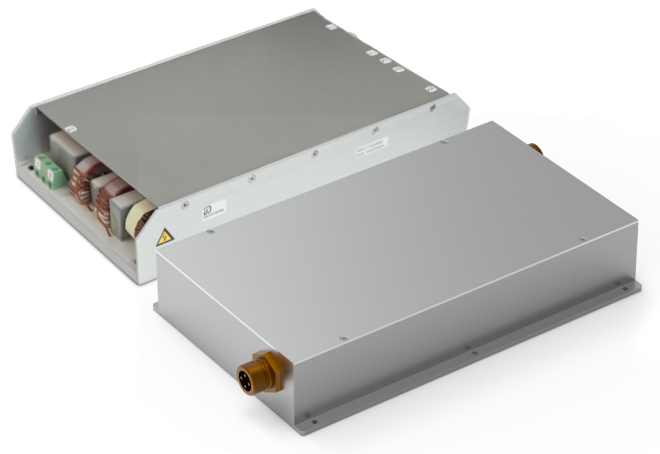


AC/DC power supplies

KWant Family

KWant3000 3 phase NEW, 3000 W



Basic specifications

Power	3000 W
.....	12000 W (peak)
Output current	up to 125 A
Input voltage	~380 (307...453) VAC 3ph
.....	~220 (176-254) VAC 3ph
Output voltage	=28 VDC, =60 VDC
Efficiency.....	93%
Case operating temperature	-40...+85 °C; -50...+85 °C
Dimensions	284×174×54 mm
Warranty	2 years

Advantages

- ◀ MIL-STD-461E without external components
- ◀ MIL-STD-810G
- ◀ Parallel and series operation
- ◀ Stand-by power supply
- ◀ 3 ph active PFC
- ◀ RS-485– digital control and monitor interface
- ◀ Current source mode



Description of KWant3000 3 ph on the manufacturer's website:
eng.kwsystems.ru/catalog/acdc/models/83

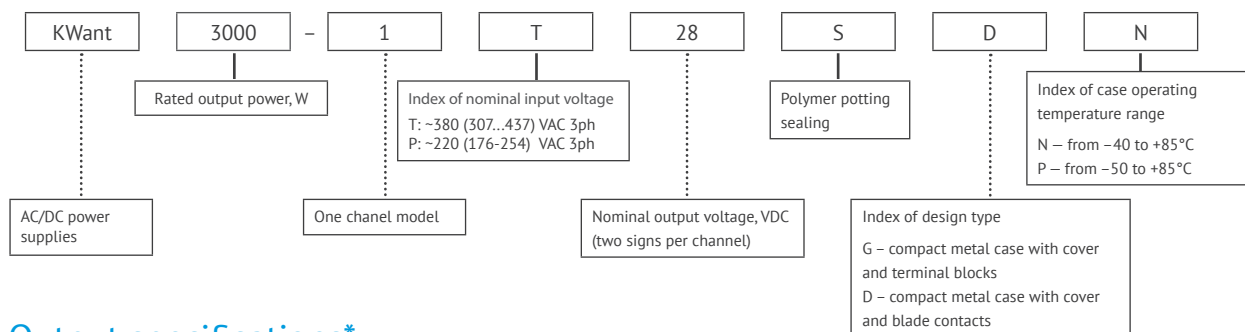
Order registration

+7 473 200 87 80, Global Operations Team

Technical support

Yuri Kazaryan, techsupport@kwsystems.ru

Ordering information



Output specifications*

Parameter		Value	
Model		KWant3000-1T28-SXX	KWant3000-1T60-SXX
Nominal output voltage, VDC		28	60
Rated output power, W		3000	3000 (12 000)
Output voltage adjustment range, MBCB	by built-in trim resistor	24...30 VDC	30...66 VDC
	TRIM pin	±10%	±10%
	RS485	-50...+10%	-50...+10%
Efficiency, %		91	92
Rated output current, A		107	50
Ripple and noise (peak-to-peak)		<2% Uout nom	
Line and load regulation		max 2%	
Start-up time, ms		2000	
Parallel operation		up to 20, redundancy, and boost of power	
Series operation		yes, up to 400 V (using ext. diodes)	
Remote on/off		Off at 5...15 VDC (15...30 mA) output «REMOTE OFF»	
Maximum load capacity		not limited	
External synchronization		480...515 kHz, pulse duration >250 ns, 4...6 V	

Input specifications*

Parameter		Value
Input voltage range, VAC*	T	380 (307...453) VAC 3ph
	P	220 (187...253)** VAC 3ph
Transient deviation range, VAC	T	~304...456
	P	~176...264
Transient time	T, P	1 s
Mains frequency range, Hz		44-800
Consumed current, A		7.5 A
Power factor corrector		+, active
Power factor		0.98
Inrush current		20 A 10 ms

* All specifications are valid for normal climatic conditions (ambient temp. +15...+35°C; relative humidity 45...80%; air pressure 8.6*10⁴...10.6*10⁴ Pa), Uin. nom., Iout. nom., unless otherwise noted.

**At input voltages in the range of 187...220 V there is a decrease in the output power.

Protections

Type of protection	Value
Short-circuit protection*	auto recovery
Overload protection	$P_{max} < 1.8 P_{nom}$
Overvoltage protection level*	$< 125\% U_{out nom.}$
Overheat protection	triggers at case temperature $> 85^{\circ}\text{C}$

Basic specifications**

Parameter		Value
Type of connection	standart case	screw terminals or blade contacts
	milled metal case	Amphenol
Derating		60 W/°C at case $t^{\circ} > 60^{\circ}\text{C}$
Protection level		IP20
Case temperature, operating	«N»	$-40...+85^{\circ}\text{C}$
	«P»	$-50...+85^{\circ}\text{C}$
Case temperature, storage		$-60...+70^{\circ}\text{C}$
Humidity		98% / 35°C
Isolation voltage	in /case	~1500 VAC
	in /out	~1500 VAC
	out /case	~500 VAC
Isolation resistance @ 500 VDC		$\geq 20 \text{ MOhm min}$
Cooling		conductive, forced air
Environmental influence standards		MIL-STD-461E
Typical MTTF		3 000 000 Hrs
Case material		metal
Dimensions, mm	standart case	284×174×54
	milled metal case	325×205×61
Weight, kg	standart case	< 3.4
	milled metal case	< 4.5
Warranty		2 years

Digital interface

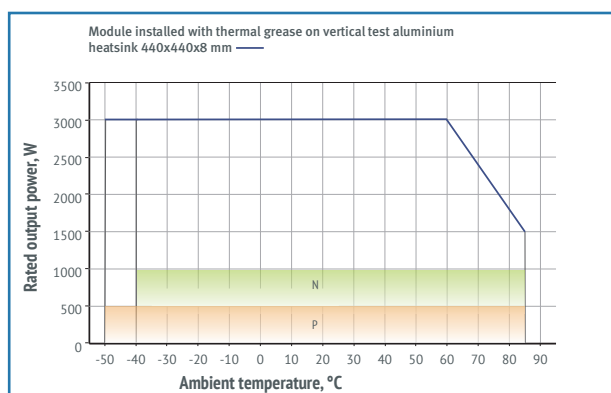
Control interface	RS-485
Serial communications protocol	MODBUS RTU
Number of units, connected to RS-485	up to 32 pcs
Control device	PC with WIN XP, 7, 8, 10

* Parameters are stated for the information purposes and could not be used at long term work, exceeding maximum output current, operating outside of a working temperatures range or when output voltage is over the range of adjustment.

** All specifications are valid for normal climatic conditions, $U_{in nom.}$, $I_{out nom.}$, unless otherwise noted.

Derating

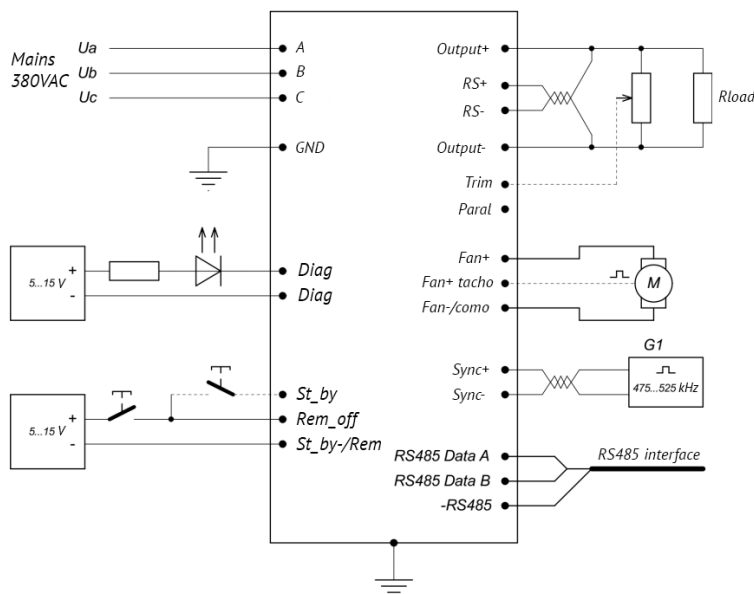
vs Temperature



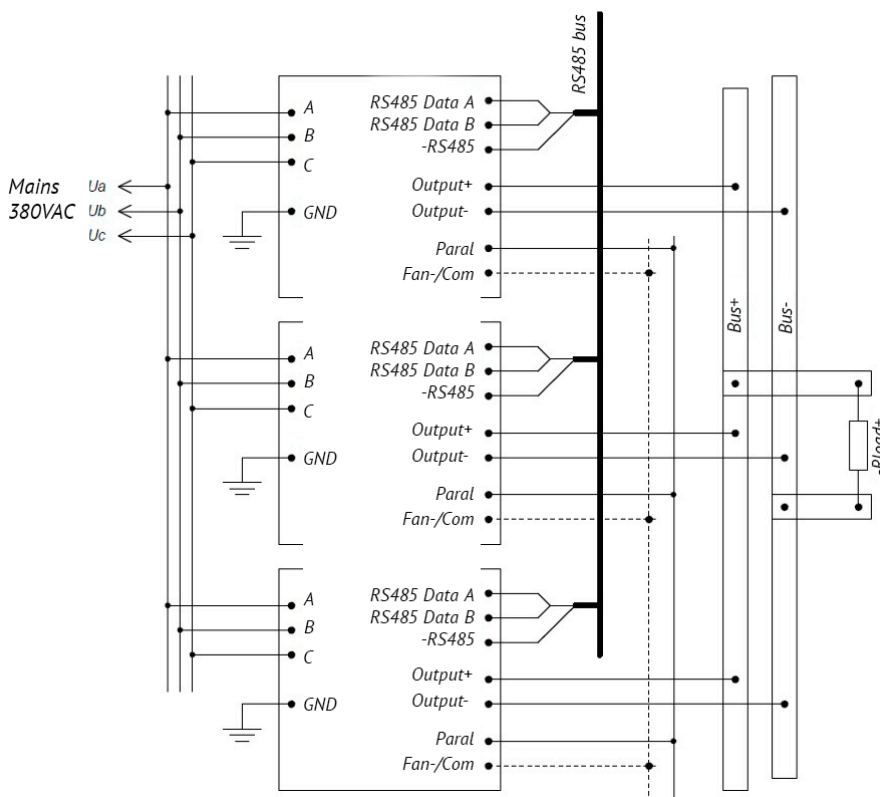
Decreasing parts of the dashed and dash-dotted curves correspond to the maximum case temperature (+85°C for models with index "N" and "P"). Output power must not exceed the values limited by curve for a given ambient temperature.

Modules can be used without the heatsink only on condition of installation with thermal grease on heat-distribution baseplate with length and width not less than case's and with thickness not less than 8 mm.

Typical connection



Parallel operation



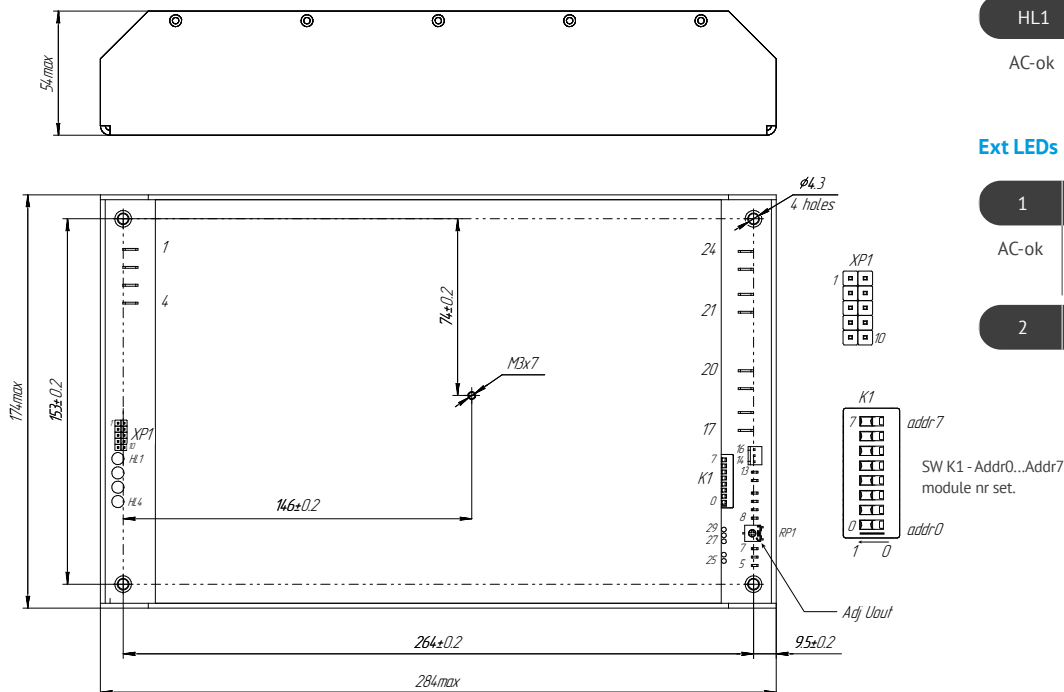
Single-channel design with terminal blocks

Ext LEDs

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	B	C	GND	St_by-/Rem	Rem off	ST-by	+RS	-RS	Paral	TRIM (analog)	DC-ok+	DC-ok-	Fan+	Fan-/COM
16		X2.1	X2.2	X2.3	X2.4	25		26		27	28		29	
Fan tach		Output+		Output-		Synchro-		Synchro+		RS485_com	RS485 Data-B		RS485 Data-A	

Dimensions

Single-channel design with blade contacts



LEDs assignment

HL1	HL2	HL3	HL4
AC-ok	Voltage src mode	Current src mode	Alarm

Ext LEDs

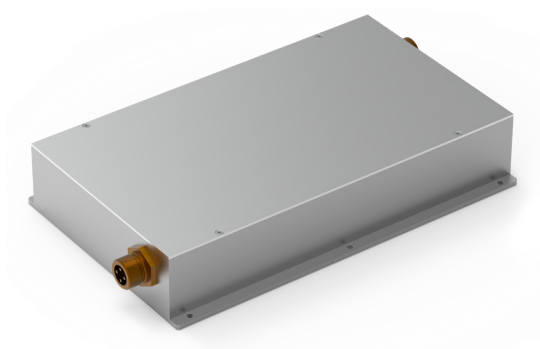
1	3	5	7	9
AC-ok	Voltage src mode	Current src mode	Alarm	n/a
2	4	6	8	10
LEDs+				n/a

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	B	C	GND	St_by-/ Rem	Rem off	ST-by	+RS	-RS	Paral	TRIM (analog)	DC-ok+	DC-ok-	Fan+	Fan-/COM
16		17-20		21-24		25		26		27	28		29	
Fan tach		Output+		Output-		Synchro-		Synchro+		RS485_com	RS485 Data-B		RS485 Data-A	

Milled metal case

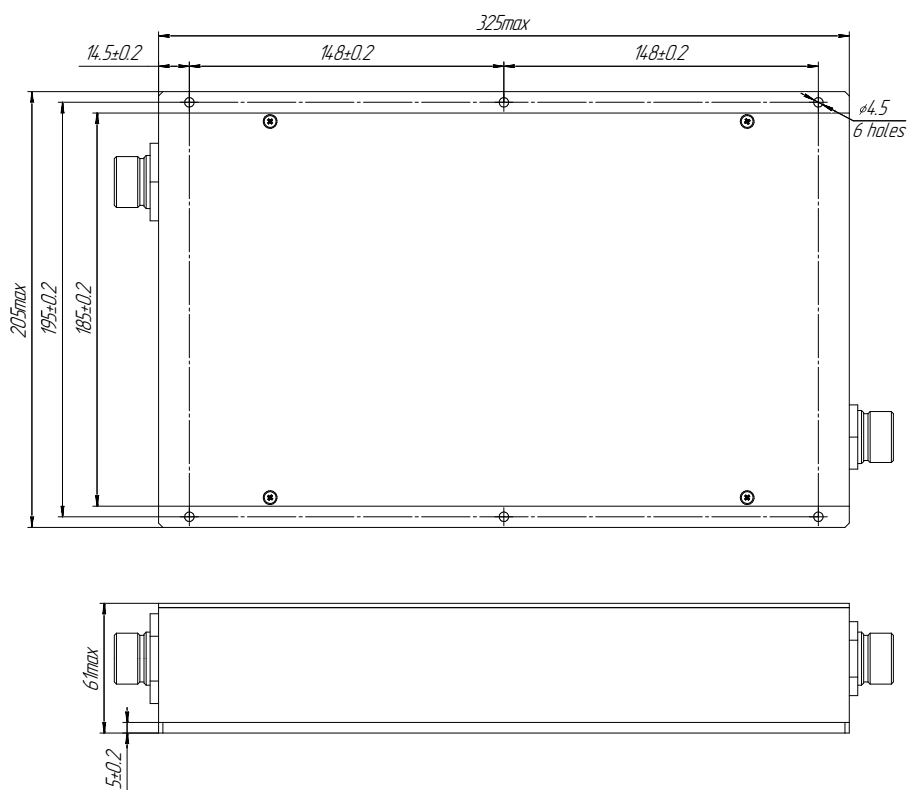
Advantages

- ◀ High EMI resistance
- ◀ Low radiated emission
- ◀ Harsh environment applications
- ◀ IP rating: 50
- ◀ Connector: Amphenol



Dimensions

Milled metal case with Amphenol connector





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KW Systems, LLC is the leading Russian developer and manufacturer of AC/DC converters and power supply systems for mission critical applications.

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