U4GK31-XX

ONLINE UPS

UNITY POWER FACTOR | 6–20 kVA (3:1) | Double Conversion



DESCRIPTION

The U4GK31-XX is an online double-conversion UPS (6–20 kVA (3:1)) with unity output power factor, built on advanced DSP technology. It gives connected loads a clean, uninterrupted supply with zero transfer time.

Wide input voltage range, parallel operation and flexible battery configuration make it suitable for offices, data rooms and industrial loads.

Features

- Advanced DSP (digital signal processor) control
- Wide input voltage range; 50/60 Hz auto-sensing
- Linear derating at low input voltage, reducing battery discharge and extending battery life
- Dual-input design with independent bypass
- Flexible battery configuration (16–20 batteries); charging voltage and current set on demand
- Cold start from battery; settable delayed restart when mains returns
- Frequency conversion: 50 Hz in / 60 Hz out or 60 Hz in / 50 Hz out
- LCD + LED display with multi-function keys
- Configuration software for all parameters
- Communication: RS232, USB, RS485, SNMP and dry contacts
- Intelligent battery management (float / equalizing charge, charger dormancy), up to 50% longer battery life
- Active power factor correction, input power factor up to 0.99
- High efficiency: 95% (up to 98% in ECO mode)
- Variable-speed fans, self-diagnostics, event log and self-aging function

Rear Panel



1	RS232
2	EPO (emergency power off)
3	Parallel port (optional)
4	USB (optional)
5	Temperature detection (optional)
6	SNMP (optional)
7	Reserved for customer functions (manual bypass, battery breaker, socket, etc.)
8	Fans
9	Bypass breaker
10	Input breaker
11	GND
12	Terminals and terminal cover

Available Options

- RS232 and smart card slot included.

All rights reserved to change the model design according to the KNX Standard (2024V0.0)

↗ Optional: parallel function, battery temperature compensation, SNMP card, USB, RS485 card, dry contacts, EMD and SMS alarms.

Technical Data

Model	U4GK3106	U4GK3110	U4GK3115	U4GK3120
Capacity	6 kVA / 6000 W	10 kVA / 10000 W	15 kVA / 15000 W	20 kVA / 20000 W
Built-in Battery (standard model)	12 V / 7 Ah × 16	12 V / 9 Ah × 16	—	—
Noise at 1 m	≤ 58 dB	≤ 58 dB	≤ 58 dB	≤ 58 dB
Dimensions W × D × H (mm)	191 × 495 × 711 (S) 191 × 495 × 350 (H)	191 × 495 × 711 (S) 191 × 495 × 350 (H)	191 × 495 × 515 (H)	191 × 495 × 515 (H)
Net Weight (kg)	58.5 (S) / 18.5 (H)	64 (S) / 18.5 (H)	26.5 (H)	26.5 (H)
Gross Weight (kg)	66.5 (S) / 20 (H)	72 (S) / 20 (H)	28 (H)	28 (H)

(S) = standard model with built-in batteries · (H) = long-run model for external batteries.

Parameter (all models)	Specification
Input Wiring	Three-phase five-wire (3L + N + PE)
Input Rated Voltage	380 / 400 / 415 VAC
Input Voltage Range	190–305 VAC (linear derating 50–100% load) 305–499 VAC (no derating)
Input Frequency	50/60 Hz auto-sensing; range 40–70 Hz
Input Power Factor	≥ 0.99
Bypass Voltage Range	-40% to +15% (adjustable)
Input THDi	≤ 5%
Output Wiring	Single-phase three-wire (L + N + PE)
Output Rated Voltage	208 V (PF 0.9) / 220 / 230 / 240 VAC
Voltage Regulation	±1%
Output Frequency	Synchronized to bypass in mains mode; 50/60 Hz ±0.1% in battery mode
Waveform	Pure sine wave
Output Power Factor	1
Output THDv	≤ 1% (linear load); ≤ 3% (non-linear load)
Crest Factor	3:1
Overload Capacity	102–110%: 10 min · 110–125%: 1 min · 125–150%: 30 s
Battery DC Voltage	192 VDC (192 / 240 VDC adjustable)
Number of Batteries	16 (16–20 adjustable)
Charging Current	Standard: 1 A · Long-run: 5 A default (1–5 A adjustable); 10 A optional

All rights reserved to change the model design according to the KNX Standard (2024V0.0)

Parameter (all models)	Specification
Recharge Time	Standard model: 90% in 8 hours · Long-run model: depends on battery capacity
Efficiency	≥ 94% at 100% load; max. 95% at 60% load; ≥ 98% in ECO mode
Transfer Time	0 ms
Protections	Short circuit, overload, overtemperature, low battery, overvoltage, undervoltage, fan failure
Parallel Units	Up to 4
Communication	RS232 (standard); USB, RS485, dry contacts, SNMP, battery temperature compensation (optional)
Display	LCD + LED
Operating Temperature	0 °C to +40 °C
Storage Temperature	-25 °C to +55 °C (without battery)
Humidity	0–95% (non-condensing)
Altitude	≤ 1000 m; derate 1% per additional 100 m
Protection	IP20

Safety Instructions

- All equipment must be installed and put into operation only by a qualified electrician or authorized person who knows the complete power-supply system and its standards.
- Switch off and isolate all power sources and the related circuit breakers before installation or any electrical connection.
- Check that the unit is undamaged and in a safe state before connecting it; otherwise there is a risk of electric shock or fire.
- Dangerous high voltage is present during operation. Do not open the unit while it is connected, and touch only the display/keypad.
- Follow the warning labels and the nameplate on the unit at all times.
- Install only in dry locations, away from direct sunlight, rain and high humidity, and keep the unit accessible for operation and inspection.
- Before maintenance, disconnect all power sources and wait at least 5 minutes. Use antistatic protection (ESD gloves) when working inside the unit.
- Do not use aerosol sprays, solvents or abrasives on the unit.

EU Main Office:

Vitosha,JK.Manastrski Livadi
5A Maistor Dimitar Sofianliata Str.
Sofia, Bulgaria.

All rights reserved to change the model design according to the KNX Standard (2024V0.0)