

Energy + Home Automation

# KOPP Kuara 6H



## Product features

- ✓ True 3 phase emergency power
- ✓ Black start capable
- ✓ Shift load capable up to 30% between phases
- ✓ Off-grid capable
- ✓ Wide voltage range 160-950V MPPT range
- ✓ DC Switch
- ✓ Anti-islanding protection
- ✓ PV reverse polarity protection
- ✓ Insulation monitoring
- ✓ Residual current monitoring
- ✓ AC short-circuit protection
- ✓ Leakage current protection

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**KOPP**

Product	
Article number:	433406004
Product description:	3 Phase Hybrid AC Inverter
EAN-Code:	

Dimensions, Weight, Color	
Height / Width / Depth:	449 x 519 x 198 mm
Weight:	28 kg
Color:	blue

Specifications	
Input PV	
Max. Recommended DC Power [W]:	9000
Max. DC Voltage [V]:	1000
Nominal DC Operating Voltage [V]:	720
Max. Input Current (input A / input B) [A]:	14 / 14
Max. Short Circuit Current (input A / input B) [A]	16 / 16
MPPT Voltage Range [Vdc]:	160–950
MPPT Voltage Range (full load) [Vdc]:	250–800
Start-up Voltage [V]:	160
No. of MPP Trackers:	2
Strings Per MPP Tracker:	1+1

Output AC	
Nominal AC Power [W]:	6000
Max. Apparent AC Power [VA]:	6600
Rated Grid Voltage [Vac]:	400V/230VAC;380V/220VAC,3L/N/PE
Rated Grid Frequency [Hz]:	50/60 ±5
Max. AC Current [A]:	9.6
Displacement Power Factor:	1 (Adjustable from 0.8 leading to 0.8 lagging)
Total Harmonic Distortion (THDi, Nominal output):	< 3%
Parallel operation:	yes at max. 10 PCS
Unbalance output:	yes
Max output fault current (A):	150 A at 0.5 ms
Max. output overcurrent protection (A):	45

Battery	
Battery Type:	Lithium battery
Battery voltage (V):	180–600
Full AC load Battery voltage[V]:	250
Max. Charge/ discharge current[A]:	26.0
Communication interface:	CAN/RS485

Input AC	
Max. AC power [VA]:	12000
Max. AC current [A]:	18.2
Rated grid voltage (AC voltage range) [V]:	400V/230VAC;380V/220VAC,3L/N/PE
Rated Grid Frequency [Hz]:	50/60 ± 5
Power factor:	1 (Adjustable from 0.8 leading to 0.8 lagging)
AC Inrush current (A):	15 A at 0.5 ms

EPS Output	
Nominal AC power [W]:	6000
Max. AC power (60s) [VA]:	12000
EPS rated voltage [V], Frequency [Hz]:	400V/230VAC;380V/220VAC,3L/N/PE, 50/60
EPS Max current [A](Per phase):	18.2
Power factor:	1 (Adjustable from 0.8 leading to 0.8 lagging)
Switch time:	<20 ms
THDV:	<3% at rated power

Protection	
MPPT Efficiency:	99,9%
Euro-efficiency:	97,2%
Max. Efficiency:	97,8%

Protection	
PV Reverse Polarity Protection:	yes
Battery reverse Protection:	yes
Anti-islanding protection:	yes
Output short protection:	yes
Leakage current protection:	yes
Insulation resistor detection:	yes
Over voltae category:	III (AC side), II (DC side)
Over-current protection / Over-temperature protection:	yes
AC/DC surge protection:	Type II
DC Switch:	optional
AFCI Protection:	optional
String Monitor function:	optional

Standard	
Safty:	EN 62109-1, EN 62109-2, EN 62477-1
EMC:	EN 61000-6-1/2/3/4
Certification:	EN 50549-1, Tor Erzeuger Typ A, OVE-DIRECTIVE R25, C10/11, VDE-AR-N 4105, UTE C15-712-1, NRS 097-2-1, NTS TypeA, CEI 0-21

General Data	
Installation:	wall-mounted
Operating Temperature Range:	-25 – +60°C (derating at +45)
Storage Temperature Range:	-40 – +70°C
Storage/Operation relative humidity:	0%–95% (without condensation)
Altitude (m):	<2000
Protectiv Class:	I
Ingress protection:	IP65 (for outdoor use)
Standby consumption (W):	200 W for hot standby, 15 W for cold standby
Cooling Concept:	Natural cooling
Inverter topology:	Non-isolated
Communication:	Ethernet, Meter, WIFI, 4G(optional), DRM, USB, BMS(CAN&RS485), RS485
LCD display:	Backlight 16*4 character



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# KOPP.Kuara 8.0-3-H



## Product features

- ✓ True 3 phase emergency power
- ✓ Black start capable
- ✓ Shift load capable up to 30% between phases
- ✓ Off-grid capable
- ✓ Wide voltage range 160-950V MPPT range
- ✓ DC Switch
- ✓ Anti-islanding protection
- ✓ PV reverse polarity protection
- ✓ Insulation monitoring
- ✓ Residual current monitoring
- ✓ AC short-circuit protection
- ✓ Leakage current protection

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**KOPP**

Product	
Article number:	433408006
Product description:	3 Phase Hybrid AC Inverter
EAN-Code:	4008224675116

Dimensions, Weight, Color	
Height / Width / Depth:	449 x 519 x 198 mm
Weight:	28 kg
Color:	blue

Specifications	
Input PV	
Max. Recommended DC Power [W]:	10400
Max. DC Voltage [V]:	1000
Nominal DC Operating Voltage [V]:	720
Max. Input Current (input A / input B) [A]:	26 / 14
Max. Short Circuit Current (input A / input B) [A]	32 / 16
MPPT Voltage Range [Vdc]:	160–950
MPPT Voltage Range (full load) [Vdc]:	240–800
Start-up Voltage [V]:	160
No. of MPP Trackers:	2
Strings Per MPP Tracker:	2+1

Output AC	
Nominal AC Power [W]:	8000
Max. Apparent AC Power [VA]:	8800
Rated Grid Voltage [Vac]:	400/230; (320–460)
Rated Grid Frequency [Hz]:	50/60 ± 5
Max. AC Current [A]:	12.8
Displacement Power Factor:	1 (Adjustable from 0.8 leading to 0.8 lagging)
Total Harmonic Distortion (THDi, Nominal output):	< 3%
Parallel operation:	yes at max. 10 PCS
Unbalance output:	yes
Max output fault current [A]:	150 A at 0.5 ms
Max. output overcurrent protection [A]:	45

Battery	
Battery Type:	Lithium battery
Battery voltage [V]:	180–600
Full AC load Battery voltage [V]:	480
Max. Charge / discharge current [A]:	26.0
Communication interface:	CAN/RS485

Input AC	
Max. AC power [VA]:	16000
Max. AC current [A]:	24.2
Rated grid voltage (AC voltage range) [V]:	400/230; (320–460)
Rated Grid Frequency [Hz]:	50/60 ± 5
Power factor:	1 (Adjustable from 0.8 leading to 0.8 lagging)
AC Inrush current [A]:	15 A at 0.5 ms

EPS Output	
Nominal AC power [W]:	8000
Max. AC power (60s) [VA]:	14000
EPS rated voltage [V], Frequency [Hz]:	400V/230VAC;380V/220VAC,3L/N/PE, 50/60
EPS Max current [A] (Per phase):	21.2
Power factor:	1 (Adjustable from 0.8 leading to 0.8 lagging)
Switch time:	<20 ms
THDV:	<3% at rated power

Protection	
MPPT Efficiency:	99,9%
Euro-Efficiency:	97,3%
Max. Efficiency:	98,0%

Protection	
PV Reverse Polarity Protection:	yes
Battery reverse Protection:	yes
Anti-islanding protection:	yes
Output short protection:	yes
Leakage current protection:	yes
Insulation resistor detection:	yes
Over voltae category:	III (AC side), II (DC side)
Over-current protection / Over-temperature protection:	yes
AC/DC surge protection:	Type II
DC Switch:	optional
AFCI Protection:	optional
String Monitor function:	optional

Standard	
Safty:	EN 62109-1, EN 62109-2, EN 62477-1
EMC:	EN 61000-6-1/2/3/4
Certification:	EN 50549-1, Tor Erzeuger Typ A, OVE-DIRECTIVE R25, C10/11, VDE-AR-N 4105, UTE C15-712-1, NRS 097-2-1, NTS TypeA, CEI 0-21

General Data	
Installation:	wall-mounted
Operating Temperature Range:	-25 – +60°C (derating at +45°C)
Storage Temperature Range:	-40 – +70°C
Storage/Operation relative humidity:	0%–95% (without condensation)
Altitude [m]:	<2000
Protectiv Class:	I
Ingress protection:	IP65 (for outdoor use)
Standby consumption [W]:	200 W for hot standby, 15 W for cold standby
Cooling Concept:	Natural convection
Inverter topology:	Non-isolated
Communication:	Ethernet, Meter, WIFI, 4G(optional), DRM, USB, BMS(CAN&RS485), RS485
LCD display:	Backlight 16*4 character



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# KOPP.Kuara 10.0-3-H



## Product features

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- ✓ Black start capable
- ✓ Shift load capable up to 30% between phases
- ✓ Off-grid capable
- ✓ Wide voltage range 160-950V MPPT range
- ✓ DC Switch
- ✓ Anti-islanding protection
- ✓ PV reverse polarity protection
- ✓ Insulation monitoring
- ✓ Residual current monitoring
- ✓ AC short-circuit protection
- ✓ Leakage current protection

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**KOPP**

Product	
Article number:	433410005
Product description:	3 Phase Hybrid AC Inverter
EAN-Code:	4008224675123

Dimensions, Weight, Color	
Height / Width / Depth:	449 x 519 x 198 mm
Weight:	28 kg
Color:	blue

### Specifications

Input PV	
Max. Recommended DC Power [W]:	13000
Max. DC Voltage [V]:	1000
Nominal DC Operating Voltage [V]:	720
Max. Input Current (input A / input B) [A]:	26 / 14
Max. Short Circuit Current (input A / input B) [A]	32 / 16
MPPT Voltage Range [Vdc]:	160–950
MPPT Voltage Range (full load) [Vdc]:	280–800
Start-up Voltage [V]:	160
No. of MPP Trackers:	2
Strings Per MPP Tracker:	2+1

Output AC	
Nominal AC Power [W]:	10000
Max. Apparent AC Power [VA]:	11000
Rated Grid Voltage [Vac]:	400/230; (320–460)
Rated Grid Frequency [Hz]:	50/60 ± 5
Max. AC Current [A]:	16
Displacement Power Factor:	1 (Adjustable from 0.8 leading to 0.8 lagging)
Total Harmonic Distortion (THDi, Nominal output):	< 3%
Max output fault current (A):	150 A at 0.5 ms
Parallel operation:	yes at max. 10 PCS
Unbalance output:	yes
Max. output overcurrent protection (A):	45

Battery	
Battery Type:	Lithium battery
Battery voltage (V):	180–600
Full AC load Battery voltage[V]:	410
Max. Charge/ discharge current[A]:	26.0
Communication interface:	CAN/RS485

Input AC	
Max. AC power [VA]:	16000
Max. AC current [A]:	24.2
Rated grid voltage (AC voltage range) [V]:	400/230; (320–460)
Rated Grid Frequency [Hz]:	50/60 ± 5
Power factor:	1 (Adjustable from 0.8 leading to 0.8 lagging)
AC Inrush current (A):	15 A at 0.5 ms

EPS Output	
Nominal AC power [W]:	10000
Max. AC power (60s) [VA]:	15000
EPS rated voltage [V], Frequency [Hz]:	400V/230VAC;380V/220VAC,3L/N/PE, 50/60
EPS Max current [A] (Per phase):	22.7
Power factor:	1 (Adjustable from 0.8 leading to 0.8 lagging)
Switch time:	<20 ms
THDV:	<3% at rated power

Protection	
MPPT Efficiency:	99,9%
Euro-efficiency:	97,3%
Max. Efficiency:	H3 98,0% / AC3 97,8%

Protection	
PV Reverse Polarity Protection:	yes
Battery reverse Protection:	yes
Anti-islanding protection:	yes
Output short protection:	yes
Leakage current protection:	yes
Insulation resistor detection:	yes
Over voltae category:	III (AC side), II (DC side)
Over-current protection / Over-temperature protection:	yes
AC/DC surge protection:	Type II
DC Switch:	optional
AFCI Protection:	optional
String Monitor function:	optional

Standard	
Safety:	EN 62109-1, EN 62109-2, EN 62477-1
EMC:	EN 61000-6-1/2/3/4
Certification:	EN 50549-1, Tor Erzeuger Typ A, OVE-DIRECTIVE R25, C10/11, VDE-AR-N 4105, UTE C15-712-1, NRS 097-2-1, NTS TypeA, CEI 0-21

General Data	
Installation:	wall-mounted
Operating Temperature Range:	-25 – +60°C (derating at +45)
Storage Temperature Range:	-40 – +70°C
Storage/Operation relative humidity:	0 %–95 % (without condensation)
Altitude (m):	<2000
Protectiv Class:	I
Ingress protection:	IP65 (for outdoor use)
Standby consumption (W):	200 W for hot standby, 15 W for cold standby
Cooling Concept:	FAN cooling
Inverter topology:	Non-isolated
Communication:	Ethernet, Meter, WIFI, 4G(optional), DRM, USB, BMS(CAN&RS485), RS485
LCD display:	Backlight 16*4 character



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# KOPP.Kuara 12.0-3-H



## Product features

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- ✓ DC Switch
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- ✓ Insulation monitoring
- ✓ Residual current monitoring
- ✓ AC short-circuit protection
- ✓ Leakage current protection

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**KOPP**

Product	
Article number:	433412007
Product description:	3 Phase Hybrid AC Inverter
EAN-Code:	

Dimensions, Weight, Color	
Height / Width / Depth:	449 x 519 x 198 mm
Weight:	28 kg
Color:	blue

Specifications	
Input PV	
Max. Recommended DC Power [W]:	15000
Max. DC Voltage [V]:	1000
Nominal DC Operating Voltage [V]:	720
Max. Input Current (input A / input B) [A]:	26 / 14
Max. Short Circuit Current (input A / input B) [A]	32 / 16
MPPT Voltage Range [Vdc]:	160–950
MPPT Voltage Range (full load) [Vdc]:	320–800
Start-up Voltage [V]:	160
No. of MPP Trackers:	2
Strings Per MPP Tracker:	2+1

Output AC	
Nominal AC Power [W]:	12000
Max. Apparent AC Power [VA]:	13200
Rated Grid Voltage [Vac]:	400/230; (320–460)
Rated Grid Frequency [Hz]:	50/60 ± 5
Max. AC Current [A]:	19.2
Displacement Power Factor:	1 (Adjustable from 0.8 leading to 0.8 lagging)
Total Harmonic Distortion (THDi, Nominal output):	< 3%
Parallel operation:	yes at max. 10 PCS
Unbalance output:	yes
Max output fault current (A):	150 A at 0.5 ms
Max. output overcurrent protection (A):	45

Battery	
Battery Type:	Lithium battery
Battery voltage (V):	180–600
Full AC load Battery voltage[V]:	480
Max. Charge/ discharge current[A]:	26.0
Communication interface:	CAN/RS485

Input AC	
Max. AC power [VA]:	16000
Max. AC current [A]:	24.2
Rated grid voltage (AC voltage range) [V]:	400/230; (320–460)
Rated Grid Frequency [Hz]:	50/60 ± 5
Power factor:	1 (Adjustable from 0.8 leading to 0.8 lagging)
AC Inrush current (A):	15 A at 0.5 ms

EPS Output	
Nominal AC power [W]:	12000
Max. AC power (60s) [VA]:	15000
EPS rated voltage [V], Frequency [Hz]:	400V/230VAC;380V/220VAC,3L/N/PE, 50/60
EPS Max current [A](Per phase):	22.7
Power factor:	1 (Adjustable from 0.8 leading to 0.8 lagging)
Switch time:	<20 ms
THDV:	<3% at rated power

Protection	
MPPT Efficiency:	99,9%
Euro-efficiency:	97,3%
Max. Efficiency:	98,0%

Protection	
PV Reverse Polarity Protection:	yes
Battery reverse Protection:	yes
Anti-islanding protection:	yes
Output short protection:	yes
Leakage current protection:	yes
Insulation resistor detection:	yes
Over voltae category:	III (AC side), II (DC side)
Over-current protection / Over-temperature protection:	yes
AC/DC surge protection:	Type II
DC Switch:	optional
AFCI Protection:	optional
String Monitor function:	optional

Standard	
Safety:	EN 62109-1, EN 62109-2, EN 62477-1
EMC:	EN 61000-6-1/2/3/4
Certification:	EN 50549-1, Tor Erzeuger Typ A, OVE-DIRECTIVE R25, C10/11, VDE-AR-N 4105, UTE C15-712-1, NRS 097-2-1, NTS TypeA, CEI 0-21

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Storage Temperature Range:	-40 – +70°C
Storage/Operation relative humidity:	0%–95% (without condensation)
Altitude (m):	<2000
Protectiv Class:	I
Ingress protection:	IP65 (for outdoor use)
Standby consumption (W):	200 W for hot standby, 15 W for cold standby
Cooling Concept:	FAN
Inverter topology:	Non-isolated
Communication:	Ethernet, Meter, WIFI, 4G(optional), DRM, USB, BMS(CAN&RS485), RS485
LCD display:	Backlight 16*4 character

