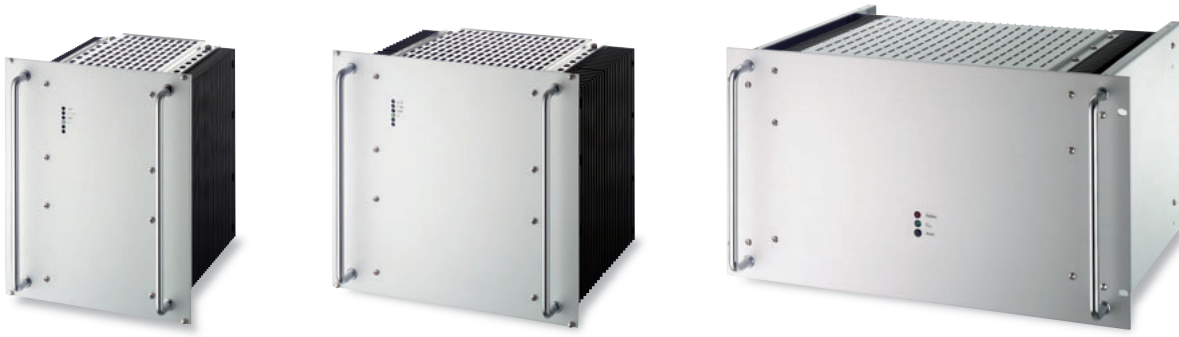


Series CI, IT and IV



Specifications

Input

Voltage range see tables, unit switches off at under- and overvoltage
 No-load input power. 10 – 30 W
 Inrush current AC input: limited by thermistor
 Hold-up time AC input: 10 ms typical

Immunity

- ESD. acc. to DIN / EN 61000-4-2 level 3
 - Fast transients acc. to DIN / EN 61000-4-4 level 3
 - Surges acc. to DIN / EN 61000-4-5 level 3

Output

Line regulation ($\pm 10\%$) 0.1 % for series CI,
 2 % for series IT and IV
 Load regulation (10 – 90 %) 1 % typical, 3 % max.
 (400 Hz: 3 % typical, 5 % max.)
 Turn-on rise time Soft-start, 100 ms typical
 Waveform. sine wave or any wave shape
 programmable by external signal
 Frequency 40 – 400 Hz: adjustable / programmable
 or any fixed frequency (crystal stabilized)
 Distortion. 3 % typical, 5 % @ 400 Hz,
 7 % @ 40 – 400 Hz
 Overload protection
 (steady state). current limited to approx. $1.05 \times I_{nom}$
 Surge power $2 \times P_{nom}$ for 1 s
 Short circuit protection electronically limited to $3 \times I_{nom}$, unit
 switches off after 1 s
 Crest factor. approx. 3
 Power factor. $\cos \varphi \geq 0.7$ inductive / capacitive

General

Efficiency 75 – 94 %
 Operating temperature. –20 to +75 °C
 Load derating 2.5 % / °C from +55 °C
 Storage temperature –40 to +85 °C
 Humidity up to 95 % RH, non-condensing
 Safety / Construction. acc. to DIN / EN 60950-1: 2003
 Protection category. IP 20, others or NEMA upon request
 EMI. acc. to EN 55022, class A,
 optionally class B
 Marking CE

Options (details see page 90 – 92)

Input

- Inrush current limiting for DC input
- Reverse polarity protection for DC input
- Autoranging for 115 / 230 VAC input
- Special circuit for 16.6 Hz AC input

Output

- Inhibit (remote on / off)
- Static Switch (details see page 88)

Signals

via relay contacts

- Power ok (input)
- AC ok (output)

Programming

Output voltage, current or frequency via

- Potentiometer
- Analog signal
- Interface card RS232 or IEEE488

Monitoring

Input / output voltage, current or frequency via

- Analog signal
- Interface card RS232 or IEEE488

Mechanics / environment:

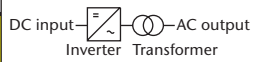
- 19" sub-rack for eurocassette, refer to page 93
- Wall mount
- Increased mechanical strength
- Tropical protection
- Extended temperature range to –40 °C
- Temperature controlled fans for 19" units

Connector (details see page 103)

Mechanics	Series CI	Series IT	Series IV
Eurocassette	H15 and high current connector for $I > 50$ A	H15, high current connector for $I > 50$ A and F24H7	--
Wall mount	Terminals	Terminals	Terminals
19" plug-in module	Terminals	Terminals	Terminals
19" sub-rack	Terminals	Terminals	Terminals

Features

- DC input: 10 – 800 V
- AC output: 115 or 230 V or any other output voltage (to be specified)
- 40 – 400 Hz or fixed frequency (crystal stabilized)
- Sine wave
- Continuous short circuit protection
- Thermal shutdown with auto restart for inverters > 1 kVA
- Suitable for complex load
- Surge power capability
- Industrial grade components
- Compact and robust design



Series IT Switch mode inverter and transformer (for isolation and voltage transformation)

Input VDC																Cooling	Output VAC
20–32 VDC	Output kVA	Size	40–64 VDC	50–80 VDC	Output kVA	Size	80–160 VDC	Output kVA	Size	160–320 VDC	340–400 ¹⁾ VDC	340–640 ²⁾ VDC	450–800 ²⁾ VDC	Output kVA	Size		
IT 1626	0.2	A	IT 1636	IT 1646	0.4	A	IT 1656	0.5	A	IT 1676	IT 1686 Z			0.5	A	115	
			IT 3636	IT 3646	0.5	B	IT 3656	1	B	IT 3676	IT 3686 Z	IT 3676 G		1	B		
							IT 3856	1.2	C	IT 3876	IT 3886 Z	IT 3876 G	IT 3876 K	1.6	C		
			IT 4836	IT 4846	1.2	D	IT 4856	2	D	IT 4876	IT 4886 Z	IT 4876 G	IT 4876 K	2.5	D		
			IT 5636	IT 5646	2	E	IT 5656	3	E	IT 5676	IT 5686 Z	IT 5676 G	IT 5676 K	5	F+T1		
			IT 5736	IT 5746	3	E	IT 5756	5	F+T1	IT 5776	IT 5786 Z	IT 5776 G	IT 5776 K	8	F+T2		
										IT 5876	IT 5886 Z	IT 5876 G	IT 5876 K	10	F+T3		
IT 1628	0.2	A	IT 1638	IT 1648	0.4	A	IT 1658	0.5	A	IT 1678	IT 1688 Z			0.5	A	230	
			IT 3638	IT 3648	0.5	B	IT 3658	1	B	IT 3678	IT 3688 Z	IT 3678 G		1	B		
							IT 3858	1.2	C	IT 3878	IT 3888 Z	IT 3878 G	IT 3878 K	1.6	C		
			IT 4838	IT 4848	1.2	D	IT 4858	2	D	IT 4878	IT 4888 Z	IT 4878 G	IT 4878 K	2.5	D		
			IT 5638	IT 5648	2	E	IT 5658	3	E	IT 5678	IT 5688 Z	IT 5678 G	IT 5678 K	5	F+T1		
			IT 5738	IT 5748	3	E	IT 5758	5	F+T1	IT 5778	IT 5788 Z	IT 5778 G	IT 5778 K	8	F+T2		
										IT 5878	IT 5888 Z	IT 5878 G	IT 5878 K	10	F+T3		

= natural convection = temperature controlled fans



Series CI Switch mode converter (for isolation and voltage transformation) and inverter in one package

Input VDC																Cooling	Output VAC
10–16 VDC	Output kVA	Size	20–32 VDC	Output kVA	Size	40–64 VDC	50–80 VDC	80–160 VDC	160–320 VDC	320–380 ¹⁾ VDC	320–640 ²⁾ VDC	450–800 ²⁾ VDC	Output kVA	Size			
CI 1606	0.4	G	CI 1626	0.5	G	CI 1636	CI 1646	CI 1656	CI 1676	CI 1686 Z			0.6	G	115		
			CI 3626	1	H	CI 3636	CI 3646	CI 3656	CI 3676	CI 3686 Z	CI 3676 G			1.2		H	
CI 4806	0.8	I	CI 4826	1.4	I	CI 4836	CI 4846	CI 4856	CI 4876	CI 4886 Z	CI 4876 G	CI 4876 K	1.8	I	115		
			CI 5626	2	K	CI 5636	CI 5646	CI 5656	CI 5676	CI 5686 Z	CI 5676 G	CI 5676 K	2.4	K			
CI 5706	2	K	CI 5726	3	K	CI 5736	CI 5746	CI 5756	CI 5776	CI 5786 Z	CI 5776 G	CI 5776 K	3.5	K			
CI 1608	0.4	G	CI 1628	0.5	G	CI 1638	CI 1648	CI 1658	CI 1678	CI 1688 Z			0.6	G	230		
			CI 3628	1	H	CI 3638	CI 3648	CI 3658	CI 3678	CI 3688 Z	CI 3678 G			1.2		H	
CI 4808	0.8	I	CI 4828	1.4	I	CI 4838	CI 4848	CI 4858	CI 4878	CI 4888 Z	CI 4878 G	CI 4878 K	1.8	I	230		
			CI 5628	2	K	CI 5638	CI 5648	CI 5658	CI 5678	CI 5688 Z	CI 5678 G	CI 5678 K	2.4	K			
CI 5708	2	K	CI 5728	3	K	CI 5738	CI 5748	CI 5758	CI 5778	CI 5788 Z	CI 5778 G	CI 5778 K	3.5	K			

= natural convection = temperature controlled fans

Frequency Designation

.0	any external signal (control, ramp) → only for Series CI
.1	40 - 400 Hz adjustable / programmable
.2	45 - 65 Hz adjustable / programmable
.3	any fixed frequency between 40 - 400 Hz
.4	400 Hz
.5	50 Hz
.51	synchronized with 50 Hz mains
.6	60 Hz
.61	synchronized with 60 Hz mains
.7	50/60 Hz switchable

Assistance in table use:
中国区总代理：上海佳鑫电子科技有限公司

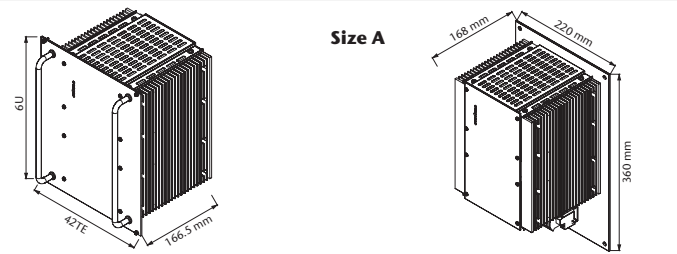
For example:
电话：021-50342560 | 手机：13764303579 | 电子邮件：roman.xiao@fitpower.cn | www.fitpower.cn

1) Input voltage = 48 VDC
2) Input supply from PFC also suitable

- Select the row for the appropriate output voltage and power.
- The intersection of both results in the module required.
- Add the required frequency designation to the part number.

- Input voltage = 48 VDC
- output voltage = 230 VAC @ 1.2 kVA
- results in a IT 4838 or CI 3638
- for 50 Hz add .5, e.g. CI 3638.5

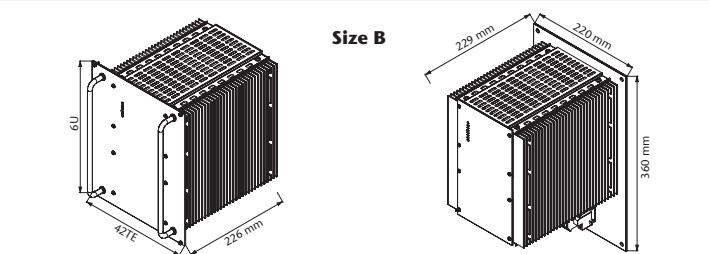
2) suited for wall-mount, alternatives upon request



Size A

Eurocassette / approx. 9 kg
(pluggable module for 19" sub-rack)

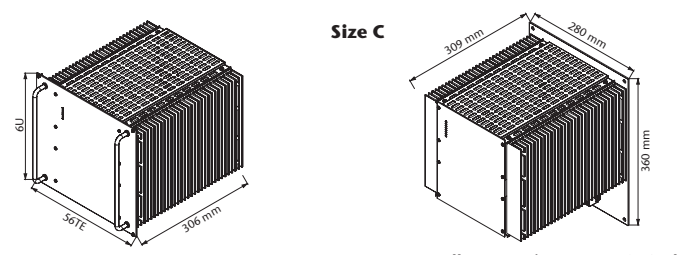
Wall mount / approx. 11 kg
(optional)



Size B

Eurocassette / approx. 11-13 kg
(pluggable module for 19" sub-rack)

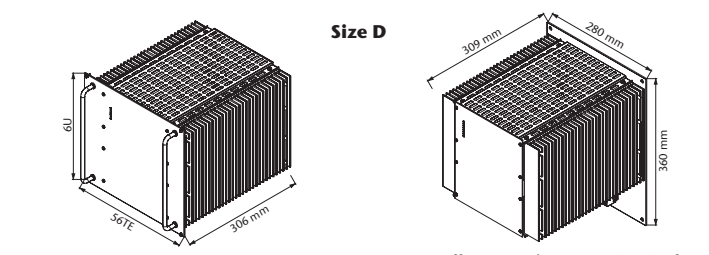
Wall mount / approx. 13-15 kg
(optional)



Size C

Eurocassette / approx. 16-18 kg
(pluggable module for 19" sub-rack)

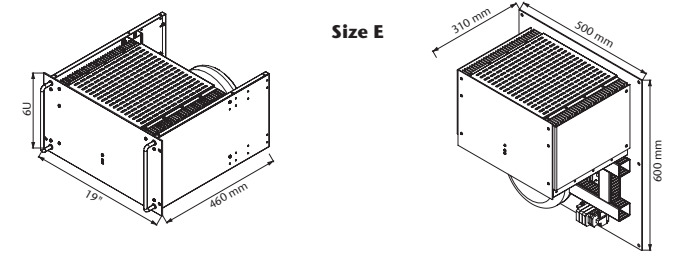
Wall mount / approx. 19-21 kg
(optional)



Size D

Eurocassette / approx. 18-24 kg
(pluggable module for 19" sub-rack)

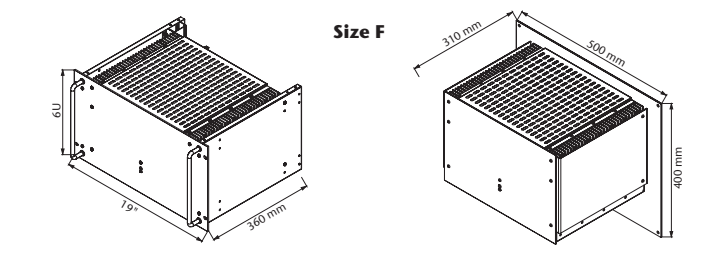
Wall mount / approx. 21-27 kg
(optional)



Size E

19" Plug-in module / approx. 46-50 kg

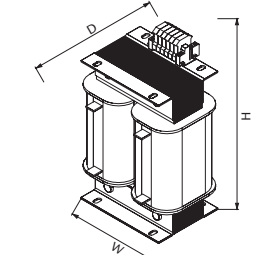
Wall mount / approx. 54-58 kg
(optional)



Size F

19" Plug-in module / approx. 32 kg

Wall mount / approx. 36 kg
(optional)

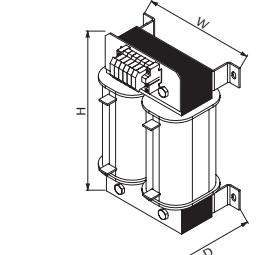


Size T1 - T3

Transformer	H	W	D	Weight in kg
T1	390	240	233	33
T2	450	280	253	50
T3	450	280	283	66

Transformers refer to 50/60 Hz.
Other frequencies or tropical insulation may change size and weight.

Standing version

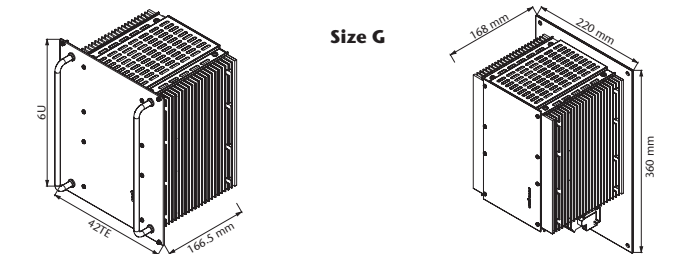


Size T1 - T3

Transformer	H	W	D	Weight in kg
T1	335	230	210	33
T2	390	260	240	50
T3	390	260	270	66

Transformers refer to 50/60 Hz.
Other frequencies or tropical insulation may change size and weight.

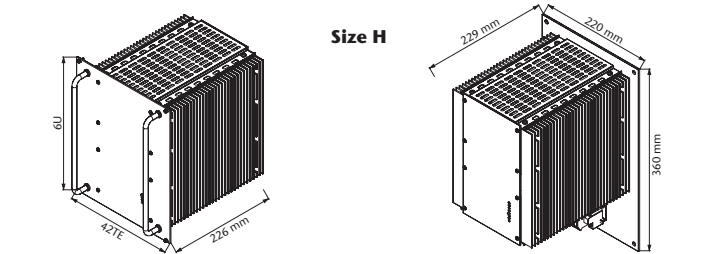
Wall mount version



Size G

Eurocassette / approx. 6 kg
(pluggable module for 19" sub-rack)

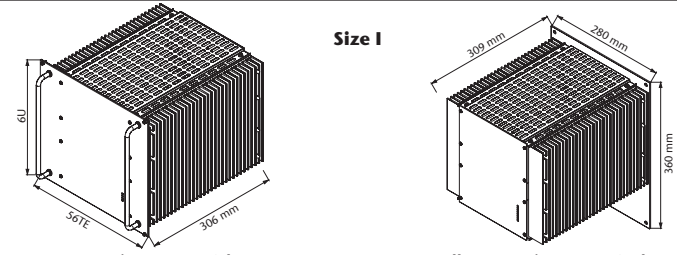
Wall mount / approx. 8 kg
(optional)



Size H

Eurocassette / approx. 10 kg
(pluggable module for 19" sub-rack)

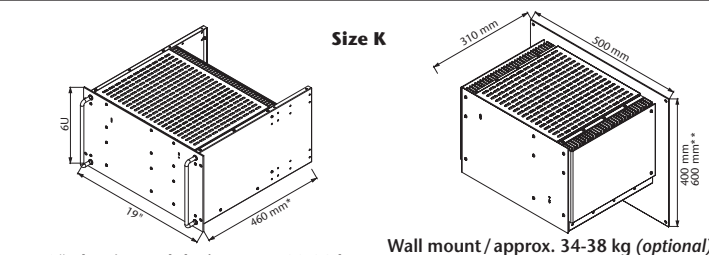
Wall mount / approx. 12 kg
(optional)



Size I

Eurocassette / approx. 18 kg
(pluggable module for 19" sub-rack)

Wall mount / approx. 21 kg
(optional)



Size K

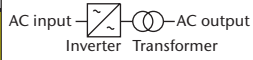
19" Plug-in module / approx. 28-32 kg
) less depth upon request

Wall mount / approx. 34-38 kg (optional)
) applicable for CI 5706, 5708, 5726 and 5728

Frequency Converters (AC / AC Inverters) with 1-phase output

Features

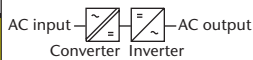
- AC input: 1 or 3-phase, 47 – 400 Hz
- AC output: 115 or 230 V or any other output voltage (to be specified)
- 40 – 400 Hz or fixed frequency (crystal stabilized)
- Sine wave
- Continuous short circuit protection
- Thermal shutdown with auto restart for inverters > 1 kVA
- Suitable for complex load
- Surge power capability
- Industrial grade components
- Compact and robust design



Series IT Switch mode inverter and transformer (for isolation and voltage transformation)

Input VAC 1-Phase	Output kVA	Size	Input VAC 1-Phase	Input VAC 3-Phase			Output kVA	Size	Cooling	Output VAC
			230 ^{+15%} / _{-20%}	3x200 ^{+15%} / _{-20%}	3x400 ^{+15%} / _{-20%}	3x480 ^{+10%} / _{-15%}				
115 ±20%										
IT 1666	0.5	A	IT 1686	IT 1666 V			0.5	A	115	115
IT 3666	1	B	IT 3686	IT 3666 V	IT 3686 V		1	B		
IT 3866	1.2	C	IT 3886	IT 3866 V	IT 3886 V	IT 3896 V	1.6	C		
IT 4866	2	D	IT 4886	IT 4866 V	IT 4886 V	IT 4896 V	2.5	D		
IT 5666	3	E	IT 5686	IT 5666 V	IT 5686 V	IT 5696 V	5	F+T1		
IT 5766	5	F+T1	IT 5786	IT 5766 V	IT 5786 V	IT 5796 V	8	F+T2		
						IT 5886 V	12	F+T3		
IT 1668	0.5	A	IT 1688	IT 1668 V			0.5	A	230	230
IT 3668	1	B	IT 3688	IT 3668 V	IT 3688 V		1	B		
IT 3868	1.2	C	IT 3888	IT 3868 V	IT 3888 V	IT 3898 V	1.6	C		
IT 4868	2	D	IT 4888	IT 4868 V	IT 4888 V	IT 4898 V	2.5	D		
IT 5668	3	E	IT 5688	IT 5668 V	IT 5688 V	IT 5698 V	5	F+T1		
IT 5768	5	F+T1	IT 5788	IT 5768 V	IT 5788 V	IT 5798 V	8	F+T2		
						IT 5888 V	12	F+T3		

= natural convection
 = temperature controlled fans



Series CI Switch mode converter (for isolation and voltage transformation) and inverter in one package

Input VAC 1-Phase	Input VAC 1-Phase		Input VAC 3-Phase			Output kVA	Size	Cooling	Output VAC
	115 ±20% / 230 ^{+15%} / _{-20%}	230 ^{+15%} / _{-20%}	3x200 ^{+15%} / _{-20%}	3x400 ^{+15%} / _{-20%}	3x480 ^{+10%} / _{-15%}				
115 ±20%									
CI 1666	CI 1686	CI 1696	CI 1666 V			0.6	G	115	115
CI 3666	CI 3686	CI 3696	CI 3666 V	CI 3686 V	CI 3696 V	1.2	H		
CI 4866	CI 4886	CI 4896	CI 4866 V	CI 4886 V	CI 4896 V	1.8	I		
CI 5666	CI 5686	CI 5696	CI 5666 V	CI 5686 V	CI 5696 V	2.4	K		
CI 5766	CI 5786		CI 5766 V	CI 5786 V	CI 5796 V	3.5	K		
CI 1668	CI 1688	CI 1698	CI 1668 V			0.6	G	230	230
CI 3668	CI 3688	CI 3698	CI 3668 V	CI 3688 V	CI 3698 V	1.2	H		
CI 4868	CI 4888	CI 4898	CI 4868 V	CI 4888 V	CI 4898 V	1.8	I		
CI 5668	CI 5688	CI 5698	CI 5668 V	CI 5688 V	CI 5698 V	2.4	K		
CI 5768	CI 5788		CI 5768 V	CI 5788 V	CI 5798 V	3.5	K		

= natural convection
 = temperature controlled fans

Frequency Designation (output)

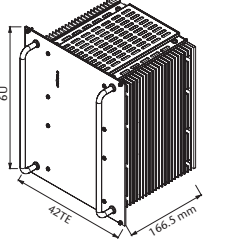
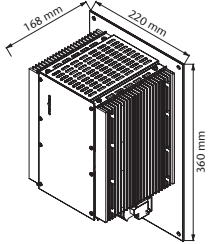
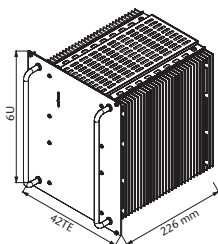
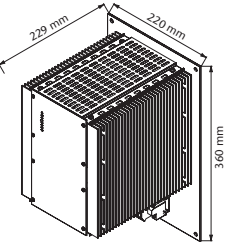
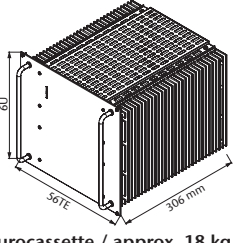
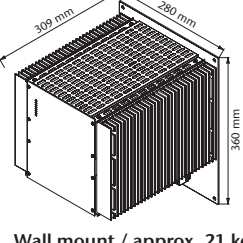
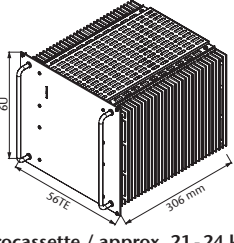
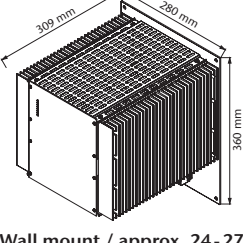
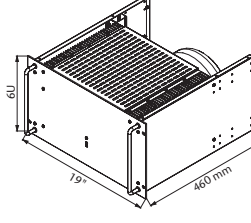
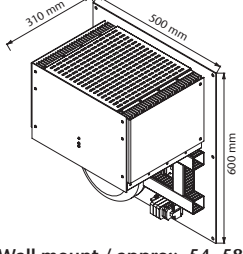
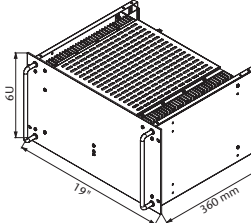
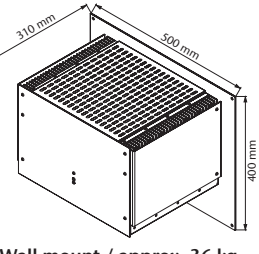
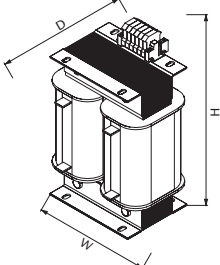
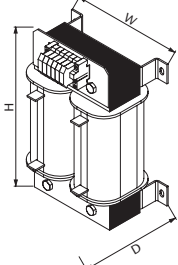
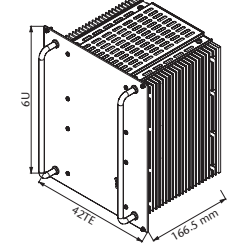
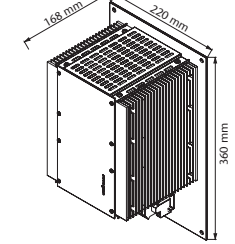
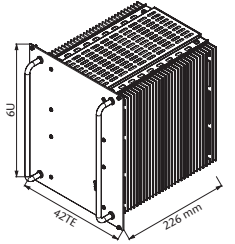
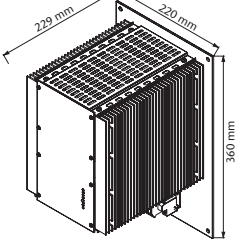
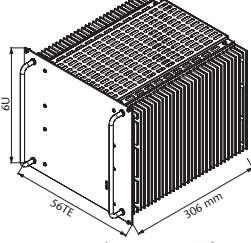
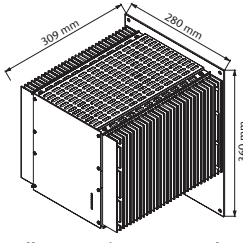
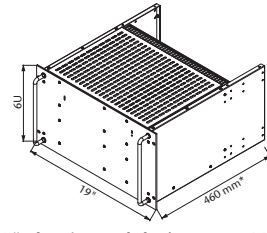
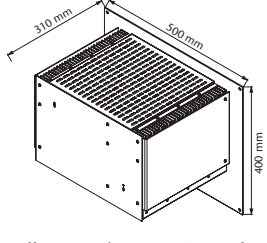
.0	any external signal (control, ramp) → only for Series CI
.1	40 - 400 Hz adjustable / programmable
.2	45 - 65 Hz adjustable / programmable
.3	any fixed frequency between 40 - 400 Hz
.4	400 Hz
.5	50 Hz
.51	synchronized with 50 Hz mains
.6	60 Hz
.61	synchronized with 60 Hz mains
.7	50/60 Hz switchable

Assistance in table use:

- 1 Select the column for input voltage range.
- 2 Select the row for the appropriate output voltage and power.
- 3 The intersection of both results in the module required.
- 4 Add the required frequency designation to the part number.

For example:

- 1 Input voltage = 115 VAC, 60 Hz
- 2 output voltage = 230 VAC, 50 Hz @ 1.2 kVA
- 3 results in a CI 3668
- 4 for 50 Hz add .5, i.e. CI 3668.5

 <p>Size A</p> <p>Eurocassette / approx. 9 kg (pluggable module for 19" sub-rack)</p>	 <p>Size A</p> <p>Wall mount / approx. 11 kg (optional)</p>	 <p>Size B</p> <p>Eurocassette / approx. 13 kg (pluggable module for 19" sub-rack)</p>	 <p>Size B</p> <p>Wall mount / approx. 15 kg (optional)</p>																																								
 <p>Size C</p> <p>Eurocassette / approx. 18 kg (pluggable module for 19" sub-rack)</p>	 <p>Size C</p> <p>Wall mount / approx. 21 kg (optional)</p>	 <p>Size D</p> <p>Eurocassette / approx. 21-24 kg (pluggable module for 19" sub-rack)</p>	 <p>Size D</p> <p>Wall mount / approx. 24-27 kg (optional)</p>																																								
 <p>Size E</p> <p>19" Plug-in module / approx. 46-50 kg</p>	 <p>Size E</p> <p>Wall mount / approx. 54-58 kg (optional)</p>	 <p>Size F</p> <p>19" Plug-in module / approx. 32 kg</p>	 <p>Size F</p> <p>Wall mount / approx. 36 kg (optional)</p>																																								
 <p>Size T1 - T3</p> <table border="1"> <thead> <tr> <th>Transformer</th> <th>H</th> <th>W</th> <th>D</th> <th>Weight in kg</th> </tr> </thead> <tbody> <tr> <td>T1</td> <td>390</td> <td>240</td> <td>233</td> <td>33</td> </tr> <tr> <td>T2</td> <td>450</td> <td>280</td> <td>253</td> <td>50</td> </tr> <tr> <td>T3</td> <td>450</td> <td>280</td> <td>283</td> <td>66</td> </tr> </tbody> </table> <p>Transformers refer to 50/60 Hz. Other frequencies or tropical insulation may change size and weight.</p> <p>Standing version</p>	Transformer	H	W	D	Weight in kg	T1	390	240	233	33	T2	450	280	253	50	T3	450	280	283	66	 <p>Size T1 - T3</p> <table border="1"> <thead> <tr> <th>Transformer</th> <th>H</th> <th>W</th> <th>D</th> <th>Weight in kg</th> </tr> </thead> <tbody> <tr> <td>T1</td> <td>335</td> <td>230</td> <td>210</td> <td>33</td> </tr> <tr> <td>T2</td> <td>390</td> <td>260</td> <td>240</td> <td>50</td> </tr> <tr> <td>T3</td> <td>390</td> <td>260</td> <td>270</td> <td>66</td> </tr> </tbody> </table> <p>Transformers refer to 50/60 Hz. Other frequencies or tropical insulation may change size and weight.</p> <p>Wall mount version</p>	Transformer	H	W	D	Weight in kg	T1	335	230	210	33	T2	390	260	240	50	T3	390	260	270	66		
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 <p>Size I</p> <p>Eurocassette / approx. 18 kg (pluggable module for 19" sub-rack)</p>	 <p>Size I</p> <p>Wall mount / approx. 21 kg (optional)</p>	 <p>Size K</p> <p>19" Plug-in module / approx. 28-32 kg *) less depth upon request</p>	 <p>Size K</p> <p>Wall mount / approx. 34-38 kg (optional)</p>																																								