



Hybrid Power

# AEP 100

## DC/AC converter



- Innovative in energy storage & Power Electronics
- Custom-made solutions
- Complete solution: storage & Power Electronics
- Design and system integration

## Features

- 40 kW converter
- Flexible mounting system
- Several devices mountable alongside each other, cable connection only on two sides
- Load-dependent PWM fan control
- Low output current ripple for DC/DC application
- Optional: customer specific signal analysis and processing
- Optional: implementation and analysis of customer specific data interfaces and protocols

## Applications

- Drive of AC- or DC-motors (including regenerative energy)
- Active filter
- Active Front End

## Mechanical Data

Length x Depth x Height  
178 x 359 x 238 mm  
Approx. 9,8 kg

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## Technical Characteristics

Symbol	Parameter	Description	Value	Unit
<b>General</b>				
$P_r$	Rated power	@ $U_{out}400VAC, \cos(\phi)=1$	40	kW
$P_{MAX}$	Max. power	@ $U_{out}400VAC, fr\ 2kHz\ 1min/10min$	48	kW
$F_r$	Switching frequency		$\leq 16$	kHz
$\eta_r$	Efficiency	@ $P_r$	$>95$	%
<b>Output</b>				
$U_{in}$	Output voltage range	$\pm 15\%$	400	VAC
$f_n$	Nominal frequency	$\pm 10\%$	50	Hz
$I_{nom}$	Nominal phase current		60	A
$I_{max}$	Max. phase current	30s/10min.	70	A
<b>Input</b>				
$U_{out}$	Input voltage		600 – 700	VDC
$U_{out,max}$	Max. operating voltage		750	VDC
<b>Supply power</b>				
	Control voltage	Rated value	$24 \pm 5\%$	VDC
	Control current		$<1$	A
<b>Environment</b>				
	Operating temperature		0 till 40	$^{\circ}C$
	Storage temperature		0 till 50	$^{\circ}C$
	Protection degree		IP00	
<b>Communication</b>				
	Measurement signals	IGBT temperature (NTC integrated in module)	-40 till 160	$^{\circ}C$
		Output current (LEM LAH 100-P)	-145 till 145	A
		DC-Link voltage	0 till 980	V
		PCB temperature	-40 till 150	$^{\circ}C$
	6x relay drivers			
	7x binary outputs	High	16 till 29	V
		Low	0 till 2	V
	7x binary inputs	High	17 till 30	V
		Low	0 till 2	V
	2x connection for voltage and current measuring			
	Data	CAN / RS232		

Symbol	Parameter	Description	Value	Unit
	Cooling	Fischer electronic LA V 7 with 2 x 24 V DC fan and airflow chamber		
	Dimensions including fan and airflow chamber	Length x Depth x Height	178 x 359 x 238	mm
$R_{th}$	Thermal resistance		0,045	K/W
$P_{Fan}$	Power demand	Each fan	3	W
$V/t$	Max. Flow rate	Each fan	56	M <sup>3</sup> /h
$n_r$	Rated revolutions		6850	Min <sup>-1</sup>

## Mechanical Data

Length x Depth x Height: 178 x 359 x 238 mm  
 Weight: Approx. 9,8 kg

## Accessories

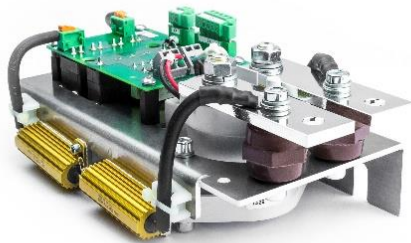


Figure 1: Pre-charge



Figure 2: Choke Assembly



Figure 3: EMC filter



Figure 4: Voltage measurement

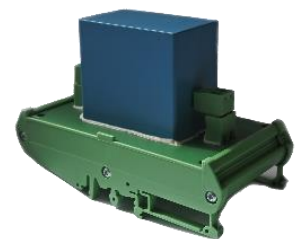


Figure 5: Output cap