STATIC DAYLIGHT PAR 575 VF

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THIS INFORMATION IS DESIGNED TO PROVIDE YOU WITH THE INFORMATION YOU NEED IMMEDIATELY UPON DELIVERY OF YOUR NEW LUMINAIRE.

Before operating your new luminaire, please download the COMPLETE OPERATION MANUAL from Staticlightcompany.com and also study the enclosed ETC “source 4 User Manual”.
For further assistance, contact Static Light Company at info@staticlightcompany.com

The Static Daylight Par is a new concept luminaire. Please read this information carefully to ensure that you are fully conversant with its operation.

THE BOX SHOULD CONTAIN THE FOLLOWING ITEMS:

1 x Static Daylight PAR 575 fixture
1 x Lamp, MSR575/2 or equivalent type (fitted to fixture)
1 x Set of four lenses, clear, stipple, 8-row and 12-row (in box).
1 x Four leaf rotatable barndoor.
1 x Safety wire (wire) for barndoor.
1 x Safety mesh (fitted to fixture).
1 x Mains Plug
1 x Filter holder (fitted to fixture).

Note - the contents may be different if the fixture was subject to a special order.

SAFETY INFORMATION: This fixture is not intended for domestic use. It is very important to read all the safety information and instructions provided in this manual and any accompanying documentation before installing and operating this fixture. Please follow all cautions and warnings during the installation and use of this fixture.

STATIC DAYLIGHT PAR 575 VF

GENERAL INFORMATION REGARDING PROTECTION AGAINST ELECTRICAL SHOCK, FIRE EXPOSURE TO EXCESSIVE UV-RADIATION AND INJURY TO PERSONS CAN BE FOUND BELOW.

WARNING – protection against fire

- ⇒ The Static Daylight PAR fixtures have been designed for use only with specific lamps. Note lamp type before replacing lamps. The installation and use of other lamps may be hazardous.
- ⇒ The fixtures may be mounted on any type of non-flammable surface and in any position as long as the mounting instructions are followed.
- ⇒ In case of servicing, replace parts and subassemblies with the same type only.
- ⇒ Observe the minimum distances to flammable objects, surfaces and illuminated objects.
- ⇒ Maximum ambient (operating) temperature ta = +35°C
- ⇒ Maximum surface temperature tmax = +170°C

Warning – protection against electrical shock

- ⇒ The Static Daylight PAR fixture is designed and intended for dry locations only (protection class IP20). Exposure to rain or moisture is hazardous and may damage the fixture.
- ⇒ Disconnect power before cleaning, maintaining, servicing or changing lamp.
- ⇒ Servicing must only be performed by qualified personnel.

Warning – instructions for continued protection against excessive exposure to UV-radiation

- ⇒ The Static Daylight PAR fixture uses HID (high intensity discharge) type lamp that produces UV radiation. Do not look directly at the lamp itself.
- ⇒ It is hazardous to operate the fixture without a lens installed. Damaged lenses must not be used.

Warning – instructions for protection against injury to persons

- ⇒ If the fixture is used with an accessory such as a colour frame or barndoor, the retention clip must be in the locked position to prevent the colourframe or barndoor from falling out.
- ⇒ Always use the fixture with a secondary suspension device such as a safety wire. If the barndoor is used, an additional safety wire for this item must also be used.
- ⇒ Exterior surfaces of the fixture will be hot during and some time after operation. Use the appropriate safety equipment when handling and operating the fixtures.
- ⇒ The lamp will be very hot during and some time after operation. Disconnect power and allow lamp to cool down before replacing lamp.
- ⇒ The high intensity discharge lamp used in the Static Daylight PAR fixture emits significant amounts of ultraviolet (UV) radiation. It also works under high internal pressure and at high temperatures. If the lamp breaks there may be a danger of personal injury and/or fire from broken lamp particles being discharged.
- ⇒ Use the appropriate safety equipment (eye protection, gloves) when handling lamps.
- ⇒ After handling or replacing a lamp, always clean the lamp glass with denatured alcohol (tissue provided together with new lamp) and allow for a minute to dry before operating the fixture.

STATIC DAYLIGHT PAR 575 VF

INSTALLING OR REPLACING THE LAMP: When installing or replacing the lamp in a Static Daylight PAR 575, please note the following:

- ⇒ **Isolate electrically before re-lamping the luminaire. Also be aware that the lamp or luminaire may still be hot, so exercise necessary caution to avoid burns.**
- ⇒ Disconnect the fixture from its power supply.
- ⇒ Allow the lamp to cool for at least 15 minutes before attempting to remove lamp.
- ⇒ Use protective gloves when handling a hot lamp.
- ⇒ Always use protective eyewear. The lamps have a high internal pressure and the there is always a small risk of the lamps shattering when being handled.
- ⇒ Avoid touching the lamp glass with bare hands and always wipe the glass clean with the special cleaning alcohol tissue supplied with the lamp. Even very small deposits of grease and dirt on the lamp glass can cause premature lamp failure.
- ⇒ Always inspect the lamp socket for wear or cracks before inserting a new lamp into it. Replace the lamp socket if there is any doubts about its condition.
- ⇒ Use only lamps with the correct wattage, operating voltage and current, LCL distance and socket type. The recommended types is: Philips MSR575/2 (7200°K / 1000 hours) When in doubt, consult your dealer.
- ⇒ Do not use the lamps outside the recommended operating hour ratings given by the lamp manufacturer. Doing so may result in violent lamp failure.
- ⇒ On fixtures reflector, remove 4 chrome screws at base of focus assembly. Replace all seals, screws and earth bonds when unit is relamped.

NOTES ON LAMP OPERATION AND PERFORMANCE

- ⇒ The Static Daylight PAR 575 VF is not designed for hot-restrike. After the power is switched off the lamp must be allowed 8-10 minutes for cooling down before re-ignition is possible.
- ⇒ The rated lamp life is only a statistical average given by the lamp manufacturer. There is no guarantee of this lamp life being reached. The true lamp life depends on many factors including fixture design, ambient temperature, the number of times the lamp is re-ignited and so on. However, it is reasonable to expect the lamp life to be reached and the Static Daylight PAR 575 has proven to be a good working environment for the recommended lamps.
- ⇒ During the first 100 hours of operation there may be slight variations in lamp output and colour temperature. This is normal.
- ⇒ Focal characteristics and beam optimization through “variable focus control” are particular requirements of the two “spot” lenses included in the lens kit. Their operations are to be carried out by trained personnel using correct safety equipment when handling hot surfaces.

STATIC DAYLIGHT PAR 575 VF

PERIODIC MAINTENANCE: The Static Daylight PAR VF can only be expected to perform to specification if it is maintained on a regular basis. We strongly recommend that the following points are observed:

- ⇒ Clean the lenses with a dry, lint-free cloth. If the lenses are very dirty, cleaning with water and soap detergent may be needed.
- ⇒ Inspect the lenses for cracks or other physical damage. Never use damaged lenses as the high operating temperatures may cause violent failure. Replacement lenses are readily available.
- ⇒ Clean the reflector with a dry, lint-free cloth only.
- ⇒ Replace lamps before their rated life is exceeded or when they have trouble igniting within 15-20 seconds. Failure to do so may result in violent lamp failure (see previous paragraphs on lamp replacement and operation).

OTHER THINGS TO CHECK:

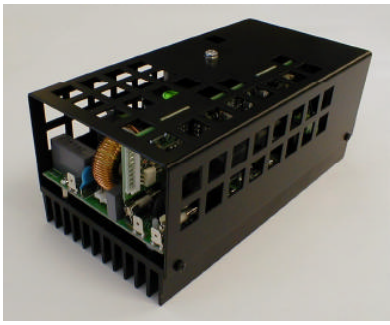
- ⇒ If a fixture starts up OK but later switches off the lamp, check that the LED is on. If an over-temperature condition occurs due to too high ambient temperature or blocked ventilation, the ballast will turn off the power to the lamp. The auxiliary voltage will still be on to power the LED indicator. Once the ballast has cooled down again, it will attempt to re-ignite the lamp.
- ⇒ The fixture will run on mains (line) voltages over wide range, 90 – 260V. However, even a very short interruption of the supply will shut the lamp off. The lamp will re-ignite as soon as the lamp has cooled down a bit usually within 5 to 10 minutes (auto-restrike).
- ⇒ Check the lamp socket for burns or possible cracked ceramic inserts. Check that the grounding lug is securely fastened to the base of the end cap.
- ⇒ Check that the lamp is looking good. The Philips MSR575/2 can sometimes fail early and this is usually visible as white dust covering the inside of the lamp glass, or blackened/deformed quartz envelope.

ATTENTION

Static Daylight Pars are “switch-sensitive” energise and turn off sub-circuits individually. In the event of mains power failure – turn off all sub-circuits immediately before power is re-energised. Failure to do so may result in permanent ballast damage.
Do not use more than 3 units on each sub-circuit.
Regularly inspect that all earth are present, undamaged and connected correctly.
Replace all earth bonds correctly when re-lamping.
Allow sufficient cooling time before re-lamping.
Static Daylight Pars will run cooler when operated at +220 – 240V.
Exceptionally, high ambient temperatures (+90º degrees) may cause thermal cut-outs. To operate always allow sufficient unrestricted airflow around the entire unit.

STATIC DAYLIGHT PAR 575 VF

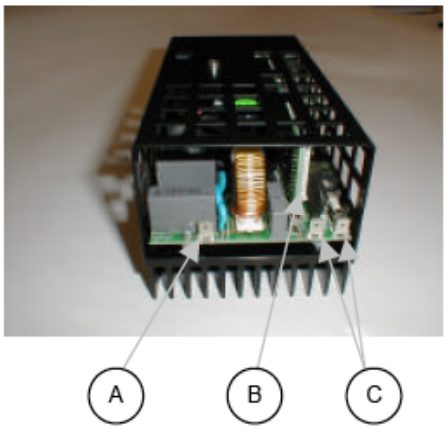
OPERATING GUIDE
STATIC HF57P - 575W Electric Ballast

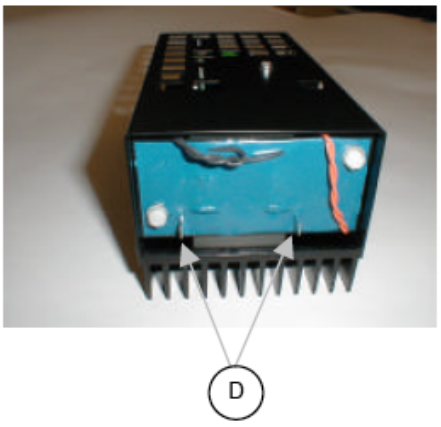


The HF57P is an electronic ballast for driving 575W HID lamps. The lamp is driven at high frequency (more than 300kHz) in contrast to most ballasts in this power range which typically operate around 100Hz. The use of high frequency has multiple benefits: the ballast efficiency is significantly increased and therefore needs less cooling, the power circuit comprises fewer components which improves reliability and useful lamp life is improved by a reduction in the rate of de-vitrification of the quartz envelope, resulting in longer lamp life.

The HF57P is an 'open-frame' style product – the end-user should provide adequate enclosure to meet the prevailing safety standards. The end-user should also make the necessary arrangements for cooling the product. The ballast is available with or without a heatsink in order to suit the customers preferred cooling arrangement.

CONNECTIONS

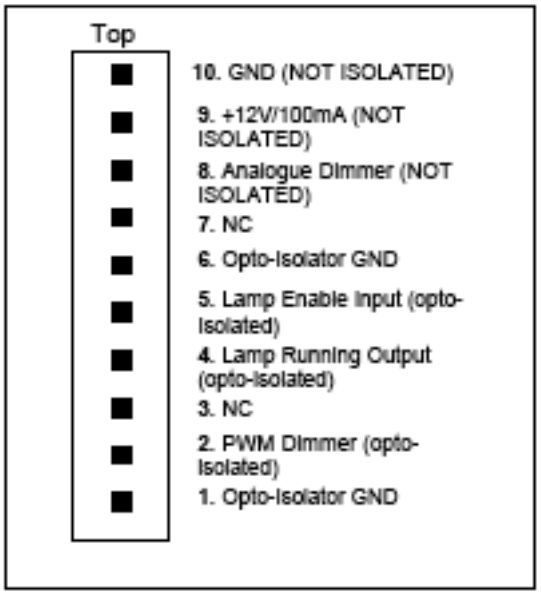




Connector A: Supply Ground. This terminal provides a protective ground for the heatsink and MUST be connected for user safety. A proper ground connection is also required to allow the input filter to perform efficiently.
Connector B: Control Connector. The connector is a 10-way EH-series manufactured by JST. Mating connectors are commonly available through electronics distributors. The pin configuration is shown in the diagram on next page.
Connector C: Mains input pins. The input voltage should be in the range 90-265V 50/60Hz.
Connector D: Lamp connection. WARNING: Very high voltages appear on these pins during ignition of the lamp. Both outputs should have high voltage insulation from Earth. The ballast is available in 2 versions – a 'Cold Strike' version where the voltage is typically 5kV during ignition, and a 'Hot Strike' version where the ignition voltage is typically 25kV. It is important to ensure that only Hot Strike-rated lamps are used with the Hot Strike ballast, otherwise the lamp may be destroyed. The output runs at high frequency and as a result the output wiring should be kept as short as possible to limit the inductance of the wiring. The maximum output lead length is 1m. The output wires should be twisted together to further reduce inductance. Both wires should follow the same path and should not be wrapped around any metal objects. NOTE – Conventional ignitors cannot be used with this ballast. Only the High Frequency ignitor supplied with the ballast is suitable, otherwise dangerous overheating may occur.

Pin 1/6: These pins are the ground reference for the opto-isolated inputs. The voltage difference

between these pins and the supply neutral should not exceed 260V AC. 1 & 6 are linked internally. Either, or both, may be used.
Pin 2: This pin can be used to reduce the ballast output power. If a PWM signal is applied then at 0% duty cycle the ballast output is minimum (around 60% of full power), and at 100% duty cycle the ballast runs at full power. The PWM signal should have a frequency in the range 1-20kHz and an amplitude in the range 5-18V. The input impedance is approximately 1k5 W. The pin is opto-isolated and referenced to pin 1.
Pin 3: Not Connected
Pin 4: Opto-isolated Open Collector output which pulls low when the lamp is running. Minimum sink current 2. 5mA.
Pin 5: Opto-Isolated input. Applying 5-18V starts the ballast. Input impedance approximately 1k5 W. The ballast can also be made to run as soon as power is applied by fitting jumper to JP2 on the control PCB.
Pin 8: The output power of the ballast can be varied by applying a 0-5V signal to this pin. 5V is maximum power. A signal source with impedance no greater than 10kW should be used. WARNING – This pin is not isolated from ground – the signal source should have high voltage insulation from Earth potential.
Pin 9: 12V output. Up to 100mA may be drawn from this pin for auxiliaries, such as a fan. Wiring connected to this pin should have 300V insulation realtive to Earth potential.
Pin 10: Control ground. Reference for Pins 8 & 9. WARNING – Not at earth potential. Maintain high voltage insulation (300V) from Earth.



WIRING

The input and output wires should have a cross-sectional area of not less than 1mm2. The output wires should have an insulation rating of not less than 5kV for Cold-Strike versions.

COOLING

The ballast will shut down if the baseplate temperature exceeds 90°C. With adequate cooling this will allow the ballast to operate in an ambient air temperature of 50°C.

Cooling Tips:
- ⇒ If natural (not forced) cooling is used then keep heatsink fins vertical
- ⇒ Try to avoid placing the ballast where it will draw hot exhaust air from the fixture.
- ⇒ If fans are used then avoid re-circulating hot air back along the heatsink.

The majority of the heat generated by the ballast is conducted through the baseplate to the heatsink. However the internal components of the ballast also generate some heat and ventilation should be provided in the enclosure to allow these components to cool. For the ballast to operate in a 50°C ambient the thermal impedance of the heatsink arrangement should be around 1°C/W.

Trouble Shooting

- ⇒ Service by authorized service technicians only.
- ⇒ Lamp Fails to Ignite: Is there any flashing in the globe? If the ballast seems totally dead then check the correct supply voltage is applied. If the voltage is o.k. then disconnect the ballast from the supply and check the condition of the input fuses FS1 & FS2 using a resistance meter. If necessary replace with fuses of the same type and rating.
- ⇒ If there is flashing in the globe, but the lamp fails to ignite then the lamp may have reached the end of it's life and should be replaced. Alternatively there may be flashover occurring from one of the lamp poles to ground, or a short-circuit between the lamp wires. Either of these conditions can cause the ballast to shutdown to protect against damage. The shutdown condition is latched until the input power has been removed for approx 30 seconds.
- ⇒ Lamp Fails to Re-strike: The HF57P is available in Hot and Cold strike versions. With the Cold Strike version the lamp will not restrike after running until it has been allowed to cool for 5-10 minutes
- ⇒ Ballast stops whilst running: The over-temperature trip may be operating. Ensure that the heatsink temperature does not exceed 90°C. The heatsink temperature should be reduced by reducing the ambient air temperature, or increasing airflow across the sink. Also ensure that hot exhaust air is not recirculating across the heatsink fins.

BALLAST SPECIFICATIONS

Input
Voltage: Range:90-265V AC
Current: 2.7A @230V, 5.7A @ 110V
Power Factor: >0.98

Output
Power: 575W
Typ. Lamp Voltage Range: 85-110V
Maximum Output Current: 7A

Mechanical
Weight: 1.6kg (3.6lbs)
Dimension (WxHxD): 190 x 103 x 85mm (7.5 x 4 x 3.3")

SAFETY

Static Light Company Ltd has manufactured this luminaire in accordance with recognised best practice to recommended international safety standards. It is your responsibility to maintain this luminaire in good and safe working condition.

Repairs should only be carried out by suitably qualified persons. Do not operate the luminaire with cracked lens, damaged cables, etc. Consult Static Light Company for assistance. Only replace damaged parts with authorised Static spares.

Cable Conductor colour codes:	BROWN:	Phase, Live
	BLUE:	Neutral
	GREEN/YELLOW:	Earth