THREE PHASE ONLINE DOUBLE CONVERSION UPS

20kVA Tower UPS – 80 Batteries

PRODUCT CODE

TT020EB-80

A 20kVA/20kW three-phase online double-conversion tower UPS with 80 internal 12 V 9 Ah batteries (±240 VDC). Input, bypass, output, maintenance bypass and battery breakers are built in, with a 7-inch touch LCD, Ethernet, RS232, RS485, USB, dry contacts, an intelligent slot and parallel ports.

20kVA
20kW · Output PF 1.0

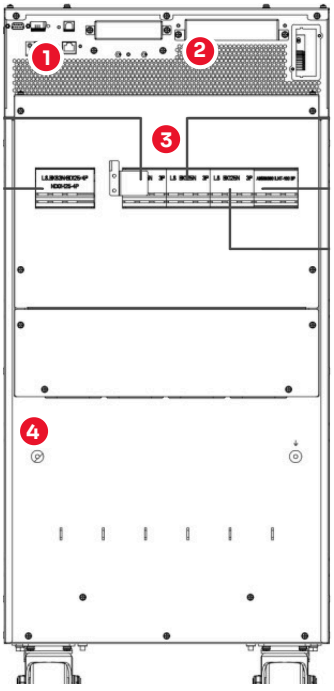
3 / 3
Three-phase in and out

±240 VDC
80 × 12 V 9 Ah internal

Up to 97%
Online efficiency

Bypass
Internal maintenance

REAR PANEL



1. Communication ports
2. Intelligent slot and parallel ports
3. Input, bypass, output, maintenance and battery breakers
4. Earth studs

KEY FEATURES

- Online double conversion, VFI-SS-111
- Unity output PF – full 20000 W usable
- Up to 97% efficiency in online mode
- 80 × 12 V 9 Ah internal batteries
- 304–478 VAC input, input PF >0.99
- 7-inch touch LCD with status LEDs
- USB, RS232, RS485, Ethernet, dry contacts
- Intelligent slot for SNMP or AS400 card
- Parallel kit option for N+1 or capacity
- Built-in maintenance bypass breaker

Technical specifications

GENERAL	
Model	TT020EB-80
Topology	Online double conversion
Rated power	20000 VA / 20000 W
Configuration	3/3 (3/1, 1/1 optional)
Display	LED + 7-inch touch LCD
Form factor	Tower with castors

INPUT	
Connection	3P + N + PE
Rated voltage	380 / 400 / 415 VAC (L-L)
Voltage range	304–478 VAC (full load)
Low-voltage range	228–304 VAC, derates to 50%
Frequency	40–70 Hz
Power factor	>0.99
Current THDi	<2% (linear load)
Max current	38 A per phase

OUTPUT	
Rated voltage	380 / 400 / 415 VAC (L-L)
Frequency	50 / 60 Hz
Power factor	1.0
Rated current	30 A per phase
Voltage accuracy	±1%
Waveform THD	<1% linear; <5% non-linear
Phase accuracy	120° ±0.5°
Crest factor	3:1
Efficiency	Up to 97% (online mode)
Overload	110%: 1 h · 125%: 10 min · 150%: 1 min · >150%: 200 ms
Single-phase output	20 kVA

BATTERY (INTERNAL)	
Batteries	80 × 12 V 9 Ah (2 strings)
Nominal voltage	±240 VDC
Charger capacity	8.6% × rated output
Float charge	2.25 V/cell (2.2–2.35)
Max battery current	44 A

COMMUNICATIONS	
Standard ports	USB, RS232, RS485, Ethernet
Dry contacts	Input and output contacts
Remote EPO	NO or NC contact
Intelligent slot	UTTSNMP or UTTAS400 card
Parallel	Parallel kit optional
Cold start	Yes

Specifications may change as products are updated and improved.

Technical specifications (continued)

PHYSICAL	
Dimensions (mm)	400 W × 770 D × 854 H
Net weight (with batteries)	248 kg
Heat output	≈619 W (2,111 BTU/h)
Colour	Black
Protection	IP20

ENVIRONMENT	
Operating temp.	0–40 °C
Storage temp.	−25–70 °C
Humidity	0–95%, non-condensing
Altitude	≤3000 m; −2% per 100 m above
Noise (1 m)	65 dB full load; 62 dB at 45%

INSTALLATION	
Breakers in / byp / out (A)	40 / 32 / 32 (3P)
Battery breaker	DC 63 A
Cables in / byp / out (mm²)	10 / 6 / 6
Cables batt / PE (mm²)	10 / 10

STANDARDS	
Safety	IEC 62040-1 / AS 62040.1
EMC	IEC 62040-2 / AS 62040.2, C3
Performance	IEC 62040-3 (VFI-SS-111)
Approval	RCM (AU & NZ)

RELATED ACCESSORIES	
UTTSNMP	SNMP network card
UTTAS400	AS400 dry contact card
Parallel kit	N+1 or capacity parallel
Air filter	For dusty environments

RUNTIME GUIDE · minutes at % of rated load (20000 W)

Configuration	100%	75%	50%	25%
TT020EB-80, internal batteries (80 × 12 V 9 Ah)	9	12	22	52

Runtimes are approximate; varies with load, battery age and temperature. For longer runtimes, ask us about a custom battery cabinet.

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