

# AETES

## Rectifier Charger 3PH-110-F

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



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

## DESCRIPTION

AETES XTM 3PH Series Industrial Rectifier Charger is a high technology equipment, including all protection and control systems, which is designed and manufactured to convert 3 Phase AC voltage to pure and regulated 110V DC voltage. It provides DC power, which is especially important for industrial and defence applications. When this system is used with a battery group at its output, this equipment charges batteries and acts as a Uninterruptible DC Power Source.

This equipment contains an input isolation transformer and provides full electrical isolation between input supply and 110 Volt DC output.

This uses all advantages of Digital Signal Processor control. It provides handy multilingual user interface and automation compatible communication features. When used as battery charger, it can perform battery charge in 3 different modes: Float Charge, Equalizing Charge, Boost Charge.

## FEATURES

- Internal Isolation Transformer at input
- Full Digital Controlled Conventional Rectifier
- Soft Start, Smart control and high reliability with Digital Signal Processor
- Float charge, equalizing charge and boost charge modes
- Automatic and manual charge modes
- Low output voltage ripple and high reliability
- User panel with LCD display, showing measurements, status and alarm messages
- Audible alarm and Led displays for easy observation of Rectifier status
- Programmable current limitation
- User language selection from front panel (DE, EN, ES, NL, PT, TR)
- Calibration of measurements from front panel
- DC Low, DC High, Line Failure, Over Temperature, Short Circuit protections
- Ability to program all operation parameters (Password Protected)
- Programmable alarm relay contact outputs (4 standard, up to 16 relays as option)
- Low Voltage Disconnect (LVD) Protection
- Modbus RS232 communication, standard
- Log records with date and time stamp up the 200 events

# GENERAL SPECIFICATION

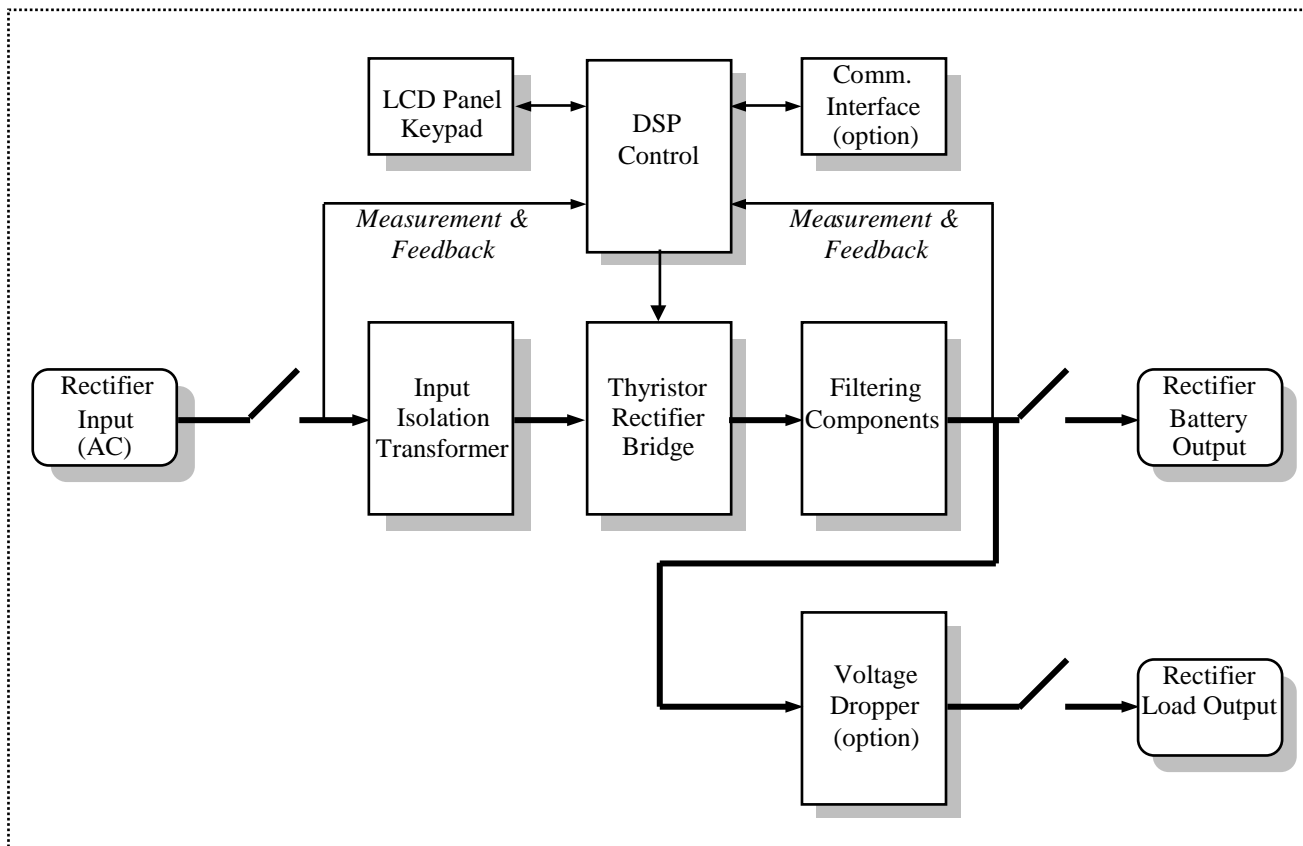
MODEL : XTM 3PH-110-F	/300A	/400A	/500A
<b>INPUT</b>			
Nominal Voltage	Options: 3x208VAC / 3x380VAC / 3x400VAC / 3x415VAC / 3X440VAC / 3x480VAC (±15%)		
Nominal frequency	50Hz / 60Hz (±10%)		
Power Factor (Nominal)	0.80		
ITHD	<30-35% standard (<10% at 12 pulse Optional)		
Input Protection	Thermic Magnetic Overcurrent Protection, Overvoltage Protection		
<b>OUTPUT</b>			
Nominal Output Voltage	110V DC		
Output Voltage Adjustment	110V...130V DC (Optional to 143V DC for NiCd)		
Output Current Adjustment	10-100% of Nominal Output Current		
Float Charger Voltage Range	100%-120% of Nominal Output Voltage		
Boost Charger Voltage	100% to 120% (opt.130%) of Nominal Output Voltage		
Boost Voltage (V/C)	2,40 Lead Acid Battery 1,50 NiCd Battery		
Float Voltage (V/C)	2,24 Lead Acid Battery 1,40 NiCd Battery		
Nominal Output Current	300 Amp	400 Amp	500 Amp
Max Output Current	330 Amp	440 Amp	550 Amp
Voltage Ripple / Regulation	< 1.5% / <1.0%		
<b>GENERAL PROPERTIES</b>			
Bost Timer	0-99.9 hours adjustable		
Cooling	Fan Forced Cooling(Standard), Natural Cooling(Optional)		
Isolation Voltage	1500 or 3000VAC input/chassis and output/chassis		
Efficiency at full load	<91%		
Protection level	IP20 (Standard) to IP54 (Optional)		
Cable Entry	Front Bottom (Option: Top or Rear or Side)		
Filtering	LC Filter		
Circuit Breakers	Thermic-magnetic circuit breakers for input (Standard); for Battery and Load (Optional)		
Reset Button	Used for re-operation in case of fallure of the system.		
<b>ENVIRONMANTAL</b>			
Acoustic Noise	45 - 65 dB (according to Power Rating)		
Storage Temperature	(-20 °C) - (+70 °C)		
Operating Temperature	(-5°C) - (+50°C)		
Relative Humidity	0 - 95% Non-condensing		
Max Altitude	1000m (-1% Power for every 100m after 1000m) Max. 4000m		
Color	RAL7035 (Standard), others (Optional)		
<b>COMMUNICATION &amp; PARALLELING</b>			
Communication	ModBus RS232 (Standard), 4 Dry Contacts (Standard), RS485 (Optional), TCP IP (Optional), MQTT (Optional)		
Paralleling	Parallel Redundant Kit (Optional)		
<b>COMPATIBILITY</b>			
Standards	IEC62040-1, IEC62040-2		

NOTE: All specifications subject to change without notice. Consult AETES's Technical Support Department for special applications. All names used above are registered trademarks of their respective owners.

# OPTIONS

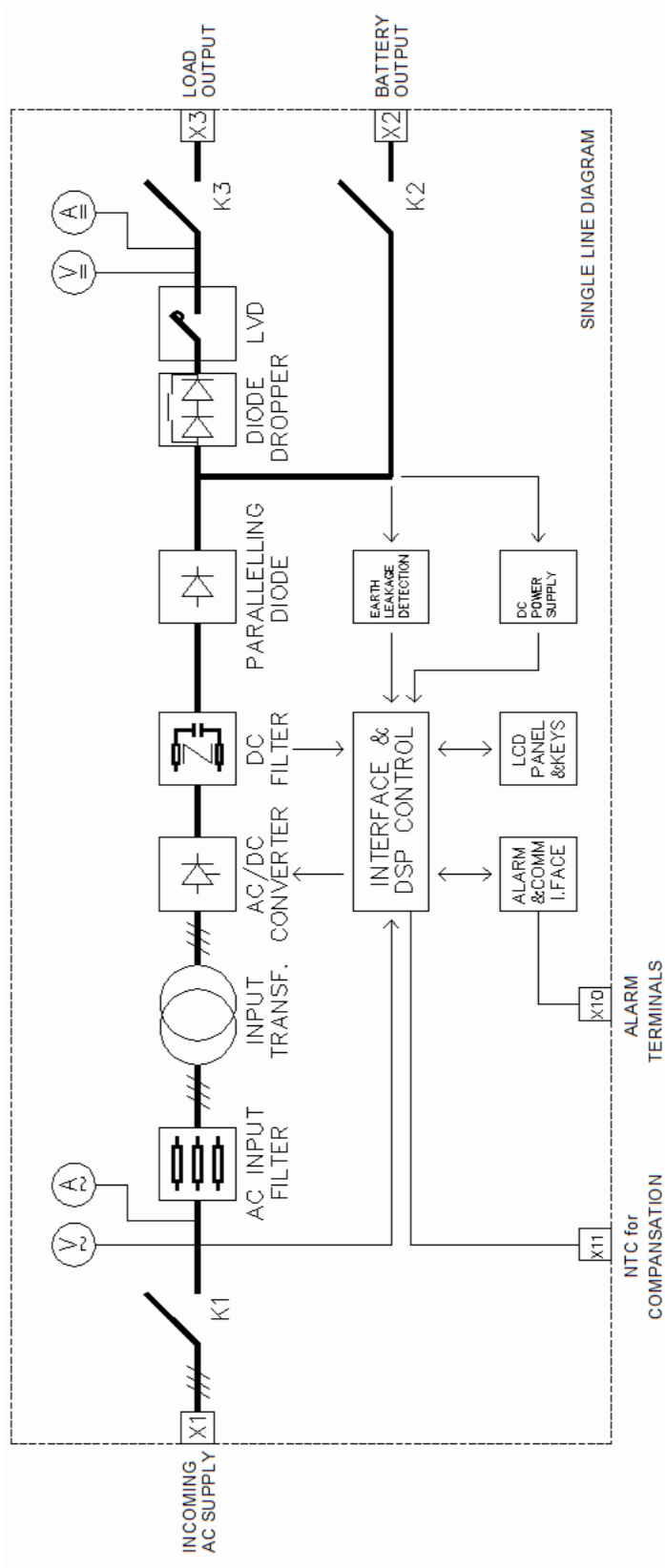
- 12 Pulse option to limit input current distortion
- Active parallel current sharing operation up to 4 devices
- Wide Screen HMI Touch Panel and Mimic Diagram
- Battery Temperature Compensation Module
- Analog Gauges (Input / Output / Battery Voltages and Currents)
- Transducers for Input / Output Voltage / Current (4-20mA and 0-10V)
- Load Output Voltage Dropper
- Powermeter for Input Power Factor / kVA / kW measurement
- Additional Dry Contact Relay Boards (Max 3 pcs, 12 relays)
- Internal Cabinet Heater
- Additional Alarm and Communication Interface RS485/ TCP-IP

# BLOCK DIAGRAM



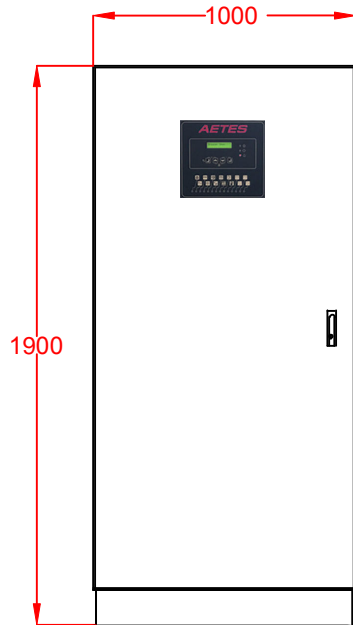
AETES 3PH Industrial Rectifier Charger Block Diagram

# LINE DIAGRAM

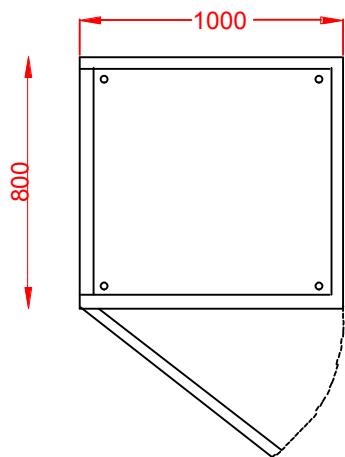
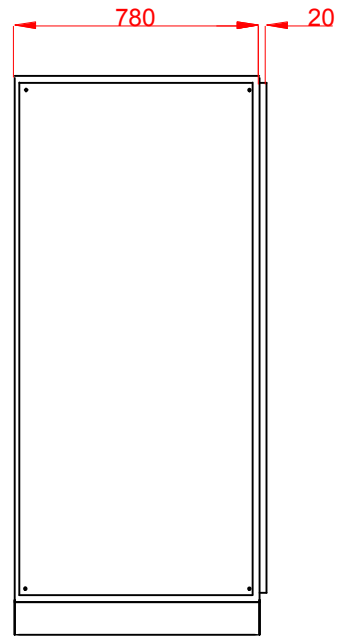


# DRAWING

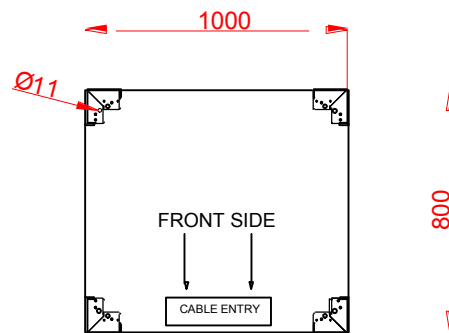
FRONT



LEFT

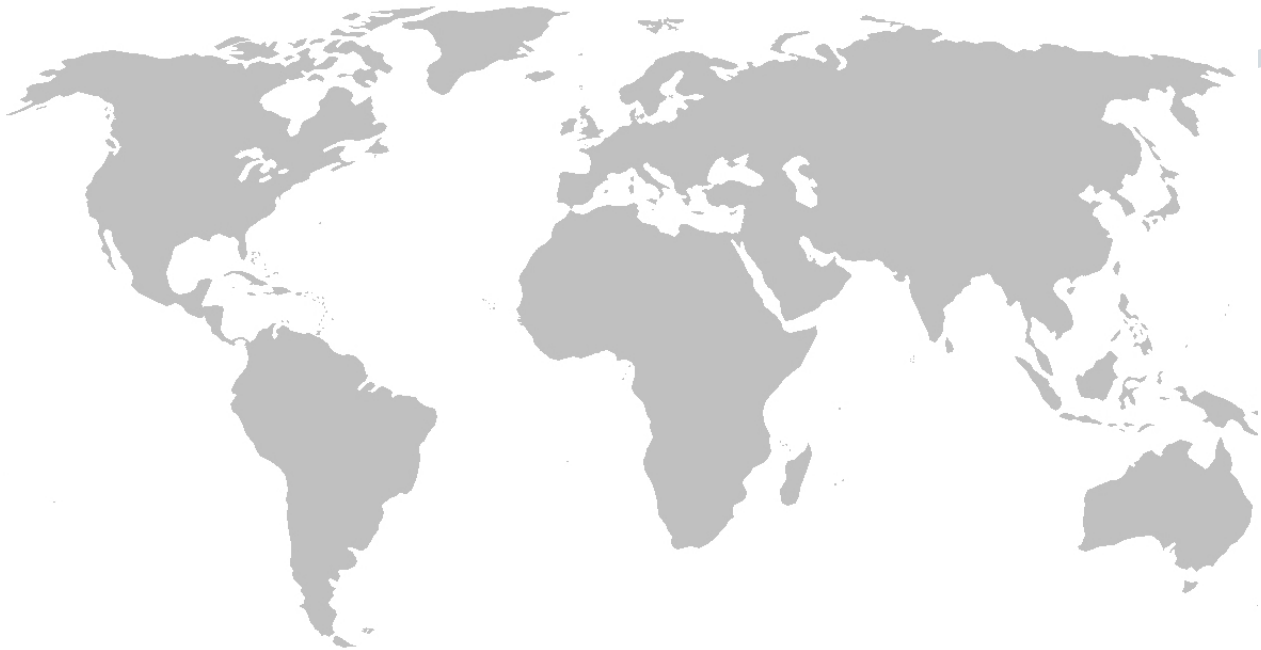
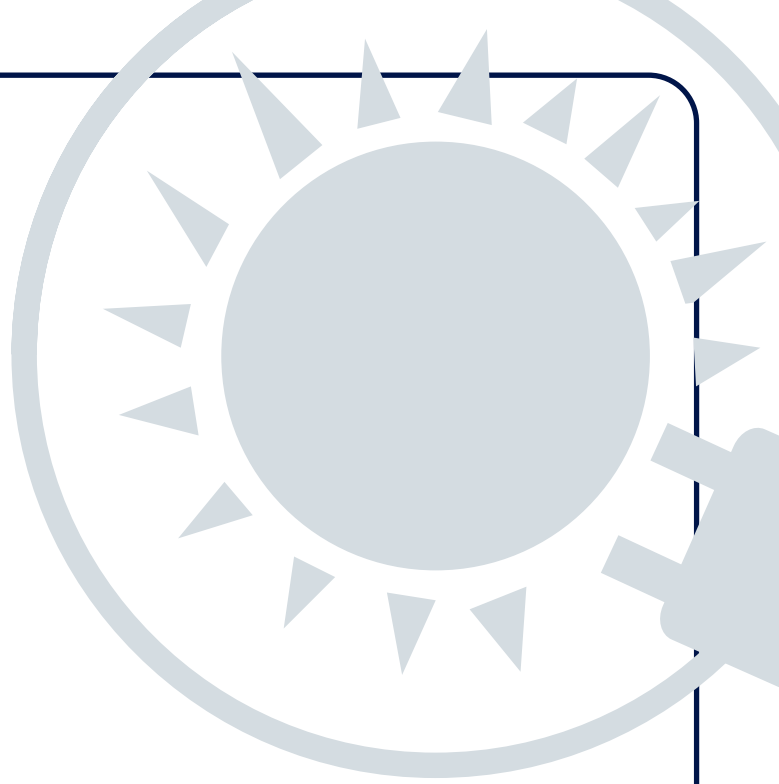


TOP



BOTTOM

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