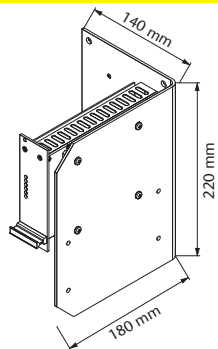
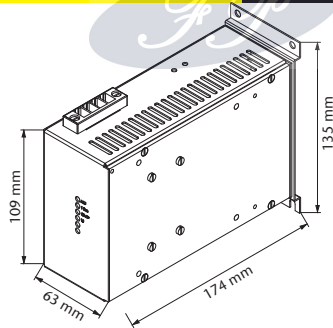


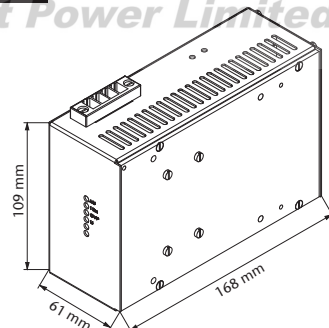
**Eurocassette / approx. 0.7 kg**  
(pluggable module for 19" sub-rack)



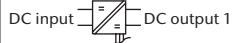
**Wall mount / approx. 2.2 kg**



**NEW**  
**Chassis mount / approx. 1.05 kg**



**NEW**  
**DIN rail mount / approx. 1.0 kg**



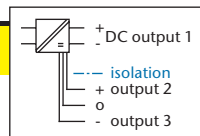
**DC / DC Converters**

▶ 30 W		▶ 40 W								
Input VDC									Output 1 VDC	
10–16 VDC	Max. Output Amps	18–36 VDC	36–75 VDC	45–90 VDC	80–160 VDC	160–320 VDC	320–380 <sup>1)</sup> VDC	Max. Output Amps	Adj.	Range
M 200	3	M 220	M 230	M 240	M 250	M 270	M 280 Z	4	5	5– 5.5
M 201	1.5	M 221	M 231	M 241	M 251	M 271	M 281 Z	2	9	8– 10
M 202	1.2	M 222	M 232	M 242	M 252	M 272	M 282 Z	1.5	12	11– 13
M 203	1	M 223	M 233	M 243	M 253	M 273	M 283 Z	1.3	15	14– 16
M 204	0.6	M 224	M 234	M 244	M 254	M 274	M 284 Z	0.8	24	23– 26
M 205	0.5	M 225	M 235	M 245	M 255	M 275	M 285 Z	0.7	28	26– 30
M 209	0.3	M 229	M 239	M 249	M 259	M 279	M 289 Z	0.4	48	45– 55
M 206	0.2	M 226	M 236	M 246	M 256	M 276	M 286 Z	0.3	60	58– 68



**AC / DC Power Supplies**

▶ 40 W					
Input VAC, 1-Phase				Output 1 VDC	
115 ±20%	230 <sup>+15%</sup> <sub>-20%</sub>	115 ±20% / 230 <sup>+15%</sup> <sub>-20%</sub>	Max. Output Amps	Adj.	Range
M 260	M 280	M 290	4	5	5– 5.5
M 261	M 281	M 291	2	9	8– 10
M 262	M 282	M 292	1.5	12	11– 13
M 263	M 283	M 293	1.3	15	14– 16
M 264	M 284	M 294	0.8	24	23– 26
M 265	M 285	M 295	0.7	28	26– 30
M 269	M 289	M 299	0.4	48	45– 55
M 266	M 286	M 296	0.3	60	58– 68



**Additional DC outputs**

+ output 2		- output 3	
common return			
5 V	2 A max.	5 V	0.5 A max.
12 V			
15 V			

The modules require a minimum load of 10...20 % at the main output in order to generate sufficient voltage for the additional outputs.

**Assistance in table use:**

- 1 Select the column for input voltage range.
- 2 Select the row for the appropriate main output voltage.
- 3 The intersection of both results in the module required.
- 4 Additional outputs can be chosen, considering that the max. output power of 30/40 W will not be exceeded.

**For example:**

- 1 input voltage = 48 VDC
- 2 output voltage = 24 VDC @ 0.8 A
- 3 results in a M 234 module.
- 4 Additional outputs to be specified.

<sup>1)</sup> input supply from PFC also suitable

**Features**

- DC input: 10 - 380 V
- AC input: 115 / 230 V, 47 - 400 Hz
- Up to 4 DC outputs: 5 / ... / 60 V
- Power: 30 / ... / 700 W
- Continuous short circuit protection for main output
- Overvoltage protection for main output
- Industrial grade components
- Compact and robust design

**Specifications**

**Input**

Voltage range . . . . . see table, unit switches off at under- and overvoltage  
 No-load input power. . . . . 3 - 6 W  
 Switch-on time . . . . . 0.5 - 2 s  
 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

**Main output**

Line regulation ( $\pm 10\%$ ) . . . . . 0.1 %  
 Load regulation (10-90 %) . . . . . 0.2 %  
 Load transient (10-90-10 %) . . . . . 6 % typical  
 Response time to  $\pm 1\%$  . . . . . 2 - 3 ms  
 Turn-on rise time . . . . . Soft-start, 100 ms typical  
 Ripple. . . . .  $\leq 1\% + 30\text{ mV}_{\text{p-p}}$   
 Overload protection . . . . . current limited to 105 - 110 % of  $I_{\text{nom}}$   
 Overvoltage protection . . . . . OVP switches off module with automatic return to operation  
 Remote sense. . . . . compensation up to 10 % of  $U_{\text{nom}}$

**Additional outputs**

Line regulation ( $\pm 10\%$ ) . . . . . 0.1 %  
 Load regulation (10-90 %) . . . . . 2 % typical  
 Ripple. . . . . 0.5 % typical  
 Overload protection . . . . . current limited

**General**

Efficiency . . . . . 70 - 85 %  
 Operating temperature. . . . .  $-20$  to  $+75\text{ }^\circ\text{C}$   
 Load derating . . . . .  $2.5\%$  /  $^\circ\text{C}$  from  $+55\text{ }^\circ\text{C}$   
 Storage temperature . . . . .  $-40$  to  $+85\text{ }^\circ\text{C}$   
 Humidity . . . . . up to 95 % RH, non-condensing  
 Cooling . . . . . natural convection  
 Temperature coefficient . . . . .  $0.02\%$  /  $^\circ\text{C}$  typical  
 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  
 MTBF . . . . . approx. 100,000 h @  $40\text{ }^\circ\text{C}$   
 acc. to MIL - HDBK - 217 E (notice 1)  
 Connector for eurocassette - std. design . . . . . H 15 (details see page 103)  
 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

**Output**

- Parallel operation
- Redundant operation
- Inhibit (remote on / off)

**Signals**

via open collector or relay contacts  
 ■ Power ok (input)  
 ■ DC ok (outputs)

**Monitoring**

Input / output voltage or current via  
 - analog signal  
 - interface card RS232 or IEEE488 (external)

**Mechanics / environment:**

- 19" sub-rack for eurocassette, refer to page 93
- Wall mount
- Chassis mount
- DIN rail mount
- Increased mechanical strength
- Tropical protection
- Extended temperature range to  $-40\text{ }^\circ\text{C}$

