



A division of Hubbell Limited

PO Box 5571, Glasgow G52 9AH, Scotland

Tel: +44 (0) 141 810 9644
Fax: +44 (0) 141 810 9642

Email: info@victor-lighting.com
Web: www.victor-lighting.com

Victor Technical Bulletin 10/03

Dated: 15.02.10

Battery Control & Management – Victor Excalibur VL24E Fluorescent Luminaire

A “Battery Control Management” feature can be ordered as an option on the Excalibur emergency product by adding the suffix “/BCM” to the catalogue reference.

This feature automatically controls the initial commissioning, charging and discharging of the battery.

The features of the system are as follows:

Automatic Conditioning - The battery is automatically cycled after initial commissioning so that after 51 hours of continuous mains power it is charged, discharged and recharged.

Lamp test - First lamp test takes place at a random point within 1-168 hours after connecting unit to mains. After that the lamp test takes place every 168 hours (7 days).

Lamp is considered faulty if the lamp doesn't light up within 3 seconds after starting of the lamp test.

Every 3 seconds or longer mains supply failure is considered as a lamp test, but the scheduled time of lamp test is not affected.

Battery test - First battery test takes place at a random point within 72-2400 hours after connecting unit to mains. After that the battery test takes place every 2400 hours (100 days).

Battery is considered faulty if the deep discharge protection operates before the 3 hours operation has completed.

Battery test is also a lamp test. If the lamp doesn't light up within 3 seconds after starting of the battery test, the battery test is cancelled and the lamp is considered as faulty.

If there has been a mains supply failure 24 hours or less prior to scheduled battery test, the test is delayed to take place 24 hours after the returning of the mains supply. This ensures that the battery is fully charged prior to test.

Every mains supply failure is considered also as a battery test if there has been an uninterrupted 24 hours charging of the battery prior the failure. If battery doesn't last for 3 hours, it is considered faulty. This does not affect the timing of the scheduled battery test though.

Emergency Blackstart – The BCM version of the emergency Excalibur also has connections to allow “Blackstart”. This function allows the emergency circuit to be switched off in the event of a power failure. The most notable occasion where this is required is on un-manned platforms, where there is a need to stop the emergency luminaire going into emergency mode and subsequently running down the battery.

There is an indication added for the blackstart circuit, when activated the red LED flashes each 10 seconds. When emergency blackstart is required you must order battery control management.

The electrical wiring will consist of two connections from the control gear out to the terminal block. When left with no connection to these terminals the luminaire will operate normally, ie, will go into emergency mode on power failure.

To operate the Blackstart facility a supply must be connected to these terminals, which is controlled by an external single pole switch.

Closed circuit is normal, open circuit prevents automatic operation of the emergency function.

Up to ten luminaires can be connected in parallel to one switch, using 500m of cable.

Blackstart is not possible with a completely discharged battery and no mains being present. The emergency function can be switched on/off whilst in emergency operation, using the switch. Return to emergency operation is instant. The change to lamp off when put into blackstart mode may be delayed for up to 60 seconds.



Registered office: Mitre House, 160 Aldersgate Street, London, EC1A 4DD,
Registered No. 669157



FM 09410

The BCM and Blackstart version of the emergency Excalibur is supplied with two indicating LED lamps, Red & Green, to show the status of charging and testing.
The sequencing of these are as follows:

LED	STATUS
GREEN LED ON RED LED OFF	SYSTEM HEALTHY: THE BATTERY WILL BE CHARGED WITH ENOUGH CAPACITY TO MEET EMERGENCY DURATION TIMES.
GREEN & RED LED BLINKING	THE UNIT IS PERFORMING DURATION AND EMERGENCY OPERATING TESTS
GREEN LED OFF RED LED BLINKING	LAMP FAULT.
GREEN LED OFF RED LED ON	BATTERY FAULT
GREEN LED OFF RED LED FLASHING (10SEC)	BLACKSTART ACTIVE, MAINS POWER FAILURE AWAITING EMERGENCY BLACKSTART SWITCH TO BE TURNED ON.
GREEN & RED LED OFF	MAINS OFF: UNIT IS IN EMERGENCY MODE MAINS ON: BATTERY IS NOT CHARGED

Further information on the Excalibur emergency version is available in the tech support section of our website: www.victor-lighting.com

Ian MacLeod - Technical Manager