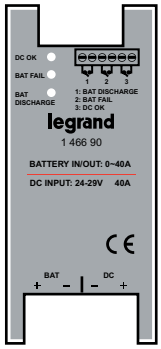
128, av. du Maréchal-de-Lattre-de-Tassigny - 87045 LIMOGES Cedex
Tel: +33(0)5 55 06 87 87 Fax: +33(0)5 55 06 88 88
www.legrand.com

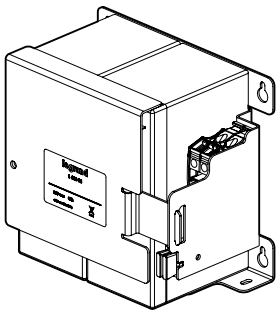
Backup function

Cat. No(s): 1 466 90/1 466 93

1 466 90



1 466 93



CONTENTS **Page**

1. USE

When used together, the battery pack and the backup module ensure continuity of service for a 24 V ⎓ system in the event of a power supply failure. The backup function consists of:
- Battery pack - *Cat. No. 1 466 93*
- Backup module – *Cat. No. 1 466 90*
- 24 V ⎓ 40 A max. switching mode power supply

2. GENERAL CHARACTERISTICS

1 466 93
The battery pack consists of two 12 V lead-acid type batteries connected in series. The batteries are sealed, rechargeable and specially designed for high-drain applications. They are maintenance-free and must not be opened.
Air cooling
Service life at 20°C: 3 to 5 years

1 466 90
The backup module is equipped with relay contacts and LED status indicators:
- normal operation
- battery failed
- battery depleted

Air cooling
MTBF: 160,000 hours (MIL-HDBK-217F (25°C))

3. ELECTRICAL CHARACTERISTICS

1 466 93
Voltage: 24 V
Capacity: 9 Ah
The pack is supplied complete with two 25 Amp ATO fuses which should be installed during commissioning (mounted in parallel).

1 466 90
Input voltage: 24 to 29 V
Maximum rating: 40 A
Relay contact voltage: 30 V max.
Relay contact current: 1 A max.

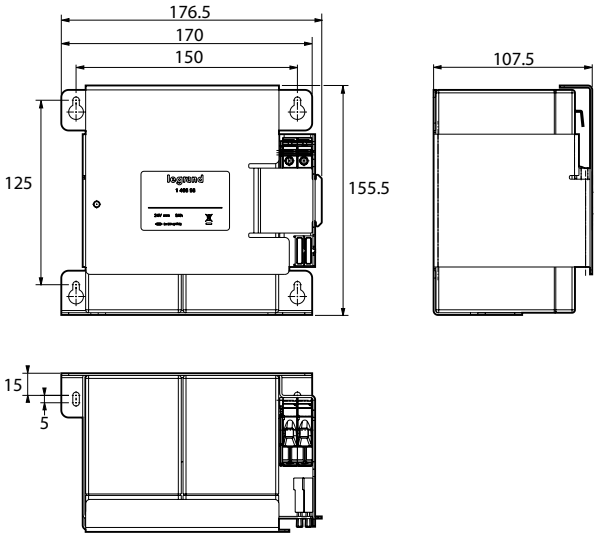
The table below gives the dwell time according to the rating to be backed up, with a fully-charged battery.

Rating to be backed up	Dwell time																					
	Seconds																		Hours			
(A)	1	5	10	30	2	3	4	5	6	7	8	9	10	15	20	30	40	50	1	2	3	5
1																						
2																					(1)	
3																				(1)		
4																				(1)		
5																			(1)			
6																			(1)			
7																		(1)	(1)			
8																(1)	(1)					
9																(1)	(1)					
10															(1)	(1)						
15														(1)	(1)							
20										(1)	(1)	(1)	(1)									
25								(1)	(1)	(1)	(1)											
30						(1)	(1)															
35						(1)	(1)															
40			(1)																			

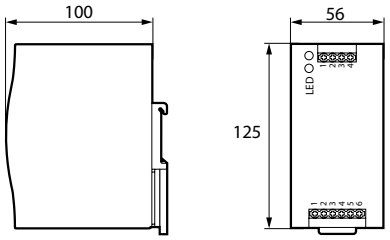
(1) : use of 2 battery packs Cat. No. 1 466 93 in parallel

4. WEIGHT AND DIMENSIONS

1 466 93
Weight: 6.1 kg

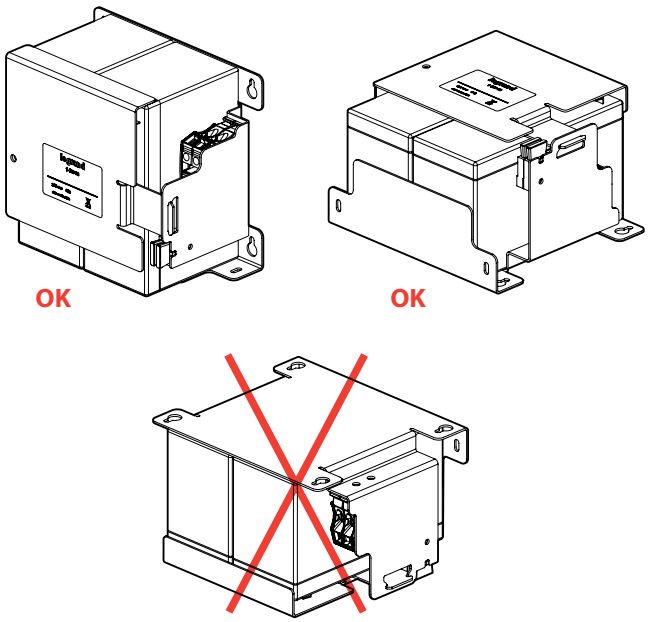


1 466 90
Weight: 0.55 kg



5. POSITIONING

1 466 93



On a panel or at the bottom of the enclosure

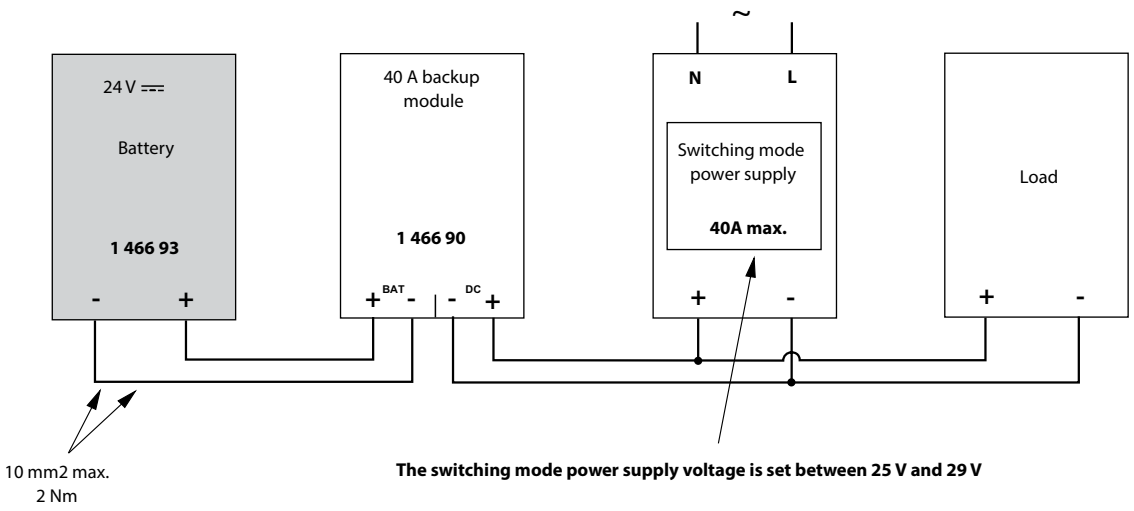
Operating range:
Discharging: -15°C to 50°C
Charging: -15°C to 40°C
Storage: -15°C to 40°C

Avoid any flames or sparks in the vicinity of the batteries

1 466 90

Max. ambient operating temperature: 70°C
Max. ambient operating humidity: 90%
Max. ambient storage temperature: 85°C
Max. ambient storage humidity: 95%

6. OPERATION



The backup module 1 466 90 is equipped with relay contacts and LED feedback indicators:

- Normal operation: the U_{DC} voltage is between 21 V and 29 V, the DC OK LED is lit up green and contact 3 is closed.

- Battery failed: only works if the battery is connected. If the U_{BAT} voltage drops to 21.9 V or less, the LED BAT FAIL lights up red and contact 2 is closed.

- Battery depleted: indicates battery operation. The BAT DISCHARGE LED lights up yellow and contact 1 is closed.

- If the U_{BAT} voltage drops to less than 21 V, all the indicators turn off and all the power is cut.

If the switching mode power supply voltage is set below 25 V, the system will work correctly but the yellow LED may be on permanently.

7. REPLACEMENT AND STORAGE INSTRUCTIONS

When changing the batteries, it is essential to replace both batteries simultaneously and to replace them with 2 new batteries from the same production load (same batch number).

When stored at 20°C, the batteries lose approximately 3% of their capacity per month. In these conditions, we recommend that the battery pack is commissioned within 4 months of manufacture (check the YYWWW traceability). Thereafter, the battery needs recharging: either by commissioning, or by recharging with a suitable charger.

If the ambient temperature is higher, the rate of discharge increases.