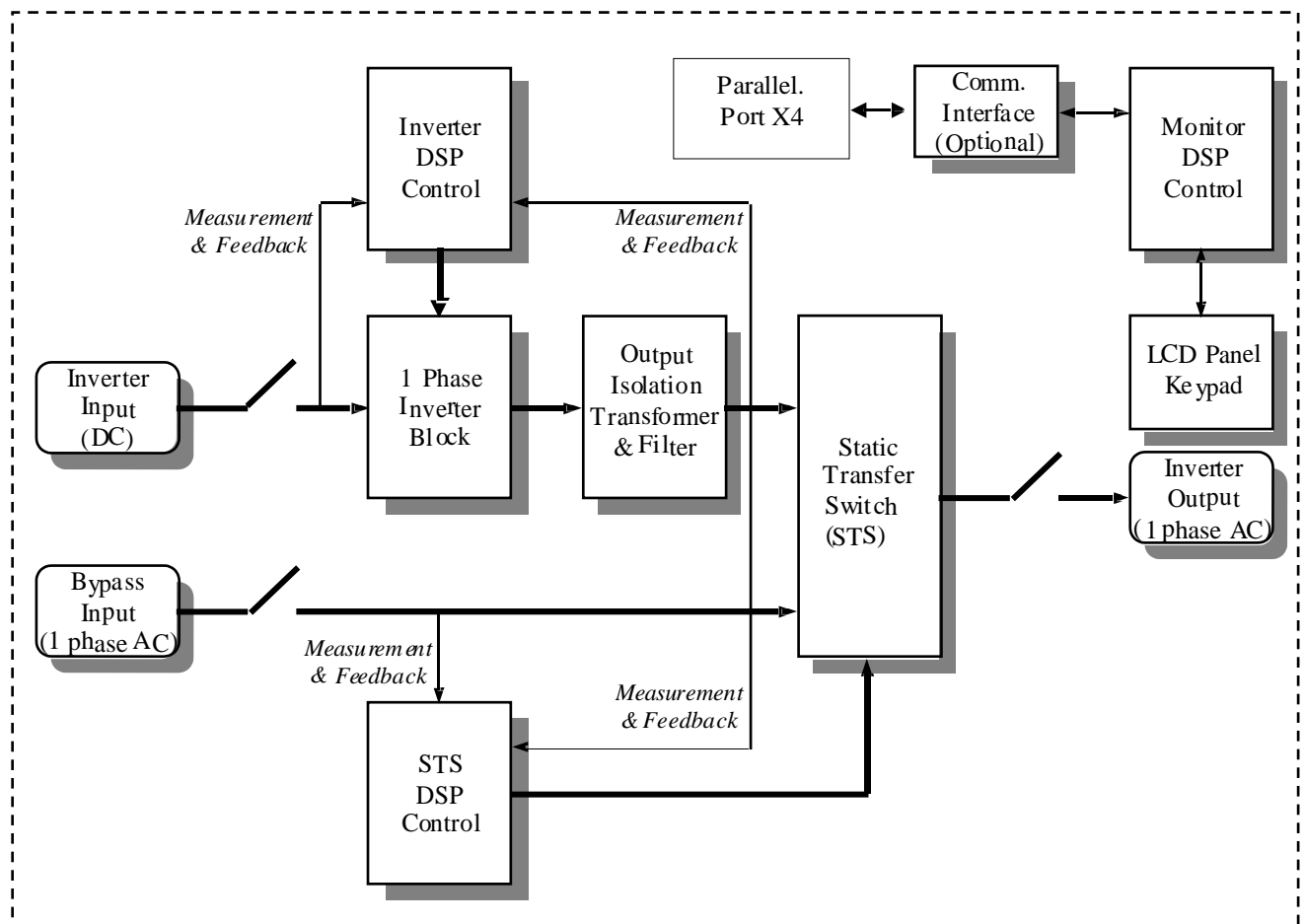
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|                 |                    |                    |                    |
|-----------------|--------------------|--------------------|--------------------|
| Dimensions (mm) | A:620 B:620 C:1300 | A:620 B:620 C:1300 | A:800 B:800 C:1600 |
|-----------------|--------------------|--------------------|--------------------|

## OPTIONS

- Input DC Filter Module
- Parallel Operation Card up to 4 devices
- By-Pass Isolation Transformer
- Analog Gauges (Input / Output / Voltmeter and Ammeter)
- Transducers for Input / Output Voltage / Current (4-20mA and 0-10V)
- DC Earth Leakage Monitoring
- Powermeter for Output Power Factor / kVA / kW measurement
- Programmable Dry Contact Relay Boards (Max 3 pcs, 12 relays)
- Internal Cabinet Heater
- Communication Interface: ModBus RS232, RS485, TCP IP, MQTT

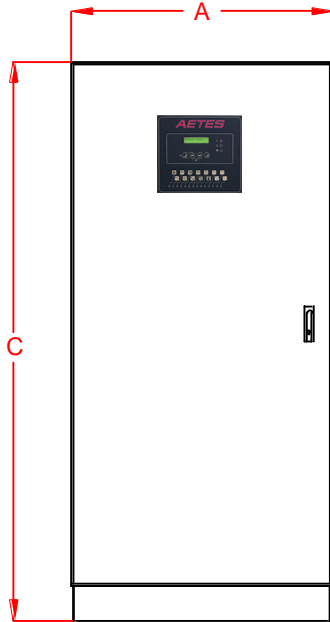
## BLOCK DIAGRAM



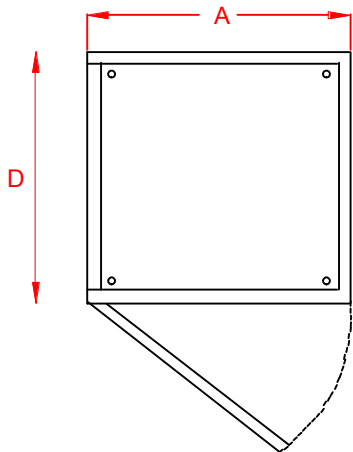
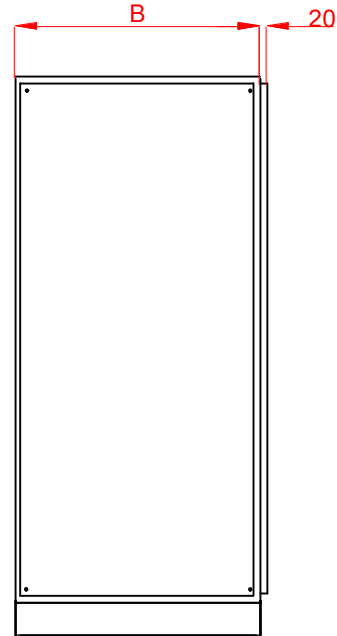
AETES Industrial Inverter 1PH Output Block Diagram

# DRAWING

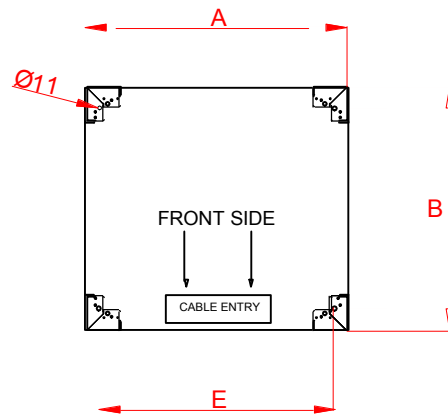
FRONT



LEFT

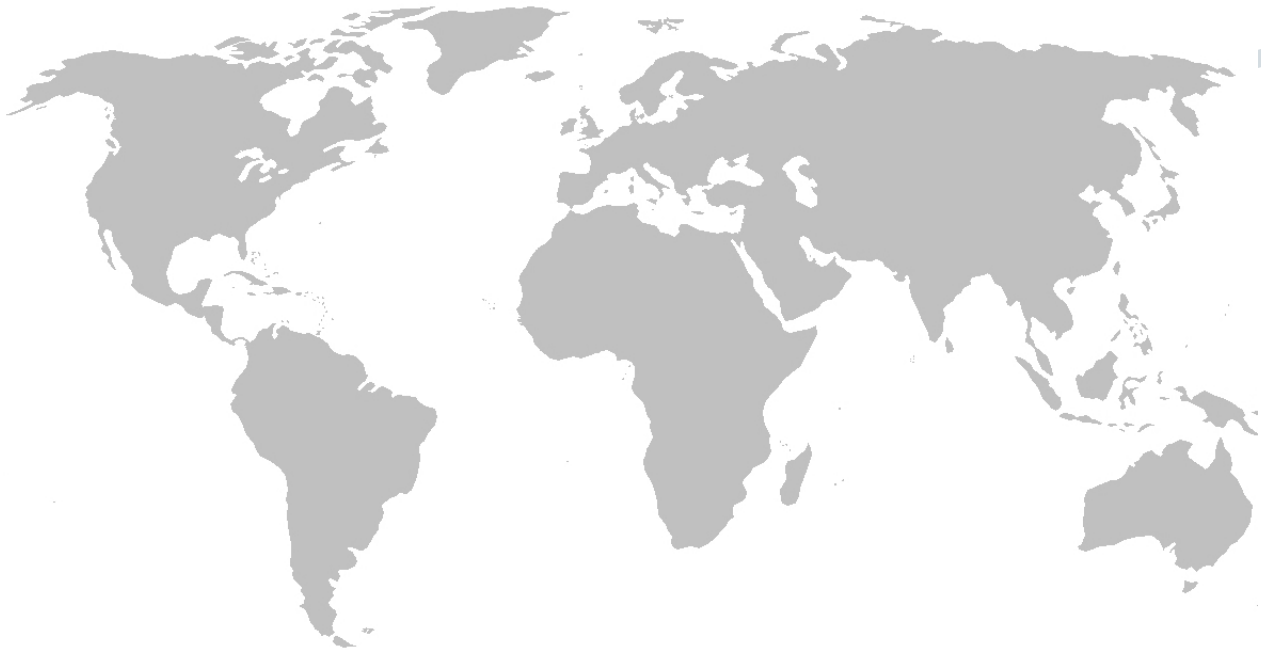


TOP



BOTTOM

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