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Datasheet VP600-18X160-HP

Art.-No: VP600-18X160-21.0.22.14.00

Discontinued

VP600 - Expert Inverters

Bidirectional inverter 78 - 1560 kVA peak power

- Application software can be extended
- Protection of your application know-how
- Bidirectional without switchover pauses

Power

These products from the VP600 product range are optimized for maximum permanent power and smallest volume. To achieve this an additional cooling system was integrated.

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General

product name	VP600-18X160-HP
Article no.	VP600-18X160-21.0.22.14.00
product family	VP600
product description	

Product overview

Article no.	VP600-18X160-21.0.22.14.00
Name	VP600-18X160-HP

Size

Height with connectors	146 mm
Width with connectors	261 mm
Depth with connectors	424 mm
Height (basic housing)	146 mm
Width (basic housing)	261 mm
Depth (basic housing)	392 mm
Weight	16 kg

Technical data

Continuous current AC ¹⁾	350 A _{rms}
Continuous current 2 AC ²⁾	350 A _{rms}
Peak current AC, for 10sec ³⁾	520 A _{rms}
Peak current AC for 60sec ³⁾	400 A _{rms}
Max. electrical rotary frequency	599 Hz
Continuous power ⁴⁾	273 kVA
Max. continuous power dissipation	4.5 kW
Peak power for 10sec	477 kVA
Max. PWM frequency	16 kHz
Min. PWM frequency	2 kHz
Integrated DC link capacity	300 µF
Recommended voltage DC-link	650 V
DC-link shutdown threshold level 1	800 V
Max. voltage DC-link [V DC]	770 V
DC-link shutdown threshold level 2	820 V
Min. voltage DC-link [V DC]	30 V
DC Controller voltage max.	27 V
DC Controller voltage min.	21 V

Technical data	
Technical notes	1) Continuous current at 650VDC, 4kHz PWM frequency, 15l/min coolant flow rate at 35°C and 45°C ambient temperature 2) Continuous current at 750VDC, 4kHz PWM frequency, 15l/min coolant flow rate at 35°C and 45°C ambient temperature 3) Peak current at 650VDC, 2.5kHz PWM frequency, 15l/min coolant flow rate at 35°C and 45°C ambient temperature 4) Continuous power at 650VDC, 4kHz PWM frequency, 15l/min coolant flow rate at 35°C and 45°C ambient temperature

Interfaces	
Communication bus	<ul style="list-style-type: none"> ● VECTOBUS ● CAN
Resolver inputs	1
Encoder inputs	1
Number of PT100 inputs	1
Number of NTC (PTC) inputs	3
External voltage measurement	yes
Analogue inputs	2
Digital inputs	2
Digital outputs (each 0,2A)	2

Cooling	
Max. coolant throughput	25 l / min
Pressure difference typical	0.3 bar
Max. coolant pressure	2 bar
Min. coolant pressure	0.5 bar
Max. coolant temperature without derating	35 °C
Max. coolant temperature with derating	45 °C
Liquid cooling	yes
Air cooling	yes
Cooling medium	Water + glycol (50:50)
Min. coolant throughput	15 l / min

Environment	
Max. ambient temperature in operation	45 °C
Max. ambient temperature in operation with derating	45 °C
Protection class according to EN 60529	IP20
Max. altitude of site above sea level	2000 m
Polution degree according to DIN EN 61800	2
Humidity according to IEC 60068-2-35	max. 90%, noncondensing

Connectors	Description	Function
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Pin settings

ST1

Properties

Plug type	AMPSEAL HDR SNAP IN W/G 23pol.
Plug design	Gehäusevariante WF

Pin no.	Description	Function	I/O
1	KL 31	Logic supply voltage, DC GND	Input
2	KL 30b	Logic supply voltage, DC +	Input
3	Enable	Enabling power Output	Input
4	Digi Out1	Digital output 1	Output
5	Digi Out2	Digital output 2	Output
6	NTC1	NTC temperature sensor no.1	Input
7	NTC2	NTC temperature sensor no.2	Input
8	AN_I1+	Analog current input no.1 +	Input
9	CAN_L	Can Bus low	bidirectional
10	CAN_H	Can Bus high	bidirectional
11	COM1_TxD	RS232 Interface for firmware updates TxD	bidirectional
12	COM1_rxD	RS232 Interface for firmware updates RxD	bidirectional
13	EN_CONF#	Enable / Allow firmware update	input
14	CAN_GND	Can Bus Ground	bidirectional
15	COM_GND	Rs232 Ground	bidirectional
16	Digi_In1	Digital Input no. 1	Input
17	Digi_In2	Digital Input no. 2	Input
18	NTC_GND	Ground for NTC temperature	Input
19	Interlock_In	NC	
20	Interlock_Out	NC	
21	An_U1+	Analog voltage input no. 1 +	Input
22	An_U1-	Analog voltage input no. 1 -	Input
23	An_I1-	Analog current input no. 1 -	Input

ST2

Description only for devices with DriveMain Version 2.x

Properties	
Plug type	A ST A 035
Plug design	17 poles, type "P"

pin-no.	operation	type	I/O
1	Resolver P+	female	
2	Resolver P-	female	
3	Resolver A+	female	
4	Resolver A-	female	
5	Resolver B+	female	
6	Resolver B-	female	
7	GND	female	
8	+5V	female	
9	NC	female	
10	C	female	
11	/C	female	
12	D	female	
13	/D	female	
14	PT100-1	female	
15	PT100-1 GND	female	
16	NTC-3	female	
17	NTC-3 GND	female	

ST3

Properties	
Plug type	A ST A 035
Plug design	17 pol, Typ "p"

pin-no.	operation	type	I/O
1			
2			
3			
4			
5			
6	+5V_MST	female	
7	/VB_MAOU	female	
8	VB_MAOU	female	
9	VB_MSTIN	female	
10	/VB_MSTIN	female	
11	0V_MST	female	
12	+5V_EXT	male	
13	/VB_SLVOU	male	
14	VB_SLVOU	male	
15	VB_SLVIN	male	
16	/VB_SLVIN	male	
17	0V_EXT	male	

ST4

pin-no.	operation	type	I/O
1	Phase U	male	
2	Phase V	male	
3	Phase W	male	
4	NC		
A	NC		
B	NC		
C	NC		
D	NC		