12 W and 36 W Low profile Modular DC Power Supplies for electrical cabinets

Type 78.12....2400
- Output 24 V DC, 12 W
- 17.5 mm (1 module) x 61 mm deep

Type 78.12....1200
- Output 12 V DC, 12 W
- 17.5 mm (1 module) x 61 mm deep

Type 78.36
- Output 24 V DC, 36 W
- Input fuse: Easily replaceable plus spare
- 70 mm (4-module) wide x 61 mm deep

- Low (< 0.4 W) stand-by power consumption
- Thermal protection: internal, with V_{out} shutdown - power OFF to reset
- Short circuit protection: Hiccup (auto-recovery) mode
- Overvoltage protection: Varistor
- Flyback topology
- Compliant with EN 60950-1 and EN 61204-3
- Parallel working for automatic redundancy - with OR diodes
- Dual Polarity and Series connection permissible
- 35 mm rail (EN 60715) mount

Screw terminal

For outline drawing see page 17

78.12....2400	78.12....1200	78.36
• 24 V DC, 12 W output	• 12 V DC, 12 W output	• 24 V DC, 36 W output

Replaceable fuse + spare

* (see diagrams P78)
** peak to peak, 100 Hz component, with 100 V AC input
*** 88…100 V AC with output current limited to 80% I_N
**** (see derating diagrams L78)

Output specification				
Output current (–20…+40 °C, 230 V AC input)	A	0.63	1.25	1.7
Rated current I_N (50 °C, full input operating range)	A	0.50	1	1.5
Rated voltage	V	24	12	24
Rated power	W	12	12	36
Output power (–20…+40 °C, 230 V AC input)	W	15	15	40
Peak current capability for 3 ms*	A	2	3	8
Output voltage adjust	V	—	—	—
Voltage variation (from no-load to full-load)		< 1%	< 1%	< 1%
Voltage ripple @ full load**	mV	< 200	< 200	< 200
Hold-up time @ full load: with 100 V AC input	ms	> 10	> 10	> 20
with 260 V AC input	ms	> 90	> 90	> 100
Input specification				
Nominal voltage (U_N) V AC (50/60 Hz)		110…240	110…240	110…240
V DC (not polarized)		220	220	220
Operating range V AC (50/60 Hz)		100…265***	100…265***	100…265***
V DC		140…370	140…370	140…370
Max power consumption	VA	28.2	32	57.5
(@ 100 V AC, 50 Hz)	W	14.2	17.2	43
Stand-by power consumption	W	< 0.4	< 0.4	< 0.4
Power factor		0.50	0.53	0.74
Max current consumption (@ 88 V AC)	A	0.25	0.30	0.6
Max. inrush current (peak @ 265 V) for 3 ms	A	10	10	12
Replaceable input fuse		—	—	1 A - T
Technical data				
Efficiency (@ 230 V AC)	%	85	87	86
MTTF	h	> 400 · 10^3	> 400 · 10^3	> 600 · 10^3
Start-up delay	s	< 1	< 1	< 1
Dielectric strength between input/output	V AC	2500 (class II)	2500 (class II)	3000 (class II)
Dielectric strength between input/PE	V AC	—	—	—
Ambient temperature range****	°C	–20…+60	–20…+60	–20…+70
Protection category		IP 20	IP 20	IP 20
Approvals (according to type)		CE EAC		

F

78 SERIES
Switch mode power supplies

60 W and 50 W High efficiency, low profile Modular DC Power Supplies for electrical cabinets

Type 78.60
- Output 24 V DC, 60 W

Type 78.50
- Output 12 V DC, 50 W

- High efficiency (up to 91%)
- Low (< 0.4 W) stand-by power consumption
- Thermal protection: internal, with V_{out} shutdown - power OFF to reset
- Short circuit protection: Hiccup (auto-recovery) mode
- Input fuse: Easily replaceable plus spare
- Overvoltage protection: Varistor
- Flyback topology
- ZVS (Zero-voltage-switching), quasi-resonant mode switching
- Compliant with EN 60950-1 and EN 61204-3
- Parallel working for automatic redundancy - with OR diodes
- Dual Polarity and Series connection permissible
- Small dimensions: 70 mm (4-modules) wide, 61 mm deep
- 35 mm rail (EN 60715) mount

Screw terminal

For outline drawing see page 17

78.60

- 24 V DC, 60 W output
- Output adjustable between 24-28 V
- ZVS technology

78.50

- 12 V DC, 50 W output
- Output adjustable between 12-15 V
- ZVS technology

Replaceable fuse + spare

* (see diagrams P78)
** peak to peak, 100 Hz component, with 100 V AC input
*** (see derating diagrams L78)

F

Output specification			
Output current (–20…+40 °C, 230 V AC input)	A	2.8	4.6
Rated current I_N (50 °C, full input operating range)	A	2.5	4.2
Rated voltage	V	24	12
Rated power	W	60	50
Output power (–20…+40 °C, 230 V AC input)	W	68	55
Peak current capability for 3 ms*	A	10	12
Output voltage adjust	V	24…28	12…15
Voltage variation (from no-load to full-load)		< 1%	< 1%
Voltage ripple @ full load**	mV	< 200	< 200
Hold-up time @ full load: with 100 V AC input	ms	> 20	> 30
with 260 V AC input	ms	> 130	> 150
Input specification			
Nominal voltage (U_N) V AC (50/60 Hz)		110…240	110…240
V DC (not polarized)		220	220
Operating range V AC (50/60 Hz)		88…265	88…265
V DC		140…370	140…370
Max power consumption	VA	90	89
(@ 100 V AC, 50 Hz)	W	67.5	58.3
Stand-by power consumption	W	< 0.4	< 0.4
Power factor		0.75	0.65
Max current consumption (@ 88 V AC)	A	0.9	0.85
Max. inrush current (peak @ 265 V) for 3 ms	A	30	30
Replaceable input fuse		1.6 A - T	1.6 A - T
Technical data			
Efficiency (@ 230 V AC)	%	91	90
MTTF	h	> 500 · 10^3	> 400 · 10^3
Start-up delay	s	< 1	< 1
Dielectric strength between input/output	V AC	3000 (class II)	3000 (class II)
Dielectric strength between input/PE	V AC	1500 (class I)	1500 (class I)
Ambient temperature range***	°C	–20…+70	–20…+70
Protection category		IP 20	IP 20
Approvals (according to type)		CE EAC	