

Energy Effective AGIL Inverter

The “Twin Sine Innovation” (TSI) technology ensures independent “hot pluggable and hot swap” modules that include virtually all functions of a conventional UPS (AC/DC, DC/AC, battery charger, Static Switch), eliminating all potential single points of failure.

Multiple modules can be connected in parallel to create multi-megawatt power solutions.



TSI AGIL INVERTERS (20kVA / 3x400Vac)

Doc 241560.700.DS3 – rev1

APPLICATIONS

Data Centre
Industrial

- Modular UPS
- Multidirectional Energy Converter
- Rail / Metro



KEY FEATURES

- HIGH EFFICIENCY
- 130% POWER BOOST FOR 15s
- 5X I_N SHORT CIRCUIT CURRENT FOR 20ms
- HOT PLUG-ABLE
- SHORT MTTR
- EFFECTIVE AC BYPASS IN EACH MODULE
- AC MAINS FILTERING
- PATENTED TECHNOLOGY

TSI AGIL INVERTERS



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MODEL	20kVA / 3x400 V _{AC}
Part number	241560.700
DC INPUT DATA	
Voltage (range)	280 – 490V _{DC} (with linear power derating below 408V _{DC})
Current, nominal (steady state)	52A _{DC}
Current, maximum (for 5 seconds) / voltage ripple	67A _{Peak} / <400mV _{rms}
AC INPUT DATA	
Voltage (nominal)	3x380 / 400 / 415 V _{AC} (3-phase Y (wye) and Neutral)
Voltage (range)	150 – 275V _{AC} phase to neutral / 260 - 476 V _{AC} phase to phase
Voltage (brownout)	150 – 220V _{AC} phase to neutral / 260 - 381 V _{AC} phase to phase derating
Power factor	> 0.99
Frequency range / synchronized ranges (in EPC mode)	30-70Hz / 47-53 Hz (50Hz) and 57-63Hz (60Hz)
OUTPUT DATA	
Voltage (default)	3x380 / 400 / 415 V _{AC} (3-phase Y (wye) and Neutral)
Voltage (adjustable range)	220 – 240 V _{AC} phase to neutral / 380V- 415 V _{AC} phase to phase
Voltage (accuracy)	±1% (>10% loading), ±2% (<10% loading)
Frequency	50 / 60 Hz selectable ± 0.03%
Power (maximum)	20 kVA / 20kW
Power (VDC input only)	20kW @ 408V _{DC} / 16kW @ 336V _{DC}
Power (short time overload capacity)	130% for 15 seconds
Power (permanent overload)	110% within T ^o range
Admissible load power factor	Full apparent power at any power factor
THD (resistive load)	< 1.5%
Load impact recovery time	0.4 ms
AC to DC / DC to AC input transfer time	0ms
Crest factor at nominal power	2.8
Short circuit current clear capacity (20ms)	5 x I _n (when AC input present)
Short circuit current after clear capacity / after 15s	2.1 x I _n / 1.5 I _n
OTHER SPECIFICATIONS	
Efficiency (typical)	> 96% EPC mode / > 96% DC mode
Alarms output / supervision	Dry contacts on T4S / MODBUS, TCP-IP, SNMP
Cooling	Forced
MTBF	240,000 hrs (MIL-217-F)
Operating temperature	-10 to +40 °C
Storage temperature	-40 to +70 °C
Relative humidity	95%, non-condensing
Altitude	<1500m above sea level >1500m: 0.8% per 100m output power derating
Dimensions[WxHxD] / Weight	600 x 3U x 800 mm / <24 kg
True redundant systems	3x disconnection levels on AC _{out} & DC _{in} power ports, 4 disconnection levels on AC _{in} port
DESIGN STANDARDS	
Electrical safety	EN 62040-1
Performances	VFI III according EN62040-3
EMC (immunity)	EN 61000-4-2 / EN 61000-4-3 / EN 61000-4-4 / EN 61000-4-5 / EN 61000-4-6 / EN 61000-4-8
EMC (emission) class	EN 55022 (A)
Environment	RoHS (2011/65/EU) and WEEE (2002/96/EC) compliant