

# INDUSTRIAL INVERTER



Energy  
Power  
Conversion

*Tailors of the Industry*



# INVERTER

CE

# INDUSTRIAL INVERTER

TELECOM

MARINE

ITS TRAFFIC

MILITARY

POWER PLANTS

OIL & GAS

RAILWAY

ALTERNATIVE



## WHY US?

### ▪ RUGGED AND HEAVY INDUSTRIAL DESIGN

+25 years of design life and over 200000 hrs. MTBF

### ▪ EASY MAINTENENCE AND REPAIR

Modular board structure and front access with smart component locating topology for the easiest repair and maintenance.

### ▪ VERY WIDE INPUT RANGE

$\pm 30\%$  Input DC Range provides you uninterrupted Pure Sine Wave for longer period of times. No need for any additional Voltage adjustment facilities

### ▪ RAIN TO DUST ENVIRONMENT

Its high grade protection level up to IP66 ensure it works on every harsh condition. Coating and plating ensures the resistance of system. Ideal for power plants and O&G Industry



## FEATURES

- Output isolation transformer
- Fast control with **DSP** controller
- IGBT/IPM Technology
- Bypass Voltage sampling
- <1% Voltage Stability
- Alarm adjustable dry contacts
- ModBus Protocol - RS232, RS485
- Uninterrupted bypass switching
- Automatic start & fault recovery
- Up to 200kVA in single phase models
- Smart fault diagnosing
- Modular board structure

## OPTIONALS

- Analog gauges (V, A, Hz meters)
- Parallel operation
- Battery discharging facility
- Transducers (4-20mA and 0-10V)
- Enclosure heating
- Fan Failure Monitoring

# INDUSTRIAL INVERTER

GENERAL			
Type	Industrial Static Inverter (AC/DC) w. Output Isolation Transformer		
Conversion Topology	Insulated Gate Bipolar Transistor (IGBT Based)		
Control	DSP Controller		
INVERTER TYPE	RACK TYPE (1 PHASE)	TOWER TYPE (1 PHASE)	TOWER TYPE (3 PHASE)
INPUT			
Input Voltage (DC)	24 to 220VDC ± 20%	24 to 220VDC ± 20%	24 to 650VDC ± 20%
Alternative Voltage (AC)	110 to 600VAC & 50/60 to 400Hz		
OUTPUT			
Output Power	1 to 3kVA	1 to 200kVA	10 to 500kVA
Output Voltage	110 to 600VAC & 50/60 to 400Hz		
Voltage Tolerance	±1% (Static), ±5% (Dynamic 100% load change 50ms)		
Frequency	50/60 to 400Hz ±1(sync), ±0,5(not sync)		
Efficiency	82 to 90% (depending on DC Bus)		
Power Factor	0,8		
Waveform	Pure Sinus Wave		
Switch to Bypass	<4ms		
Switch to Inverter	0ms (Re-transfer delay adjustable)		
Crest Factor	3:1		
Overload (INV)	125% for 10mins / 150% for 1min / 200% for 1sec (adjustable)		
Overload (BYP)	110% continuous / 150% for 1min / 1000% for 50ms (adjustable)		
THDu	<2% (linear), <5% (non linear)		
Crest Factor	3:1		
PHYSICAL CHARACTERISTICS			
Ingress Protection	Standard: IP20, (OPT: 21 to 66)		
Cooling System	Forced Ventilation (OPT: Natural cooling, Water cooling, Smart Fans)		
Cable Entry	Standard: Bottom (OPT: Top, Rear, Side)		
Cabinet Color	Standard: RAL7032,7035 (OPT: Others)		
ENVIRONMENT			
Operating Temperature	0 to 50°C		
Storage Temperature	-25 to 70°C		
Relative Humidity	up to 90% (non-condensing)		
Operating Altitude	1000m from MSL (1% derate each 100m after 1000m)		
Acoustic Noise	50 to 73 dBA (depending on rating)		
COMMUNICATIONS			
Standard Comm.	RS232, Dry Contact x4 to x16 (OPT: RS485, TCP and IEC61850)		
Parallel Operation	Up to 2		
HMI	LED/LCD Panel (OPT: HMI Touch Panel, Mimic Panel)		
PROTECTIONS			
Hardware Protections	Overvoltage, Overload, Short Circuit, SCR Rapid Protection		
Software Protections	Current Limiting, Overtemperature, Undervoltage, AC Synchronization		
Dry Contact Operation	Settable dry contact relays (NO/NC)		
STANDARDS			
IEC 62040-1/2:2008	UPS – Part 1-2 General and Safety Requirements / Electromagnetic compatibility		