

Testing precautions

Once the fitting is permanently connected to the mains supply, a commissioning discharge test as required in AS/NZS 2293.2 must be carried out. You will need to allow 24 hours for the battery to fully charge prior to conducting this test, presently (at the time of writing), the standard requires that fittings operate in emergency mode for a period not less than 2 hours for their commissioning test and for not less than 90 minutes thereafter (it is required that 6 monthly discharge tests be carried out). You will need to keep the records for the commissioning test and enter them into the building emergency services logbook or via other recording methods as allowed by AS/NZS 2293.2.

Construction sites

Continuously switching off the mains power supply that is connected to emergency light fittings during the construction phase of an installation will cause these fittings to discharge and charge their batteries many times over a short period; this can shorten life of the battery. ABB does not recommend such practices and may not honour the warranty on batteries when they are subjected to such harsh operating conditions. Emergency light fittings are designed to be discharge tested once every 6 months as per AS/NZS 2293.2, subjecting the product to repeated discharge or charge cycles is regarded as an abuse of the fittings. Being a DALI Spitfire 'rest' feature is very useful and can be used via DALI controller during the construction phase of installation.

Troubleshooting guide

If you have installed and connected the fitting as per the instructions listed earlier and it does not function correctly, use the following table as a guide to fixing the problem. Look up the type of fault in the left column and check the possible causes from the right column.

If the fitting still does not work after checking these possible causes, contact ABB customer service in Australia on 1800 60 20 20.

No.	Fault	Possible causes
1	LED light source and indicating LED not lit	AC supply not connected; or AC supply turned off; or Test switch damaged
2	LED light source is lit but indicating LED not lit	Test switch damaged; or Battery not connected or faulty
3	LED light source does not switch to emergency mode when the test button is pressed	Test switch damaged; or Battery not connected or faulty
4	LED light source works momentarily on emergency when the test button is pressed	Battery not yet charged (allow up to 24 hours)

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INSTALLATION MANUAL

Stanilite® Spitfire® LED recessed DALI emergency



Thank you for choosing ABB product

Please read this document thoroughly before commencing installation and retain for future reference. Contact ABB customer service in Australia on 1800 60 20 20 if you need any assistance. The installation instructions were correct at the time of print. To reflect changes in technology and Australian standards; ABB reserves the right to amend the instructions without notice. Updated document can be found on the Stanilite website.

Safety warning

In Australia and New Zealand, only licensed electricians are permitted by law to work with 240 volt electrical installations. Do not attempt to install or connect this product unless you are a licensed electrician. Turn off and isolate the electrical supply before connecting this fitting to the building wires. Do not touch the terminals of the terminal block when the light fitting is energised. The only user-serviceable parts are the lamp head assembly and battery pack. LED light source is not user-serviceable. Do not attempt to service other parts of the fitting as this will void the warranty. As the installer, it is your responsibility to ensure compliance with all relevant building and safety codes, (ie: AS/NZS 3000, AS/NZS 2293). Refer to the applicable standards for data and mains

This document covers	What's inside the box
Safety warning	Lamp head assembly
Installation instructions	Battery and control pack
Removal instructions	Accessory kit
Testing precautions	Installation manual
Troubleshooting guide	Warranty information

cabling installation procedures and requirements.

As per AS 60598.2.2:2016 the recessed luminaire classification is CA90.

Note: Not suitable for use with loose-fill insulation.

The control pack and battery pack must be installed above the insulation. No fire rated box is required for the product.

Important to note:

- This product is designed for indoor use only.

DALI (digital addressable lighting interface)

DALI is widely acknowledged as being an open protocol as defined under IEC 62386 and is designed only for communication in lighting systems.

ABB exit and emergency luminaire with DALI functionality comply with DALI standard IEC 62386.

The DALI Spitfire wiring consists of additional 2 control wires apart from the active and neutral wires (4 cores) in a power cord supplied with product.

Note: No mains or mains carrying cables are to be connected to DALI terminals or 2 control wires (white and black).

Installation instructions

- Note: The circuit supplying mains power to the fitting must not be energised until installation of the fitting is completed.**
- Mark and cut-out a hole in the ceiling to suit either small or large Spitfire head. The cut-out size for the standard lamp head is 50mm. The cut-out size for a small 85mm adaptor plate is 70mm and for the large 141mm adaptor plate is 130mm. **Note: The adaptor plates are mainly used for existing Spitfire replacement or where ceiling access is limited.**
- Snap the lamp head to the appropriate adaptor plate (if used).
- Connect the battery to the control pack, the battery pack can be attached to the control pack using cable tie supplied.
- Connect the mains wiring brown to (active), blue to (neutral), white to (DALI +) and black to (DALI -), see figure 1.
- Feed the battery and control pack assembly through the ceiling cut-out and secure them to a suitable location within the ceiling space. If access to the ceiling cavity is not available, connect the mains power cord before recessing the battery and control pack in the ceiling cut-out. Secure the battery and control pack to a suitable location within the ceiling space.
- Check operation of the fitting to ensure that the installation was successful. Once powered up, as a non-maintained fitting the present lamp stays off. Allow a few minutes to give the battery a small charge, then press the test button located at the Spitfire lamp head. Hold the test button in for a few seconds and observe the operation of the lamp switching from mains to the emergency mode. If the lamp on emergency mode works momentarily, that is okay. Try again in a few more minutes in case battery is completely discharge, it may take a little time to charge up enough to operate even momentarily. After this time, press the test button again and if the lamp does not work at all, check the supply, the connections and follow the instruction given in the troubleshooting guide at the end of this document. Operation modes of the LED status as shown below. In the pattern descriptor '_' means off while 'R', 'G' and 'Y' mean red, green and yellow, respectively. **Note: LED patterns are displayed only if mains is present. If there is a mains failure, the LEDs are turned off.**

Priority	Pattern	Indicated condition
9	GG_	Damaged configuration, the fitting is not operational
8	GG_R_	Hardware fault, the fitting is not operational
7	G	The button is pressed
6	_	Faulty charger or battery, cannot go to emergency mode
5	RR_	Self-test is in progress
4	GG_R_R_	STM32 interface card is missing
3	GG_R_R_R_R_	The DALI bus is not powered
2	YY_Y_Y_Y_Y_	Identify command was received from DALI
1	YY_	Last self test failed
1	YYYY_	Last self test succeeded
0	R	Fitting is healthy, battery is charging

Important: 24 hours is required to allow the fitting battery to reach full capacity, ie: prior to a discharge test. As the installer, it is your responsibility to conduct the initial discharge testing of the installed fitting. Refer to AS/NZS 2293.

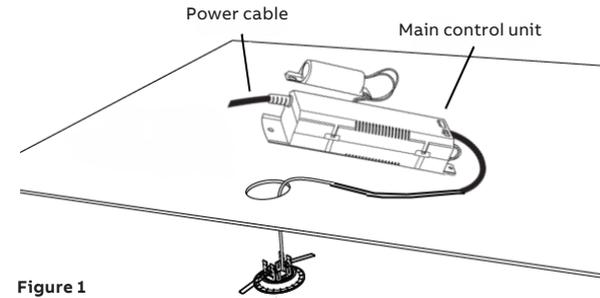


Figure 1

DALI emergency features

DALI emergency comprises most of the standard features of DALI in addition to features and commands specific to emergency products. Some of these are outlined below:

Rest

- To ensure maximum battery life (especially through the construction stages), a smart control system can use the rest command to extinguish the emergency lamp (when power has been lost) and limits the number of continual charge and discharge cycles present in the commissioning or installation phase. This reduces the stress on the battery and ensures the longest possible life.

Function test

- A test designed to quickly check the fitting's functionality. During this short test the fitting is able to check that the battery, lamp and circuitry are all working correctly. The result of this test is stored and can be returned to the control system when required.

Duration test

- The most important test for an emergency device is the duration test. This test allows the device to change to emergency mode and discharges the battery.

- You will need to allow 24 hours for the battery to fully charge prior to conducting this test, presently (at the time of writing), the standard requires that fittings operate in emergency mode for a period not less than 2 hours for their commissioning test and for not less than 90 minutes thereafter (it is required that 6 monthly discharge tests be carried out). The result of the test is stored and can be returned to the control system when required.

Inhibit

- Another measure that can be initiated by the control system is the inhibit feature which can stop the emergency DALI device from going into emergency mode.

Prolong time

- The prolong time function of the emergency DALI protocol gives installers the ability to prolong the emergency light's emergency state. This time can be set from 0 to 60 minutes and can ensure that a safe lighting level is present after a short power failure.

Removal instructions

- Before removing the installed fitting, de-energise and lock off the supply circuit.
- Disconnect the mains and DALI wiring connections.
- Disconnect the battery and lamp head plug.