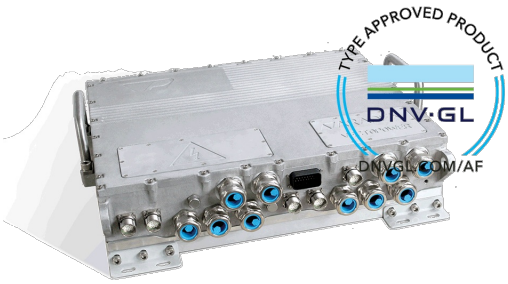

The illustration may contain optional equipment, Copyright: ARADEX AG

Datasheet VP600-18W268

Art.-No: VP600-18W268-6A.1.21.14.00

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

Traction

These products from the VP600 product range is optimized for commercial vehicle traction drives.

- Optional real-time PLC
- Control modules for all motor topologies
- Field weakening for PM motors with buried magnets and also asynchronous motors
- Boost function for more torque from standstill

ARADEX is your partner for exceptional solutions in electric drive technology.

For reference reports go to:
www.aradex.com/en/electric-mobility

All rights reserved
Subject to change without notice

info@aradex.com
www.aradex.com
+49 (0)71 72 91 81 0

ARADEX AG
Ziegelwaldstr. 3
73547 Lorch

General

Article no.	VP600-18W268-6A.1.21.14.00
product name	VP600-18W268
updated on	10.02.2021 08:44:56
status	12 Discontinued
product family	VP600
product description	

Size

Height with connectors	168 mm
Width with connectors	566 mm
Depth with connectors	470 mm
Height (basic housing)	125 mm
Width (basic housing)	566 mm
Depth (basic housing)	470 mm
Weight	40 kg

Technical data

Min. voltage DC-link [V DC]	30 V
Max. voltage DC-link [V DC]	770 V
Recommended voltage DC-link	650 V
DC-link shutdown threshold level 1	800 V
DC-link shutdown threshold level 2	820 V
Continuous power [4)]	404 kVA
Peak power for 10sec	734 kVA
Continuous current AC [1)]	440 A_{rms}
Continuous current 2 AC [2)]	440 A_{rms}
Peak current AC, for 10sec [3)]	900 A_{rms}
Peak current AC for 60sec [3)]	680 A_{rms}
Min. PWM frequency	2 kHz
Max. PWM frequency	6 kHz
Max. electrical rotary frequency	599 Hz
Max. continuous power dissipation	6 kW
DC Controller voltage min.	9 V
DC Controller voltage max.	28 V

All rights reserved
Subject to change without notice

info@aradex.com
www.aradex.com
+49 (0)71 72 91 81 0

ARADEX AG
Ziegelwaldstr. 3
73547 Lorch

Technical data

Technical notes	[1] Continuous current at 650VDC, 4kHz PWM frequency, 30l/min coolant flow rate at 65°C and 45°C ambient temperature [2] Continuous current at 750VDC, 4kHz PWM frequency, 30l/min coolant flow rate at 65°C and 45°C ambient temperature [3] Peak current at 650VDC, 2.5kHz PWM frequency, 30l/min coolant flow rate at 65°C and 45°C ambient temperature [4] Continuous power at 750VDC, 4kHz PWM frequency, 30l/min coolant flow rate at 65°C and 45°C ambient temperature

Interfaces

Communication bus	• VECTOBUS • CAN
Number of NTC (PTC) inputs	4
Number of PT100 inputs	2
Analogue inputs	2
Digital inputs	2
Digital outputs (each 0,2A)	2
Resolver inputs	1
Encoder inputs	1
Encoder inputs with digital absolute value	yes
External voltage measurement	yes

Cooling

Liquid cooling	yes
Cooling medium	Water + glycol (50:50)
Min. coolant throughput	30 l / min
Pressure difference typical	0.3 bar
Max. coolant pressure	2 bar
Min. coolant pressure	0.5 bar
Max. coolant temperature without derating	65 °C
Max. coolant temperature with derating	75 °C

Environment

Max. altitude of site above sea level	2000 m
Protection class according to EN 60529	IP65
Polution degree according to DIN EN 61800	2, inside space
Humidity according to IEC 60068-2-35	max. 90%, noncondensing
Min. ambient temperature in operation	-25 °C
Max. ambient temperature in operation	75 °C
Max. ambient temperature in operation with derating	75 °C

All rights reserved
Subject to change without notice

info@aradex.com
www.aradex.com
+49 (0)71 72 91 81 0

ARADEX AG
Ziegelwaldstr. 3
73547 Lorch

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 suply 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

All rights reserved
Subject to change without notice

info@aradex.com
www.aradex.com
+49 (0)71 72 91 81 0

ARADEX AG
Ziegelwaldstr. 3
73547 Lorch

ST2A

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	N.C.	N.C.	
8	N.C.	N.C.	
9	N.C.	N.C.	
10	N.C.	N.C.	
11	N.C.	N.C.	
12	N.C.	N.C.	
13	N.C.	N.C.	
14	PT100 1	female	
15	PT100 1 GND	female	
16	NTC 3	female	
17	NTC 3 GND	female	

All rights reserved
Subject to change without notice

info@aradex.com
www.aradex.com
+49 (0)71 72 91 81 0

ARADEX AG
Ziegelwaldstr. 3
73547 Lorch

ST2B

pin-no.	operation	type	I/O
1	Clock+	female	
2	Clock-	female	
3	Z+ or Data+	female	
4	Z- or Data-	female	
5	N.C.	N.C.	
6	N.C.	N.C.	
7	GND	female	
8	+5V	female	
9	N.C.	N.C.	
10	C	female	
11	/C	female	
12	D	female	
13	/D	female	
14	PT100 2	female	
15	PT100 2 GND	female	
16	NTC 4	female	
17	NTC 4 GND	female	

All rights reserved
Subject to change without notice

info@aradex.com
www.aradex.com
+49 (0)71 72 91 81 0

ARADEX AG
Ziegelwaldstr. 3
73547 Lorch

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	

All rights reserved
Subject to change without notice

info@aradex.com
www.aradex.com
+49 (0)71 72 91 81 0

ARADEX AG
Ziegelwaldstr. 3
73547 Lorch

ST4A

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

All rights reserved
Subject to change without notice

info@aradex.com
www.aradex.com
+49 (0)71 72 91 81 0

ARADEX AG
Ziegelwaldstr. 3
73547 Lorch

Attachments

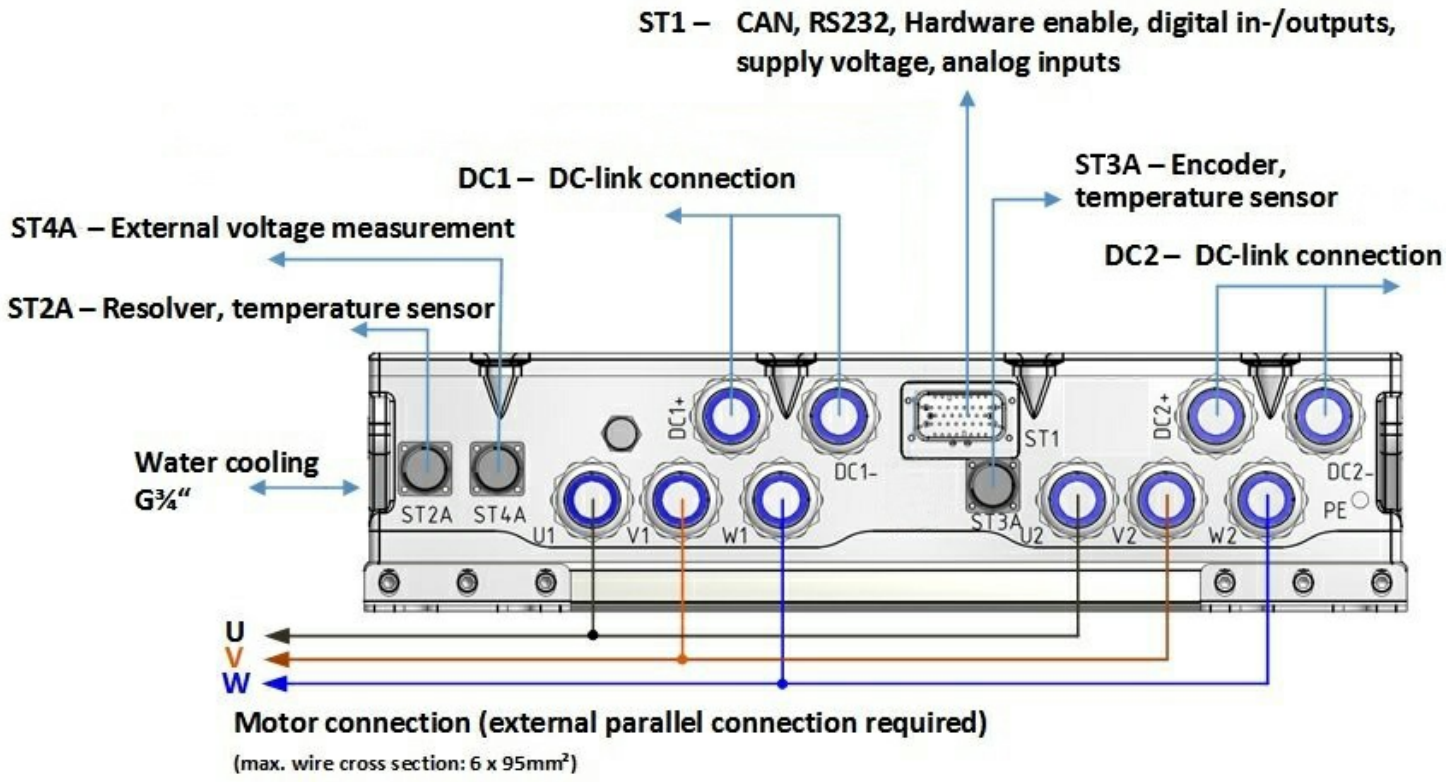

Illustration: Connectivity

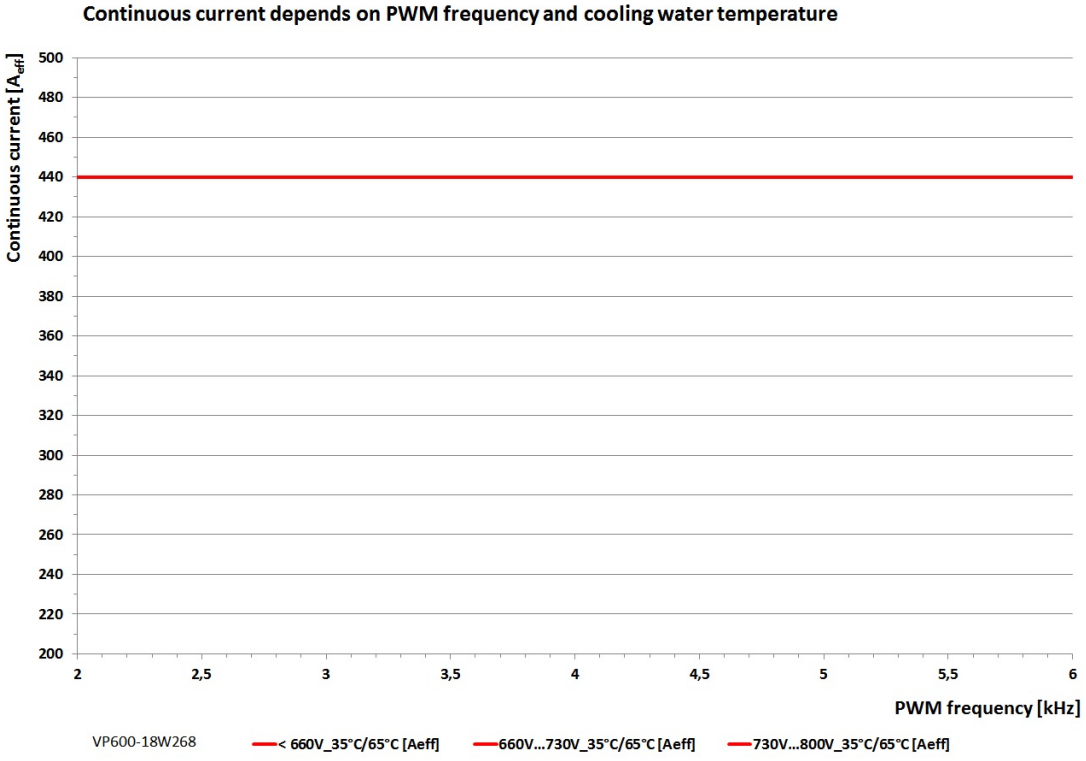

Illustration: Diagram: Continuous current about PWM

All rights reserved
Subject to change without notice

info@aradex.com
www.aradex.com
+49 (0)71 72 91 81 0

ARADEX AG
Ziegelwaldstr. 3
73547 Lorch

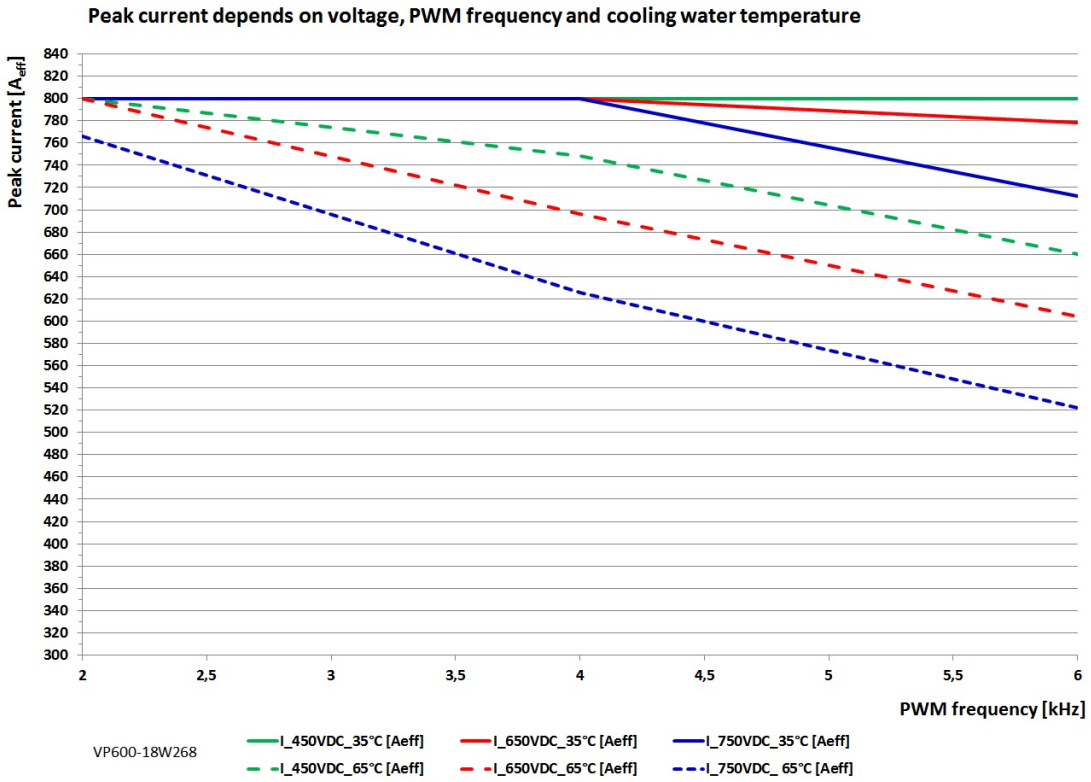

Illustration: Diagram: Peak current for 10sec about PWM

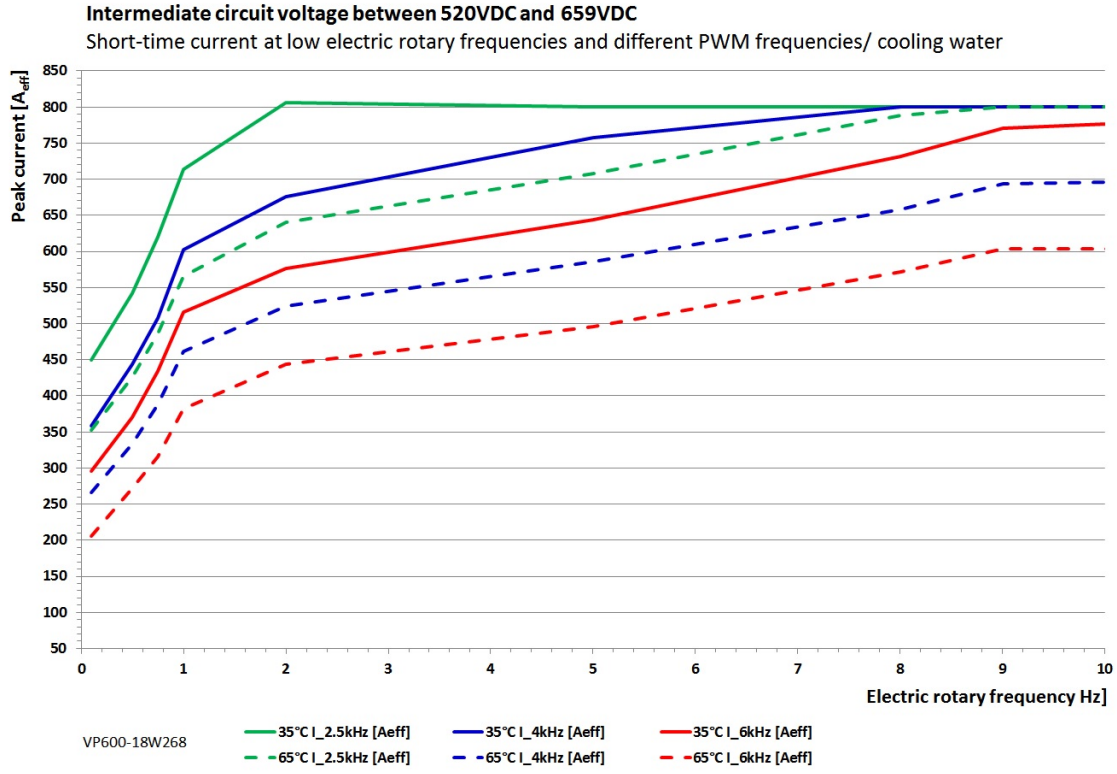

Illustration: curr_diagramm_AoverEFreq_peak_ipmboost_2

All rights reserved
Subject to change without notice

info@aradex.com
www.aradex.com
+49 (0)71 72 91 81 0

ARADEX AG
Ziegelwaldstr. 3
73547 Lorch

Intermediate circuit voltage between 660VDC and 729VDC

Short-time current at low electric rotary frequencies and different PWM frequencies/ cooling water

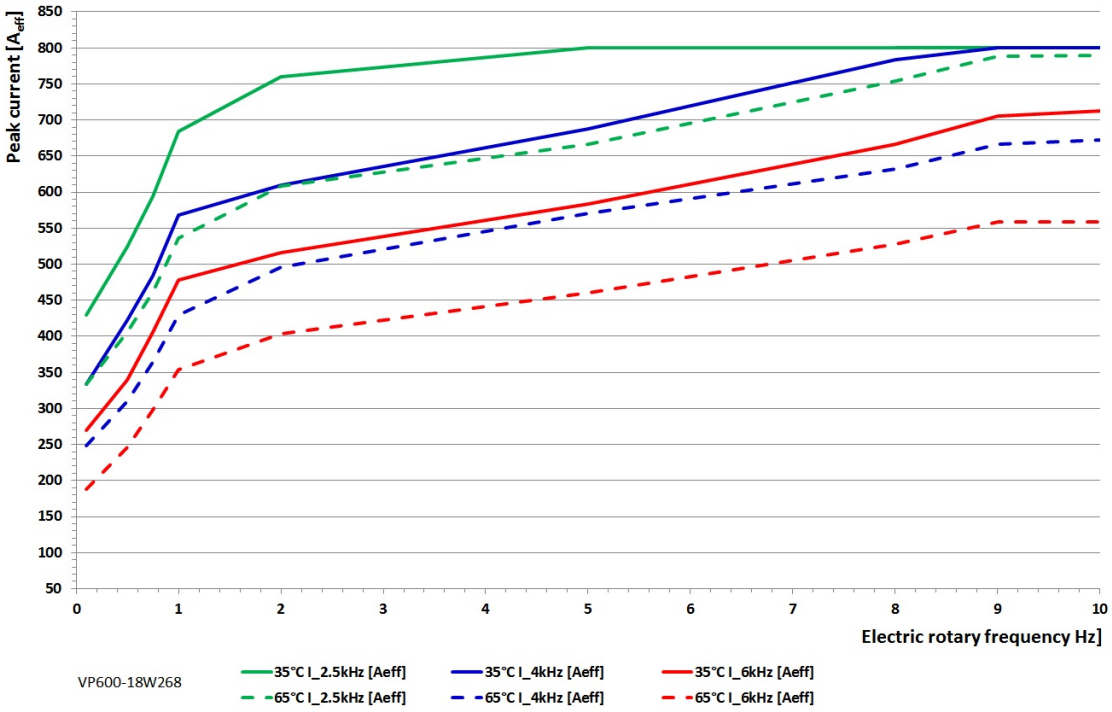

Illustration: curr_diagramm_AoverEFreq_peak_ipmboost_3

Intermediate circuit voltage between 730VDC and 800VDC

Short-time current at low electric rotary frequencies and different PWM frequencies/ cooling water

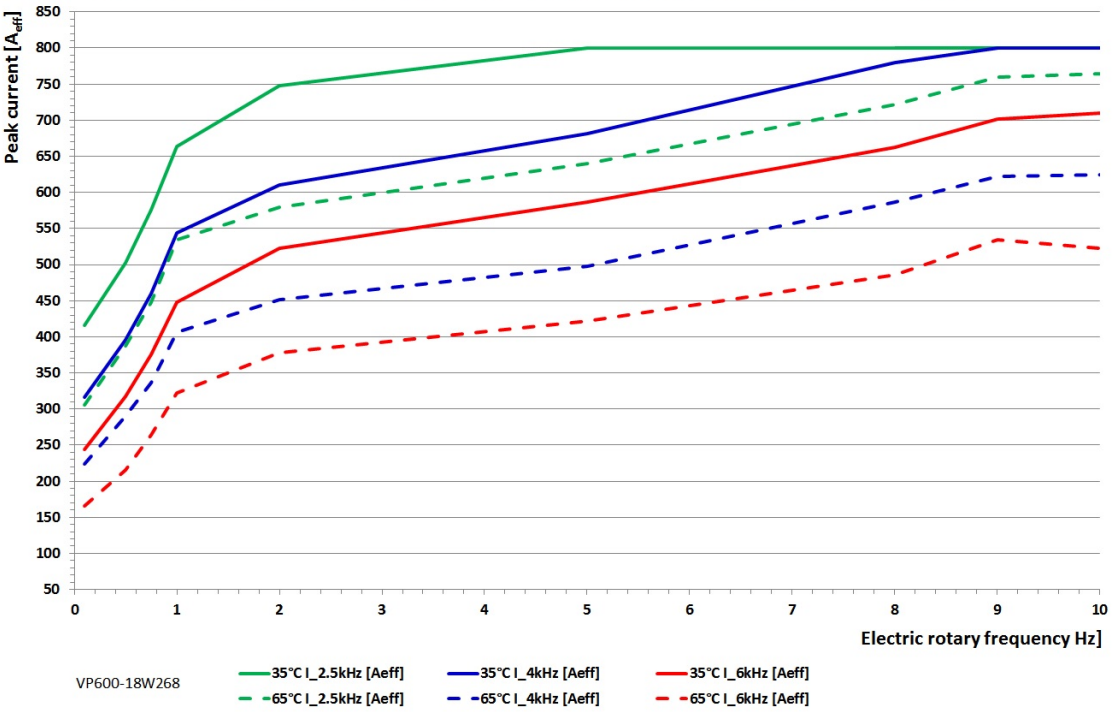

Illustration: curr_diagramm_AoverEFreq_peak_ipmboost_4

All rights reserved
Subject to change without notice

info@aradex.com
www.aradex.com
+49 (0)71 72 91 81 0

ARADEX AG
Ziegelwaldstr. 3
73547 Lorch