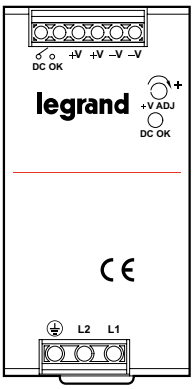
128, av. du Maréchal-de-Lattre-de-Tassigny - 87045 LIMOGES Cedex
Tel: +33 (0)5 55 06 87 87 Fax: +33 (0)5 55 06 88 88
www.legrand.com

Stabilised switching mode power supplies single phase 75 W - 120 W - 240 W - 480 W - 960 W For loads with high inrush currents

Catalogue number(s): 1 466 13/1 466 14/ 1 466 22/1 466 23/1 466 24/ 1 466 25/1 466 26/1 466 42/ 1 466 43/1 466 44



CONTENTS Page

1. USE

Switching mode DC power supplies (electronic) for which the output voltage is independent of the fluctuations of the input voltage, with an ability to respond to temporary overcurrents (up to 150% for 3 seconds) and a high degree of efficiency (up to 94%).

2. GENERAL CHARACTERISTICS

Operating frequency: 50/60 Hz
Output voltage present indicator
Output voltage adjustment potentiometer on front panel
Low harmonic pollution, integrated PFC filter (from 120 W model upwards)
Air cooled

Cat. No.	MTBF	
1 466 13	490,000 hours min.	MIL-HDBK-217F (25°C)
1 466 14	290,000 hours min.	
1 466 22	480,000 hours min.	
1 466 23	290,000 hours min.	
1 466 24	170,000 hours min.	
1 466 25	110,000 hours min.	
1 466 26	70,000 hours min.	
1 466 42	290,000 hours min.	
1 466 43	170,000 hours min.	
1 466 44	110,000 hours min.	

3. COMPLIANCE

Conform to standards UL 508, IEC EN 60950-1 and IEC EN 61204-3.
Conform to the Low Voltage, EMC and RoHS directives.
UL-approved in USA and Canada.

4. RANGES/ELECTRICAL CHARACTERISTICS

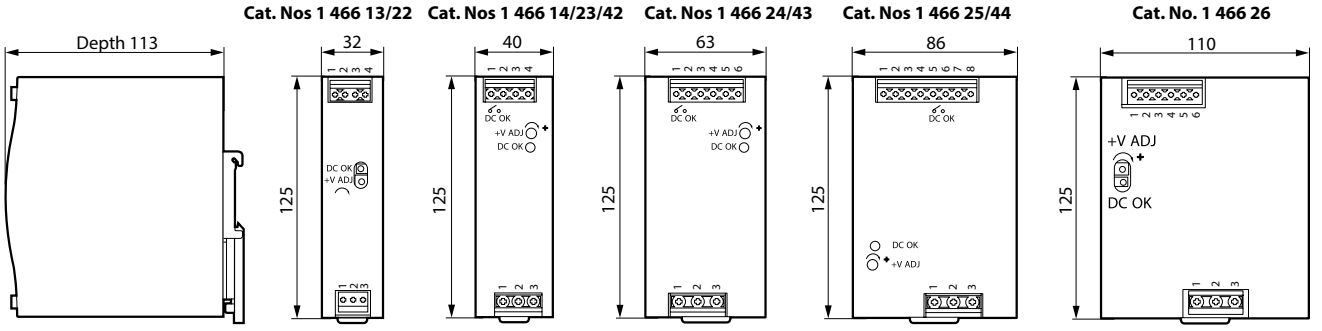
DC output voltage = 12 V, 24 V or 48 V
Aluminium casing
Insulation voltage:
- Input/output: 3000 V min.
- Input/earth: 1500 V min.
- Output/earth: 500 V
- Output/feedback relay contact: 500 V (except 1 466 13 and 1 466 22 which do not have a DC output relay)

Cat. No.	Output					Input		
	Voltage (V)		Nominal current (A)	Nominal power (Pn in W)	Peak power (3 s) (W)	Voltage Min. - Max.		Current consumption (A)
	Nominal	Adjustment range				(VAC)	(VDC)	
1 466 13	12	12 - 24	6.3	75	112.5	88 - 264	124 - 370	1.4/0.85 (1)
1 466 14	12	12 - 24	10	120	180	88 - 264	124 - 370	1.4/0.7 (1)
1 466 22	24	24 - 28	3.2	75	112.5	88 - 264	124 - 370	1.4/0.85 (1)
1 466 23	24	24 - 28	5	120	180	88 - 264	124 - 370	1.4/0.7 (1)
1 466 24	24	24 - 28	10	240	360	88 - 264	124 - 370	2.6/1.3 (1)
1 466 25	24	24 - 28	20	480	720	88 - 264	124 - 370	5/2.5 (1)
1 466 26	24	24 - 28	40	960	1248	180 - 264	254 - 370	6 (230 VAC)
1 466 42	48	48 - 55	2.5	120	180	88 - 264	124 - 370	1.4/0.7 (1)
1 466 43	48	48 - 55	5	240	360	88 - 264	124 - 370	2.6/1.3 (1)
1 466 44	48	48 - 55	10	480	720	88 - 264	124 - 370	5/2.5 (1)

Cat. No.	Efficiency (%)	Starting time at Pn (s)	Holding time at Pn (ms)	Operating temperatures without derating (°C)	Internal consumption (W)
1 466 13	88.5	3.06/1.56 (1)	20/80 (1)	-25 to +55	9.7
1 466 14	89	3.06/1.56 (1)	20/20 (1)	-25 to +55	14.8
1 466 22	89	3.06/1.56 (1)	20/80 (1)	-25 to +60	9.3
1 466 23	91	3.06/1.56 (1)	20/20 (1)	-25 to +60	11.9
1 466 24	94	3.06/1.56 (1)	20/20 (1)	-25 to +60	15.3
1 466 25	94	3.15/1.65 (1)	14/14 (1)	-25 to +60	30.6
1 466 26	94	1.1 (230 VAC)	14 (230 VAC)	-30 to +50	61.3
1 466 42	90.5	3.06/1.56 (1)	20/20 (1)	-25 to +60	12.6
1 466 43	94	3.06/1.56 (1)	20/20 (1)	-25 to +60	15.3
1 466 44	94	3.15/1.65 (1)	14/14 (1)	-25 to +60	30.6

(1) 115 VAC/230 VAC

5. DIMENSIONS AND WEIGHTS



Cat. No.	Weight (Kg)
1 466 13	0.51
1 466 14	0.67
1 466 22	0.51
1 466 23	0.67
1 466 24	1.03

Cat. No.	Weight (Kg)
1 466 25	1.6
1 466 26	2.47
1 466 42	0.67
1 466 43	1.03
1 466 44	1.6

6. PROTECTION

Integrated protection:

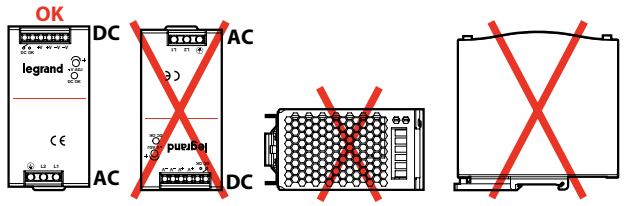
1 466 13 **1 466 22**	Overload	**Between 110-150%** of the nominal power: above 3s, disconnection of the power supply **Between 150-170%**, current limitation and automatic recovery in 3 seconds; above 3s, disconnection of the power supply
	Overvoltage	Disconnection of the power supply
	Overheating	Disconnection of the power supply, restore the supply to restart after reduction of the temperature
1 466 14 **1 466 23** **1 466 42**	Overload	**Between 110-150%** of the nominal power: above 3s, disconnection of the power supply **Over 150%**, current limitation and automatic recovery in 3 seconds; above 3s, disconnection of the power supply
	Overvoltage	Disconnection of the power supply
	Overheating	Automatic reset after reduction of the temperature
1 466 24 **1 466 43**	Overload	**Between 110-150%** of the nominal power: above 3s, disconnection of the power supply with automatic recovery **Over 150%**, current limitation and automatic recovery in 2 seconds; risk of disconnection of the power supply above 2 s
	Overvoltage	Disconnection of the power supply with automatic recovery
	Overheating	Automatic reset after reduction of the temperature
1 466 25 **1 466 44**	Overload	**Between 110-150%** of the nominal power: above 3s, disconnection of the power supply with automatic recovery **Over 150%**, current limitation and automatic recovery in 2 seconds; risk of disconnection of the power supply above 2 s
	Overvoltage	Disconnection of the power supply with automatic recovery or restoration of the supply to restart
	Overheating	Automatic reset after reduction of the temperature
1 466 26	Overload	**Between 105-130%** of the nominal power: above 3s, disconnection of the power supply with automatic recovery after 30 seconds if fault eliminated **Between 130-150%**, current limitation for 3 seconds, then disconnection of the power supply
	Overvoltage	Disconnection of the power supply with automatic recovery or restoration of the supply to restart
	Overheating	Automatic reset after reduction of the temperature

Protection devices to be used at the inputs of the power supplies:

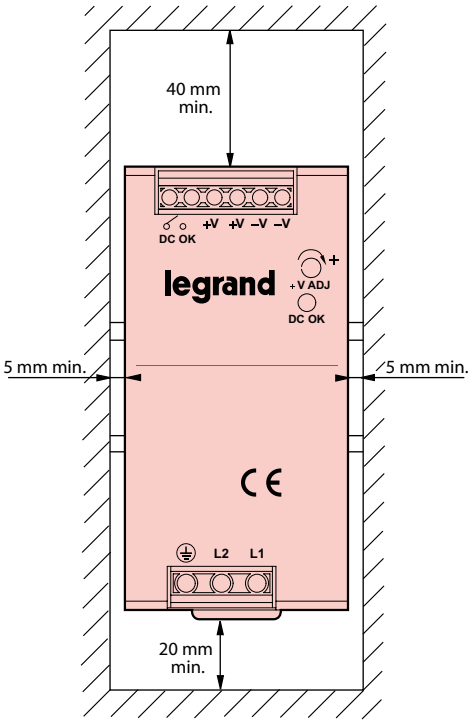
	Cat. No.	Power	Fuse	Circuit breaker	
				Rating	Cat. No.
SINGLE PHASE	**1 466 13**	75 W	T3,15A H (250 V)	4 A C	4 076 95
	1 466 22				
	1 466 14	120 W	T4A H (250 V)		
	1 466 23				
	1 466 42				
	1 466 24	240 W	T5A H (250 V)	6 A C	4 076 96
	1 466 43				
	1 466 25	480 W	T8A H (250 V)	8 A C	4 076 97
	1 466 44				
	1 466 26	960 W	F10A H (500 V)	10 A C	4 076 98

7. POSITIONING

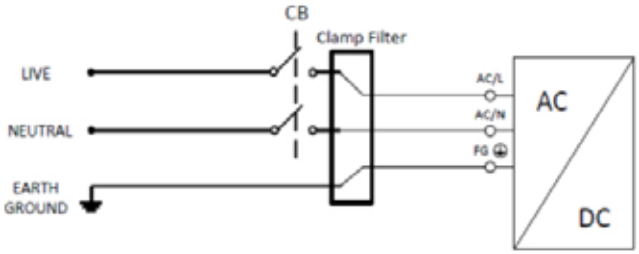
Suitable mounting: module in vertical position, input terminals at the bottom and output terminals at the top.



Comply with the distances defined below to ensure correct ventilation.



Specific to 1 466 26:
If compliance with EN 61204-3 class B (not in an industrial environment) is required, fitting a ferrite core filter as close as possible to the AC input on the power supply may meet the requirements concerning wave emissions.



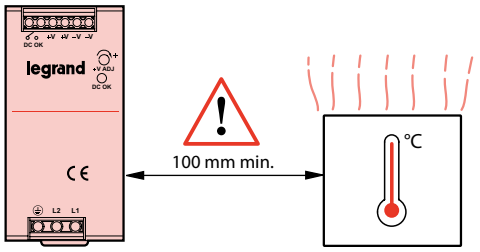
Examples of compatible filter models:
TDK ZCAT2235-1030A, TDK ZCAT12V-BK and
KING CORE KCF-130-B

Environmental conditions:

1 466 13/14	55°C max.
1 466 22/23/24/25/42/43/44	60°C max.
1 466 26	50°C max.

IEC 60664-1 pollution degree	**2**

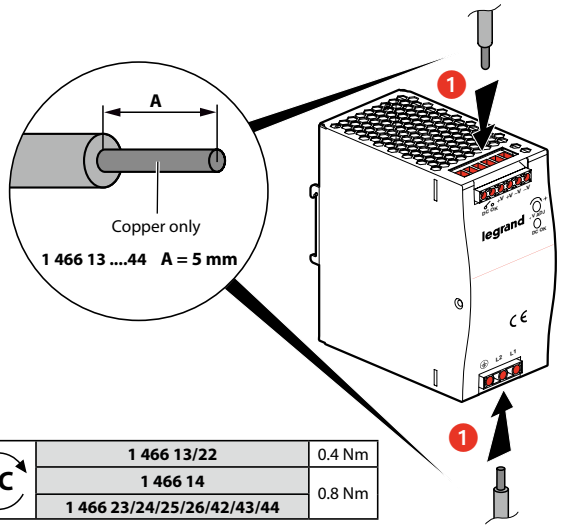
Keep at least 100 mm away from any heat source



8. CONNECTION

4 mm, 4.5 mm or 5 mm flat screwdriver, depending on Cat. No.

Cat. No.	Capacity of flexible **copper** conductor	
	Output (mm²)	Input (mm²)
1 466 13	2.5	2.5
1 466 14	4	4
1 466 22	2.5	2.5
1 466 23	4	4
1 466 24	4	4
1 466 25	4	4
1 466 26	4	4
1 466 42	4	4
1 466 43	4	4
1 466 44	4	4



2

DC	**1 466 13/22**	0.4 Nm
	1 466 14	0.8 Nm
	1 466 23/24/25/26/42/43/44	

2

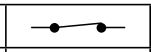
AC	**1 466 13/22**	0.4 Nm
	1 466 24/25/43/44	0.5 Nm
	1 466 14/23/42	0.63 Nm
	1 466 26	1 Nm

Use cables that can withstand at least 80°C (UL 1007) for UL 508 compliance of the installation

9. OPERATION

DC OK output relay

(Except 1 466 13 and 1 466 22 which do not have a DC output relay)

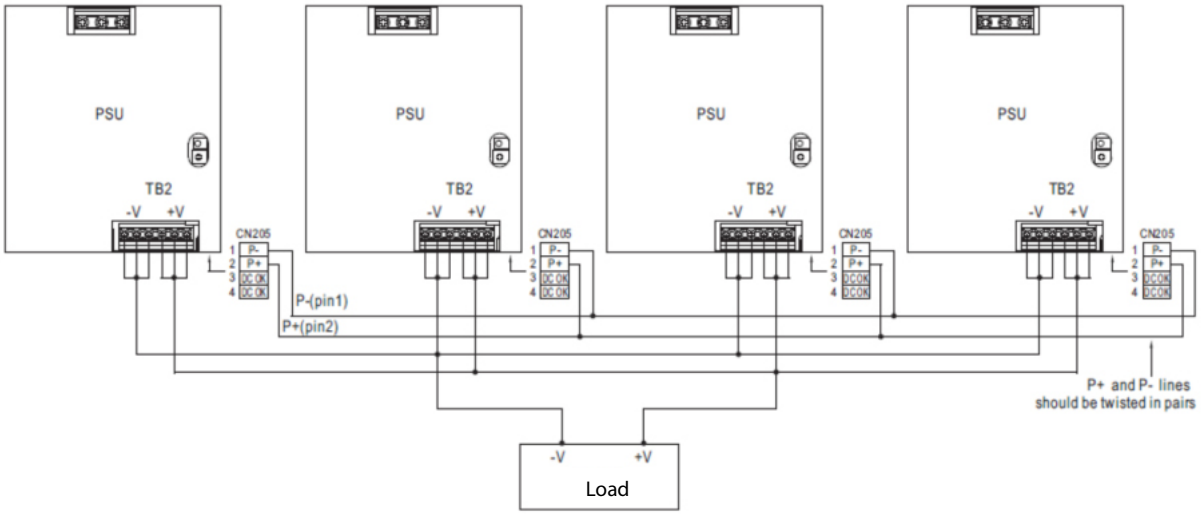
DC OK		Max. 60 VDC - 0.3 A/30 VDC - 1 A/30 VAC - 0.5 A Resistive load
DC OK		

1 466 26: This power supply can be connected in parallel with the P+ and P– sockets
Maximum four 1 466 26 power supplies in parallel

The difference in the output voltages of the power supplies connected in parallel must not exceed 0.2 V

The P+ and P– conductors must be twisted in pairs

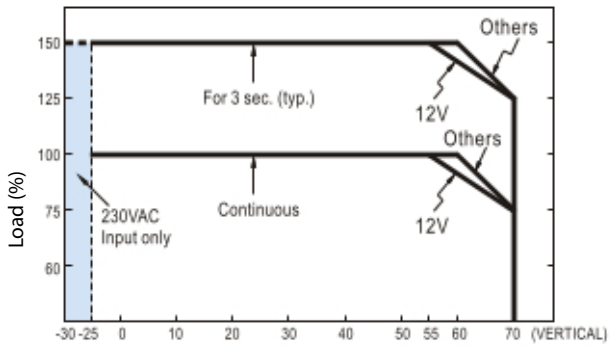
The total output current must not exceed the following value:
Nominal current of each power supply x number of power supplies x 0.9



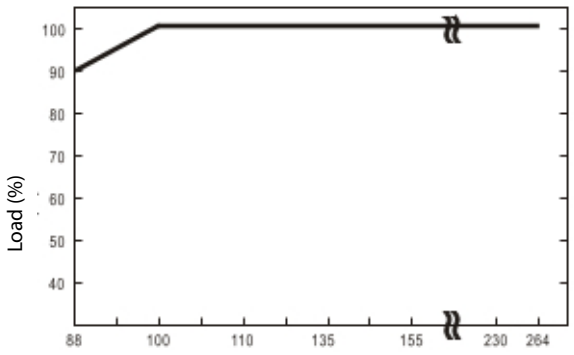
During parallel operation, the total operating current must be greater than 5% of the nominal operating current (> 5% of the nominal current of each power supply x number of power supplies).
If this total current is less than 5% of the nominal operating current, it is possible that only one power supply will operate, while the other power supplies switch to standby (their LEDs and relays do not operate).

10. DERATING CURVES

1 466 13 - 1 466 22

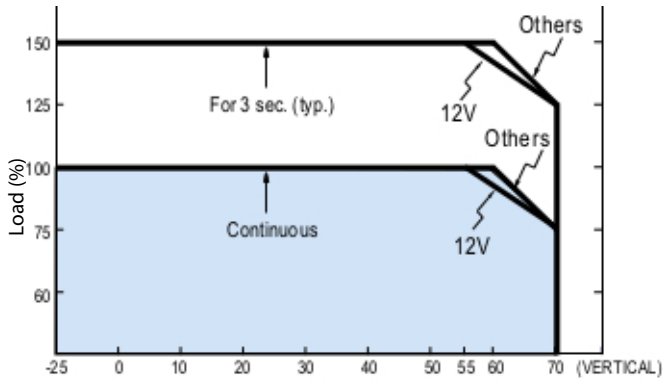


Ambient temperature (°C)

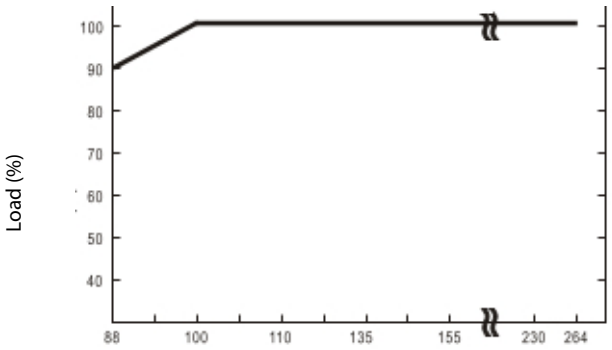


Input voltage (VAC) 60 Hz

1 466 14 - 1 466 23 - 1 466 42

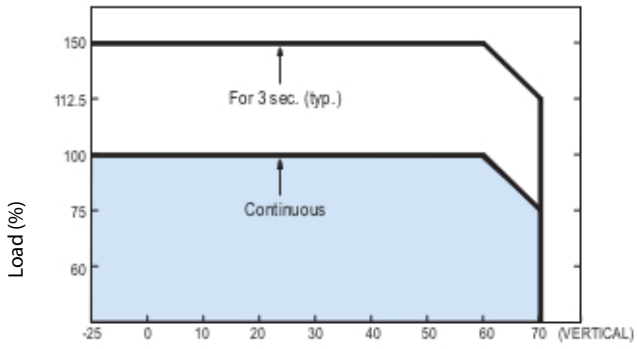


Ambient temperature (°C)

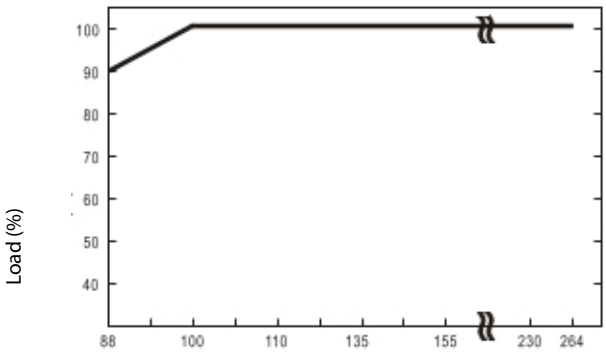


Input voltage (VAC) 60 Hz

1 466 24 - 1 466 43

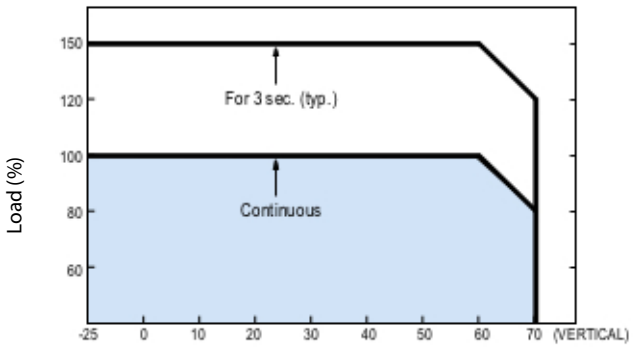


Ambient temperature (°C)

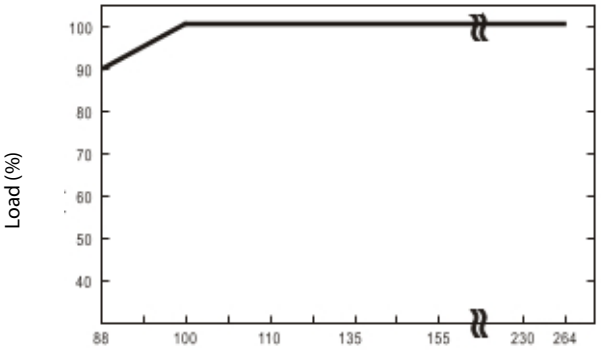


Input voltage (VAC) 60 Hz

1 466 25 - 1 466 44

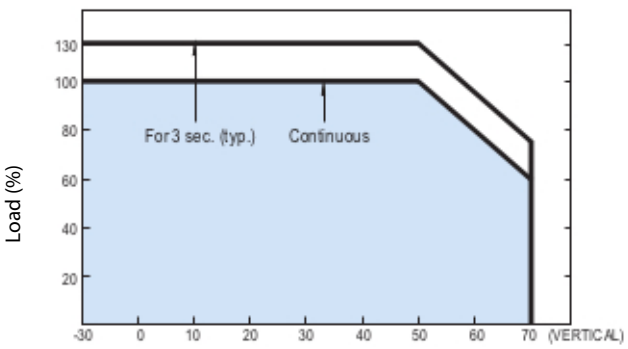


Ambient temperature (°C)

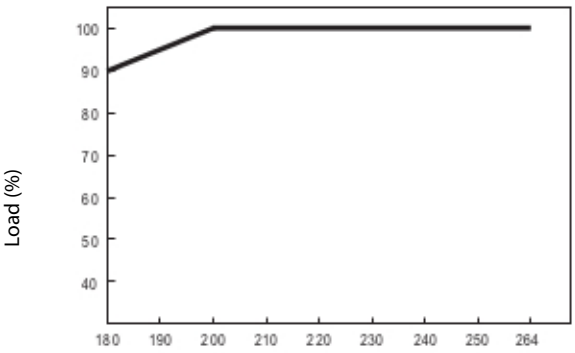


Input voltage (VAC) 60 Hz

1 466 26



Ambient temperature (°C)



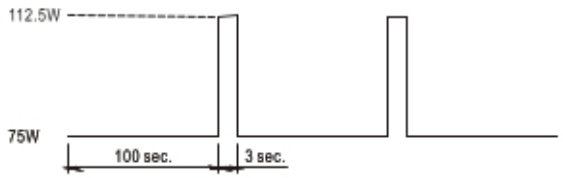
Input voltage (VAC) 60 Hz

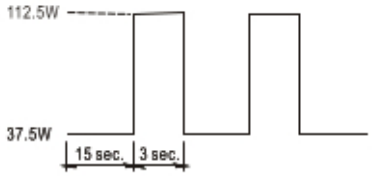
11. PERMISSIBLE TEMPORARY OVERCURRENTS

Power supply at 100% of the nominal power

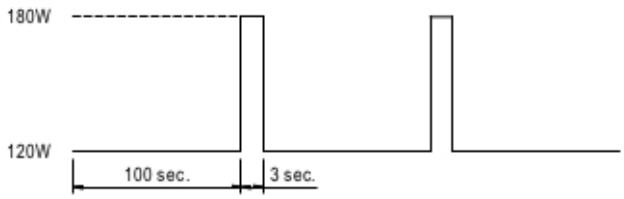
Power supply at 50% of the nominal power

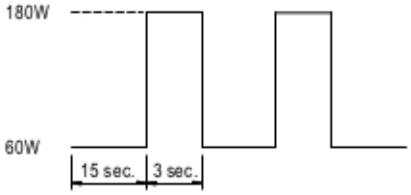
1 466 13 - 1 466 22



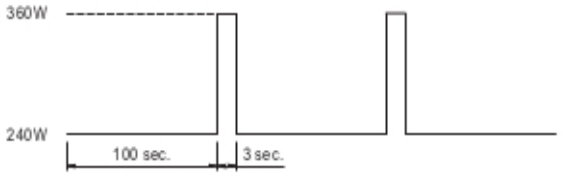


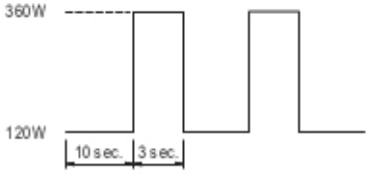
1 466 14 - 1 466 23 - 1 466 42



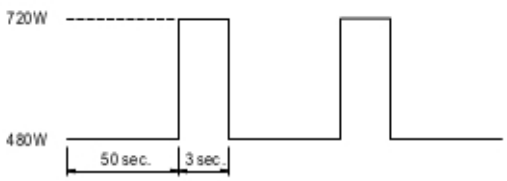


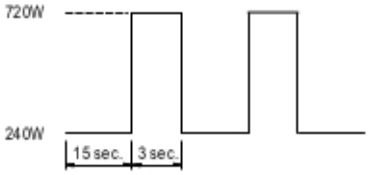
1 466 24 - 1 466 43





1 466 25 - 1 466 44





1 466 26