

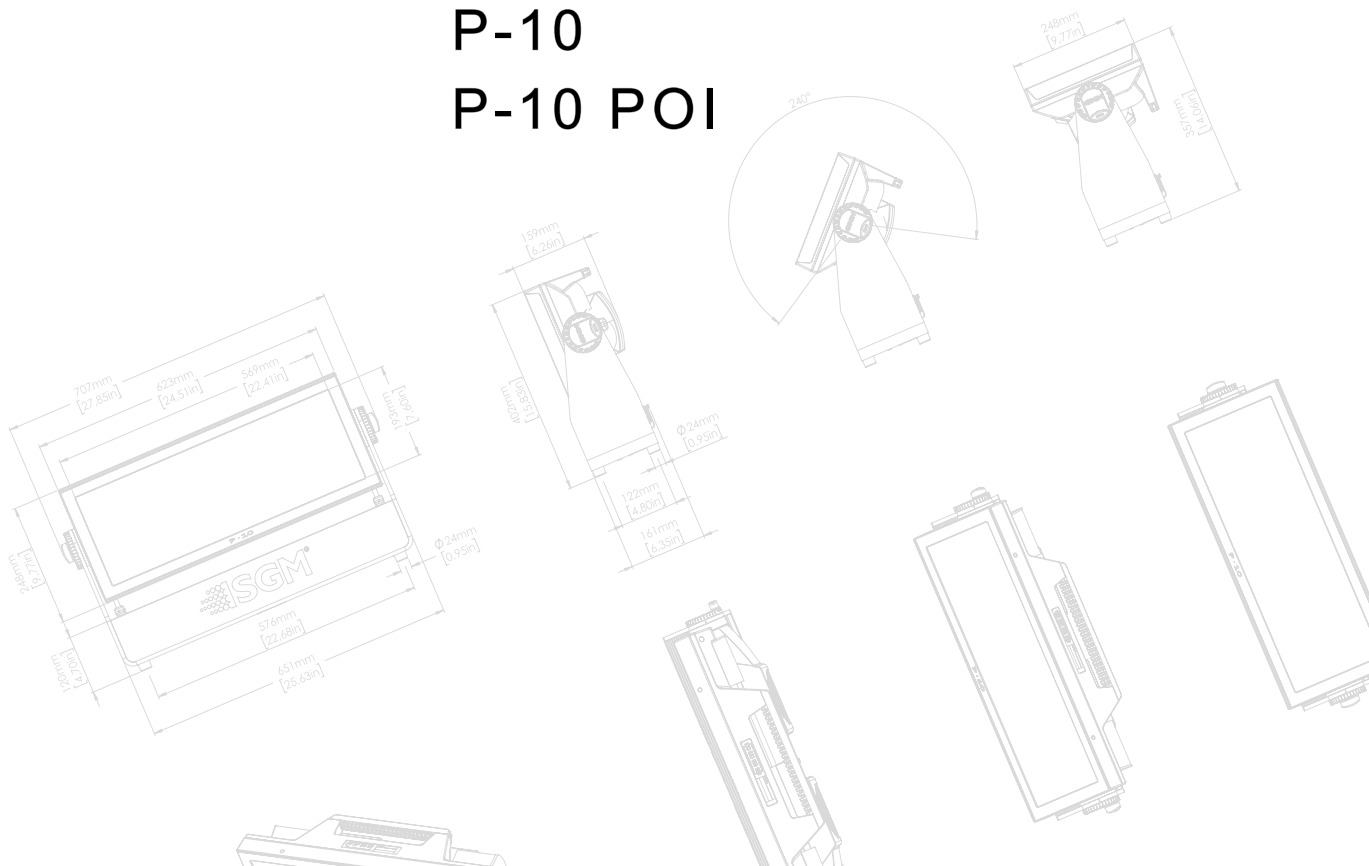
USER MANUAL



P-SERIES

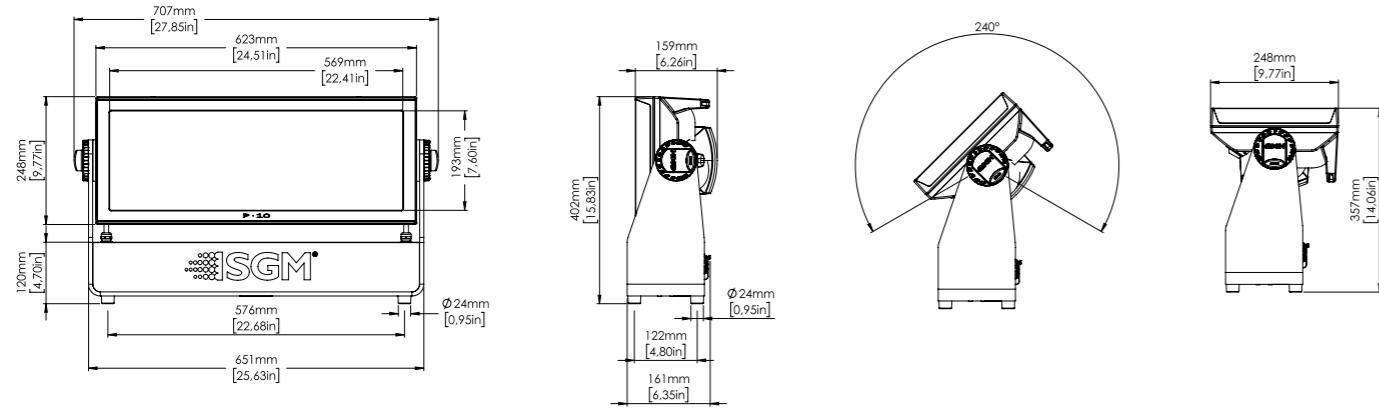
P-10

P-10 POI

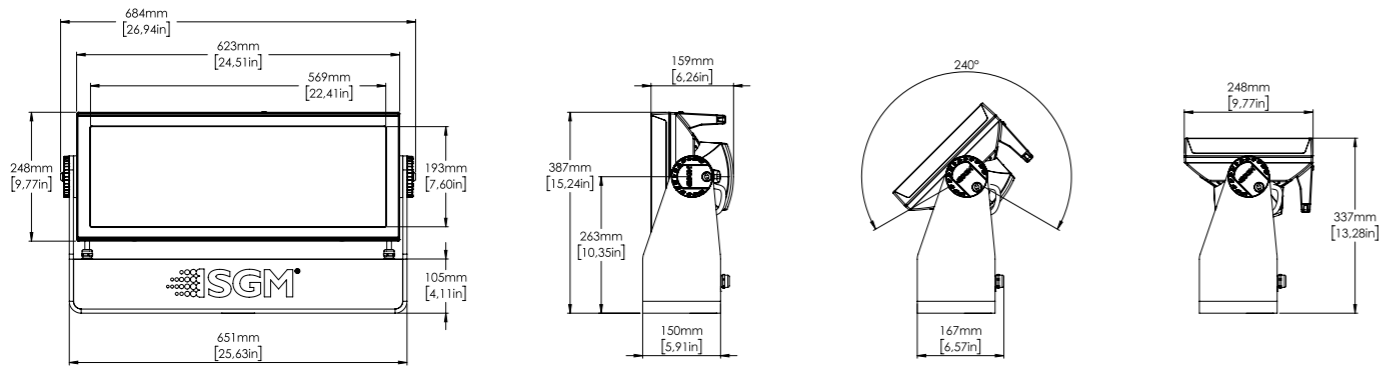


P-10 Series dimensions

P-10



P-10 POI



All dimensions in millimeters and inches. Drawing not to scale.

This manual covers installation, use, and maintenance of the SGM P-10 Series.
A digital version is available at www.sgmlight.com, or upon request via support@sgmlight.com.

P-10 SERIES USER MANUAL REV. E

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This edition applies to firmware version 0.22 or later.

English edition.

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Safety information



WARNING!

Read the following safety precautions carefully before unpacking, installing, powering, or operating the device.



SGM fixtures are intended for professional use only. They are not suitable for household use.

Les luminaires SGM sont impropres à l'usage domestique. Uniquement à usage professionnel.

This product must be installed in accordance with the applicable installation code by a person familiar with the construction and operation of the product and the hazards involved.

Ce produit doit être installé selon le code d'installation pertinent, par une personne qui connaît bien le produit et son fonctionnement ainsi que les risques inhérent.



DANGER! Risk of electric shock. Do not open the device.

- Do not open the device; there are no user-serviceable parts inside.
- Ensure that power is cut off when wiring the device to the AC mains supply.
- Ensure that the device is electrically connected to earth (ground).
- Do not apply power if the device or mains cable is in any way damaged.
- Do not immerse the fixture in water or liquid.



WARNING! Take measures to prevent burns and fire.

- Install in a location that prevents accidental contact with the device.
- Install only in a well-ventilated space.
- Install at least 0.3 m (12 in.) away from objects to be illuminated.
- Install only in accordance with applicable building codes.
- Ensure a minimum clearance of 0.3 m (12 in.) around the cooling fans.
- Do not paint, cover, or modify the device, and do not filter or mask the light.
- Keep all flammable materials well away from the device.
- Allow the device to cool for 15 minutes after operation before touching it.

CAUTION: Exterior surface temperature after 5 min. operation = 49° C (120° F). Steady state = 59° C (138° F)..



WARNING! Take measures to prevent personal injury.

- Do not look directly at the light source from close range.
- Take precautions when working at height to prevent injury due to falls.
- For Permanent Outdoor Installations (POI), ensure that the fixture is securely fastened to a load-bearing surface with suitable corrosion-resistant hardware.
- For a temporary installation with clamps, ensure that the quarter-turn fasteners are turned fully and secured with a suitable safety cable.
- For elevated installations, secure the fixture with suitable safety cables and always comply with relevant load dimensioning, safety standards and requirements.
- The standard safety wire cable must be approved for a safe working load (SWL) of 10 times the weight of the fixture, and it must have a minimum gauge of 5 mm.

Before installing this product

Please visit the SGM official website at www.sgmlight.com for the latest version of this user manual/ safety information leaflet. Due to continuous improvements, the instructions may change without notice. SGM always recommends the latest available firmware version from www.sgmlight.com.



External cleaning and visual inspection of the fixture

All users of SGM fixtures should regularly clean those parts of the fixture directly exposed to the elements, such as the external housing and front lenses. Additionally, all owners of SGM fixtures must periodically check the external housing of the fixture for structural breaks, components in bad shape, cracked lenses, or loose screws. To ensure proper operation, but also to prevent the risk of potential accidents, do not use the fixture if the lens, housing, or power cables are damaged. If parts of the fixture appear to be missing, cease use immediately and contact SGM support.



Wiring and conduit/ containment

SGM fixtures supplied with power and data cable leads are not intended for installation in permanently installed conduit or containment. When installing fixtures in a permanent installation, ensure cable leads are installed as a service loop to an appropriately rated junction box using suitable cable strain reliefs/ glands. All installed fixtures must be securely mounted and service loop appropriately protected for installation location. All electrical wiring and connections should be completed by a qualified electrician.



Safety Precautions

When using electrical equipment, basic safety precautions should always be followed including the following:

1. Do not mount near gas or electric heaters.
2. Permanently installed equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
3. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
4. Do not use this equipment for other than intended use.
5. Refer service to qualified personnel or authorized service centers.
6. Do not look directly into the beam for long periods of time, when the fixture is on.
7. The fixture shall, under no circumstance, be covered with insulating material of any kind.

READ AND FOLLOW ALL SAFETY INSTRUCTIONS.

Overview

The P-10/ P-10 POI is an RGBW LED fixture with high output, designed for multiple applications, including applications where wireless operation is essential.

P-10 features:

- Powerful all-in-one 1250 W LED with 8 individually controllable segments, weighing around 20 kg.
- A wash light, a strobe light, a flood light, a pixel light, and a blinder with a non-fading continuous output.
- IP65-rated (standard) and IP66-rated (POI), enabling operation in all kinds of environmental settings and in temperatures from -40° C to 50° C.
- Fully adjustable CTC from 2,000K to 10,000K.
- Built-in wireless DMX and programmable standalone programs.
- Fully RDM implemented.
- Integrated handle eases the transport, rigging, and positioning of the fixture.
- Rubber feet meant for delicate surfaces, while at the same time prevent fixture from sliding.
- Optional accessories, such as barndoors and filter frames.
- Native 35° and 10° (POI only) front lenses with controlled field angle.
- Corrosion classified C5-M (marine) for coastal and offshore areas with high salinity (POI only).

Parts identification and terminology

- A: 48 x 24W LEDs
- B: P-10 Tilt lock
- C: Cooling fans
- D: Control panel (POI n/a)
- E: OLED Display (POI n/a)
- F: Dehumidifier and GORE-TEX membrane
- G: DMX in and out
- H: Power in and out
- I: Handle
- J: Barndoors attachment points
- K: Safety wire attachment point
- L: Holes for Omega bracket / M-10 screws (x6)
- M: P-10 POI Tilt lock (POI only)
- N: LED indicator (POI only)

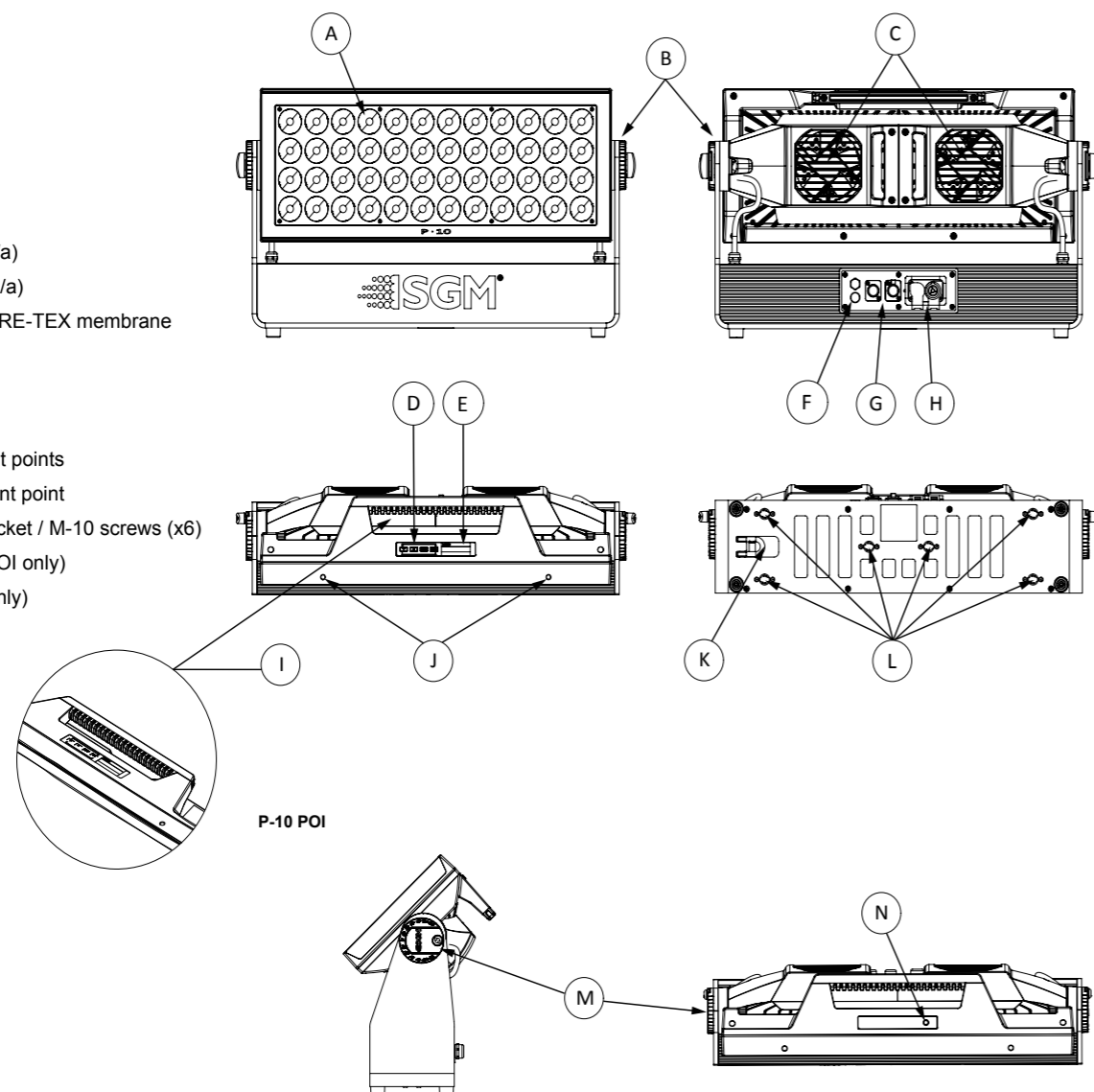


Figure 1: Parts identification and terminology

Preparing for installation

Unpacking

Unpack the device and inspect it to ensure that it has not been damaged during transport.

The P-10/ P-10 POI is shipped with:

- 1 x Power cable with IP connector, 2 m/ 78in. (standard only). In POI versions, a power cable with bare ends is supplied.
- Two Omega brackets with 1/4-turn fasteners (standard only).
- 1 x Spanner with magnet (POI only).
- 6 x M-10 screws (POI Only).
- Safety information leaflet.

Location/ application

The standard fixture is IP65-rated and is designed for both indoor and outdoor events. This means that it is protected from:

- Dust, to the degree that dust cannot enter the fixture in sufficient quantities as to interfere with its operation.
- Lower pressure water jets from any direction.

The POI fixture is IP66-rated and designed for use in outdoor installations. This means that it is protected from:

- Dust, to the degree that dust cannot enter the device in sufficient quantities as to interfere with its operation.
- High pressure water jets from any direction.

When selecting a location for the device, ensure that:

- It is situated away from public thoroughfares and protected from contact with people.
- It has adequate ventilation.
- It is not immersed in water.

When using standard fixtures outdoors or in wet locations, ensure that:

- For wireless DMX or standalone operation, the protective cover is securely mounted in any unused DMX connectors in order to ensure the IP rating.
- For cabled DMX operation, the DMX out of the last fixture is terminated with a 120 ohm resistor between pin 2 and 3 (according to the RS485 standard), and the DMX out is properly sealed, in accordance with the ingress protection (IP) requirements. Note that a maximum of 32 fixtures can be connected to the same DMX link.

Transportation

Always use the supplied packaging or suitable flight case for transportation and storage. Never carry the fixture by connected cables or wires; use the handle.

Installing/ rigging the P-10 Series

All SGM fixtures have locking points at the base for installation and rigging. In both standard and POI fixtures, the distance between the points from center to center is always 106 mm.

While the base of the standard fixtures includes 1/4-turn fastener camlocks to mount the omega brackets, the POI products come with M-10 nuts for M-10 screws.

The standard P-10 may be installed in any orientation and it might take up to three omega brackets per fixture. Always use a minimum of two omega brackets to rig the fixture and lock the bracket with the 1/4-turn fasteners.

PLEASE NOTE!!

The 1/4-turn fasteners are only locked when turned fully clockwise.

NOTE: In POI fixtures, a customized bracket may have to be used to install the fixtures. See more about "Installation and rigging the P-10 POI" on page 17.

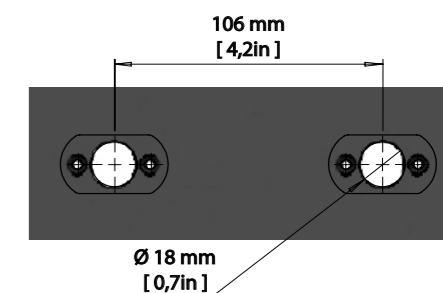


Figure 2: P-10 Series locking points

Rigging process

Start the standard rigging process by blocking the lower working area, and make sure the work is performed from a stable platform.

1. Check that the clamp is undamaged and can bear at least 10 times the weight of the fixture. Check that the structure can bear at least 10 times the weight of all installed fixtures, lamps, cables etc.
2. Bolt the clamp securely to the omega bracket with a M12/ ½ bolt (min. grade 8.8) and a lock nut.
3. Align the omega bracket with the two 1/4-turns in the base. Insert the fasteners into the base bracket, and turn both levers a full 1/4-turn clockwise to lock.
4. Working from a stable platform, hang the fixture on a truss or other structure. Tighten the clamp.
5. Install a safety wire that can bear at least 10 times the weight of the fixture. The safety wire attachment point is designed to fit a carabiner.
6. Verify that there are no combustible materials, cables, or surfaces to be illuminated within 0.3 m (12 in.) of the fixture.
7. Check that there is no risk of colliding between the head/ yoke and other fixtures or structures.

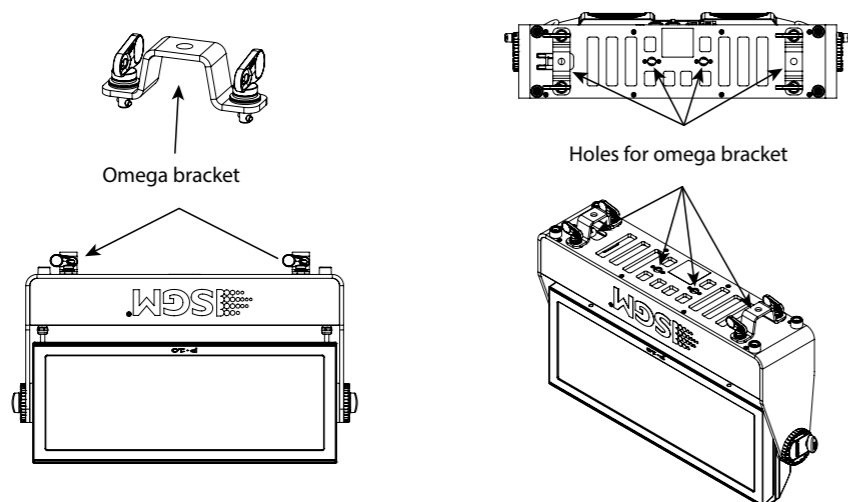


Figure 3: Base with omega bracket



WARNING! Always secure an elevated fixture with a safety wire

Fasten a safety wire (not shown) between the load-bearing support structure and the safety wire attachment point on the device.

The safety cable (not included in the package) must:

- Bear at least 10 times the weight of the device (SWL).
- Have a minimum gauge of 5 mm.
- Have a maximum length (free fall) = 30 cm (12 in.).

CAUTION!!

- Always use a safety wire of a grade AISI 316 steel.
- Make sure the slack of the safety wire is at a minimum.
- Never use the handle for secondary attachment.



Figure 4: Safety wire attachment point

Tilt Lock

The P-10 can be tilted from 0° - 120°.

In standard versions, there is no need for any special tools to adjust the tilt angle.

Take the following steps for adjusting the tilt in standard P-10:

1. Loosen the two tilt knobs (one on each side) by turning them counter-clockwise.
2. Adjust the tilt to the desired angle and hold it.
3. Lock the position by re-tightening both tilt lock knobs clockwise.

If you feel resistance when tilting the fixture, you might not have loosened the tilt lock knobs enough.

CAUTION!!

If the fixture has been operating, always allow it to cool for 15 minutes before handling. Exterior surface temperature after 5 min. operation = 49° C (120° F). Steady state = 59° C (138° F).

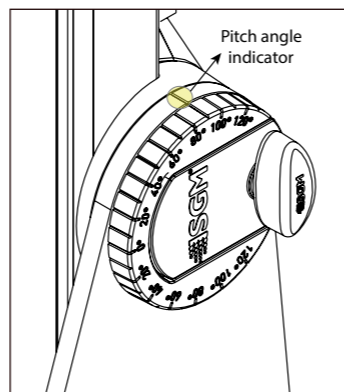


Figure 5: Tilt lock

Angle indicator

The P-10 comes with a scale function which eases the adjustment to the tilt desired.

The angle indicator in the wheel shows the current angle of inclination.

NOTE: In POI versions, SGM provides a POI Spanner with a pig-nose key for tilt adjustment. Either use the large or the small pig-nose key, depending on the type of fixture. See “POI Tilt lock” on page 17 to know more about the tilt lock in P-10 POI.

Connecting AC power

The P-10 Series can operate on any 100–277 V, 50/ 60 Hz AC mains power supply.

Connect a P-10 standard to AC power using the supplied power cable or similar with a maximum of 20 A to ensure the correct ingress protection (IP rating).

The fixture must be grounded/ earthed and able to be isolated from AC power. The AC power supply must incorporate a fuse or circuit breaker for fault protection.

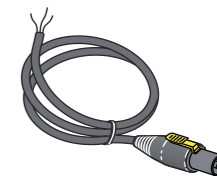


Figure 6: P-10 Power cable

The power cable color coding is given in figure 7:

- Connect the black wire to live.
- Connect the white wire to neutral.
- Connect the green/ yellow wire to ground (earth).

Wire	Color	Symbol	Conductor
	Black	L	live
	White	N	neutral
	green/yellow	⊥ or ⊕	ground (earth)

Figure 7: Connecting AC Power

For a temporary outdoor installation, the mains cable must be fitted with a grounded connector intended for exterior use. For permanent installations, have a qualified electrician to wire the mains cable directly to a suitable branch circuit. The junction's ingress protection (IP) rating must be suitable for the location. Always use a junction box with a proper IP class suitable for the environment.

When installing standard type C circuit breakers, there will be no limitations due to the fixture's in-rush current.

For assistance with alternative configurations, contact your SGM representative.

NOTE: In POI versions, SGM supplies a power cable with bare ends. Connect the fixture to power by mounting a power connector to the bare-ended mains cable. Please refer to “Connecting DMX and AC power in POI” on page 18 for connecting AC power in POI fixtures.

After connecting the P-10 to power, run the on-board test by selecting TEST → AUTOMATED TEST in the menu, to ensure that the fixture and each LED are functioning correctly. POI versions have to be tested through RDM.

PLEASE NOTE!

The protective caps must be securely mounted on any unused DMX connectors in order to maintain the ingress protection (IP-rating).

CAUTION!!

Do not connect the fixture to an electrical dimmer system, as doing so may cause damage.

Configuring the device

The P-10 can be set up by using the control panel and OLED multi-line display on the fixture's head or through RDM.

Please note: In POI versions, there is no display mounted in the fixture. The adjustments are made through RDM. See “RDM” on page 15 for more information.

The OLED display is the human interface of the fixture as it displays the current status and menu of the fixture. The display panel can be used to configure individual fixture settings, check the fixture's wireless status, confirm the firmware version, and read error messages. The complete list of the menu and all commands available are listed in “Control menu” on page 14.

Before turning on the P-10, make sure the power in cable is properly connected. To turn off the device, simply disconnect power in cable. When the fixture is powered on, it boots and resets before displaying the currently selected operating mode and the DMX start address. Navigate through the menus and options using the arrow buttons, and select items using the ENTER button.

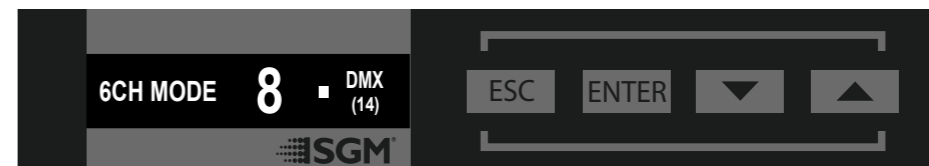


Figure 8: OLED display and control panel

Using the display panel

- Press the 'ENTER' button to access the menu or make a selection.
- Press the arrow buttons to scroll up and down in the menus.
- Press the 'ESC' button to take a step back in the menu.

Display

- A - Operational mode (quick color, standalone, or DMX mode).
- B - DMX address.
- C - External data indicator (if DMX control is active).
- D - External data protocol (CRMTM or DMX).
- E - Next available DMX address depending on the fixtures DMX footprint.

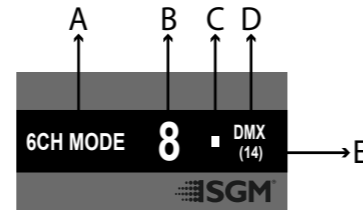


Figure 9: Display view

Note: the fixture is set by default to be controlled in DMX mode.

Error Indicator

If any errors are detected, the message 'ERR' will be flashing in the display for easy detection. To read the error message select ENTER → INFO → ERRORS in the menu.

Shortcuts

- ESC + ENTER: Press ENTER to confirm factory defaults.
- ESC + UP: Display OFF.
- ESC + DOWN: Set up new DMX address; keep ESC and press ENTER to confirm.
- UP + DOWN arrows simultaneously = flip the display upside-down.

Connecting to a DMX control device

The P-10 Series is controllable using a DMX control device, and it can be connected using either a DMX cable, or via the fixture's built-in CRMX wireless receiver system.

When using a cabled DMX system, connect the DMX-In cable to the input connector and the DMX-Out cable to the output, both on the rear of the fixture's base (chassis mounted male and female 5-pin XLR plugs). For outdoor installations, use only IP-rated XLR connectors suitable for outdoor use.

In standard fixtures, if using a wireless DMX system, remember to use the protective caps in any unused DMX connector in order to maintain the fixture's IP rating. For POI versions, please refer to "Connecting DMX and AC power in POI" on page 18.

NOTE: SGM fixtures provide a passive DMX Thru signal as DMX Out, instead of an active output signal.

Connecting a wireless transmitter

The P-10 is designed to look for wireless transmitters in 'connect' state when this option is not yet enabled. To connect the P-10 to a wireless transmitter:

- Log off the currently paired wireless transmitter - see below "Disconnecting a wireless transmitter".
- Press the connect button on the wireless transmitter.
- Confirm that the fixture has paired with the wireless transmitter.

Note: for POI versions, refer to "Connecting a wireless transmitter in POI" on page 18.

Disconnecting a wireless transmitter

To disconnect the fixture from the currently paired wireless transmitter, go to SETTINGS → WIRELESS DMX → LOG OFF in the menu.

Note: for POI versions, refer to "Disconnecting a wireless transmitter in POI" on page 18.

Signal priority

The P-10 can be paired to an active wireless transmitter simultaneously, when connected to a cabled DMX. The fixture will prioritize cabled DMX over wireless DMX.

The active input type is displayed under the wireless signal strength indicator. The signal strength can be also checked via RDM data by using an external RDM device (e.g. the SGM A-4).

NOTE: In POI version with wireless, the DMX signal strength can only be checked through RDM.

Configuring the device for DMX control

About DMX

The P-10 Series can be controlled using signals sent by a DMX controller on a number of DMX channels.

DMX is the USITT DMX512-A standard based on the RS-485 standard. The signal is sent as DMX data from a console (or a controller) to the fixtures via a shielded twisted pair cable designed for RS-485 devices.

The cables can be daisy chained between the fixtures, and up to 32 fixtures can be connected to the same DMX link. Up to 300 meters (1000ft.) of cable is achievable with high quality DMX cables. In installations with standard fixtures, remember that all DMX links must be terminated in the last fixture by connecting a DMX termination plug to the last fixture's 5 pin DMX-Out connector.

PLEASE NOTE:

- Standard microphone cable is not suitable for transmitting DMX.
- Up to 32 fixtures can be linked to the same DMX chain. Additional fixtures will overload the link.
- The last fixture must always be fitted with a DMX termination plug to the fixture's DMX out.

DMX Start address

The P-10 Series can be operated in different DMX modes. For any of the modes, the first channel used to receive data from a DMX control device is known as the DMX start address.

For independent control, each P-10 must be assigned its own DMX start address. For example, if the first P-10 is set to 6ch CTC DMX mode with a start DMX address of 113, the following P-10 in the DMX chain should then be set to a DMX address of 119. As the first fixture uses all the first 6 DMX channels, including channel 113, the next available channel is 119 (113+6=119 >> 119).

If two or more fixtures of the same type have the same DMX address, they will behave identically. Incorrect settings will result in unpredictable responses from the lighting controller. Address sharing can be useful for diagnostic purposes and symmetrical control.

Set/ edit DMX address

The DMX address is shown on the OLED display in the control panel. To change the address setting, press the up and down arrows. When the desired address is displayed, press ENTER to save the setting. For your convenience, the next available DMX address is displayed to the right. Note that channel spacing is determined by the number of channels of the DMX mode.

See instructions on how to use the display panel in "Configuring the device" on page 9.

The P-10 Series also offers the option to set the DMX address through RDM.

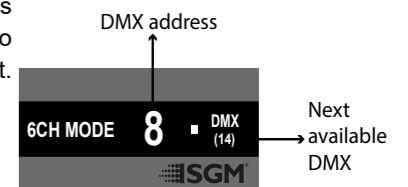


Figure 10: Set/edit DMX address

NOTE: POI versions are only addressable via RDM. See "POI Permanent Outdoor Installation" on page 16.

DMX modes

The P-10 Series operates in different modes.

All DMX charts are available at www.sgmlight.com under the respective products or upon request via support@sgmlight.com.

P-10 Connection diagram

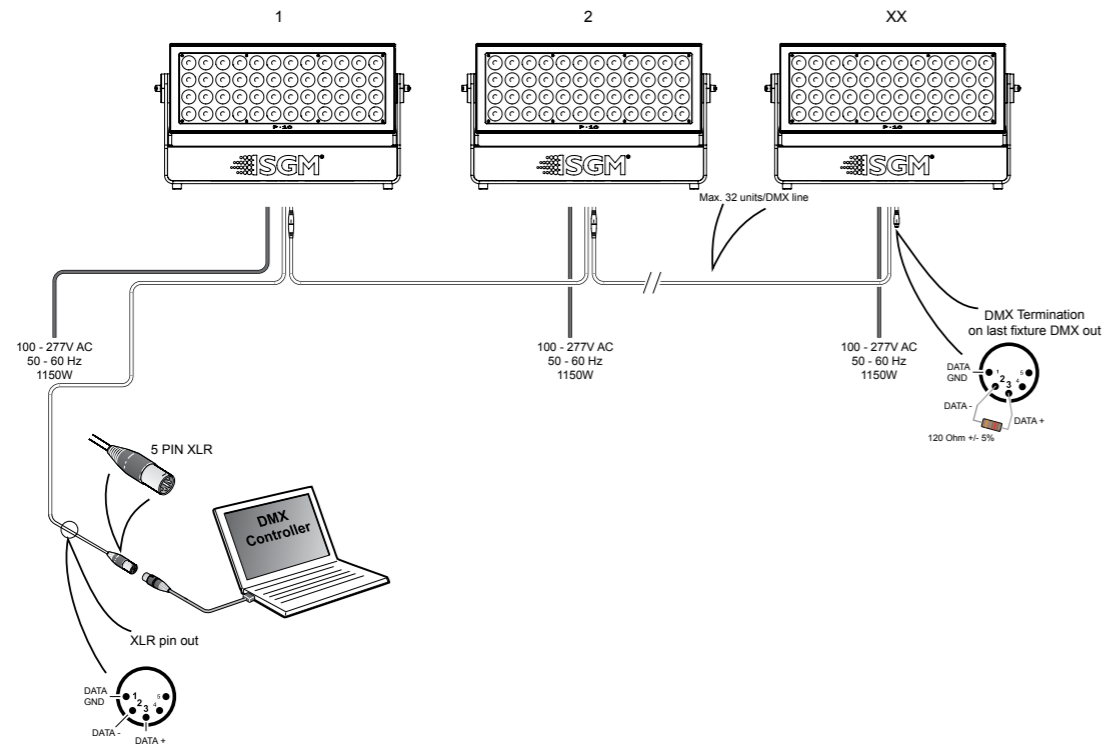


Figure 11: P-10 connection diagram (see “P-10 POI connection diagram” on page 18 for POI)

Using standalone operation

Standalone operation is not running when the fixture is connected to a control device, but when it is pre-programmed with a series of up to 24 scenes, playing continuously in a loop. Up to three stand-alone programs can be defined and run from the menu, and one of the programs can be set to run by default whenever the fixture is powered on.

Each of the three available stand-alone programs contains 24 user-definable scenes with its own RGB and shutter settings.

Each scene has a definable fade-in time for the transition from one color to the next, and a wait (static) time of up to 120 minutes and 59 seconds.

To define a standalone program, press ENTER → MANUAL → EDITOR.

The standalone mode of the fixture's startup is enabled by selecting: ENTER → SETTINGS → STARTUP MODE → SELECT STARTUP MODE → STANDALONE.

To select the fixture's startup program, press: ENTER → SETTINGS → STARTUP MODE → STARTUP PROGRAM. The chosen program will run its length cyclically whenever the fixture is powered on.

To run an internal program, go to: ENTER → MANUAL → RUN PROGRAM.

To stop an active internal program, go to: ENTER → MANUAL → STOP PROGRAM.

Please note: In POI versions, configuring the fixtures can only be done through RDM.

Setting a static color manually

The P-10 can be configured to display a predefined and static color. To set up a static color select ENTER → MANUAL → QUICK COLOR.

Note that once the MANUAL → QUICK COLOR settings are changed, the fixture is set, by default, to automatically start in quick color mode whenever it is powered on. This can be reset through the menu SETTINGS → STARTUP MODE → SELECT STARTUP MODE.

The current quick color program can always be stopped by going to: ENTER → MANUAL → STOP PROGRAM.

See “Control menu” on page 14 for detailed information about the manual menu.

Please note: In POI versions, configuration of the fixtures can only be done through RDM.

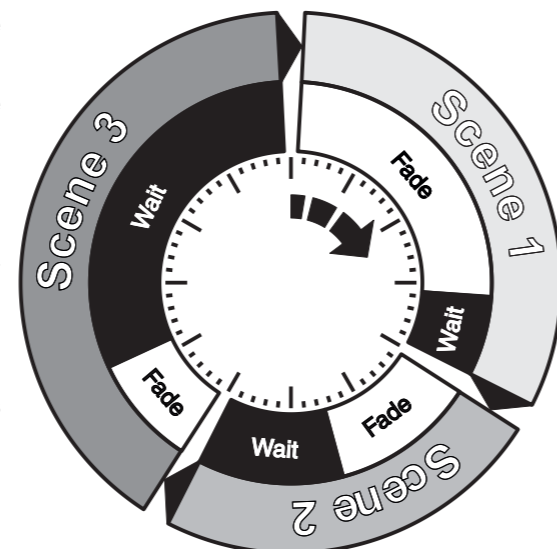


Figure 12: Standalone operation

Fixture properties

Factory default

When restoring factory defaults in the P-10 Series, the following settings will be set:

- Set DMX address to 1.
- Set 6 Channel CTC DMX mode.
- Set screensaver to Dimmed.
- Set flip screen to not-flipped.
- Disable Startup Programs.
- Set all Quick Color values to zero.
- Disable DMX Loss.
- Disable High Speed mode.
- Set all values in Manual Programs to zero.
- Set Fan mode to Standard.

Effects

Colors and LED Panels

The P-10 Series features 48 high-power RGBW 24W LEDs, divided into eight individually controllable segments, which generates wide-ranging color effects and pixel-mapping combinations for creative lighting designs.

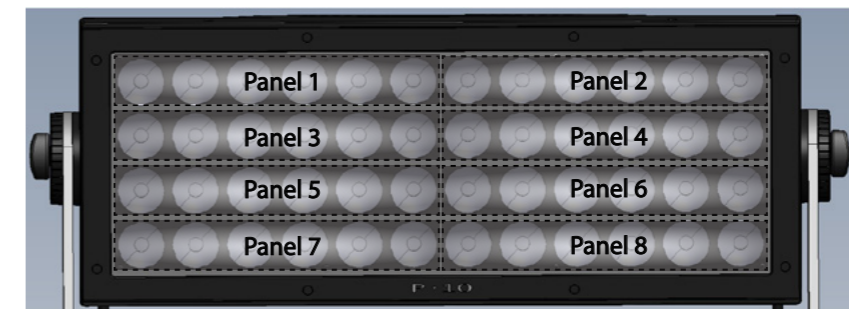


Figure 13: P-10 Pixel segments

Color temperature correction

The P-10 Series offers seamless CTC (color temperature correction) control from 2,000° Kelvin - 10,000° Kelvin.

Ultra high-speed strobe effect

The ultra high-speed strobe effect generates random strobe and pulse effects with variable speed.

Beam angle

The P-10 Series offers a narrow beam angle that can be modified using different optional magnetic holographic filter frames and barndoors, or native individual front lenses (POI only).

Individual fixture settings

Flipping the OLED display (POI n.a.)

If the fixture is installed hanging upside down, it might be useful to flip the display so that it is easier to read. To flip the display, press ENTER and select SETTINGS → FLIP DISPLAY, or press the up and down buttons on the control panel at the same time.

Setting the OLED display saver (POI n.a.)

By default the OLED display dims down after a short period when the control panel is not in use. The display can also be set to turn off completely, especially when a pitch-black environment is required. Pressing any key will always turn on the display or restore it to normal brightness.

To configure the display settings, press ENTER → SETTINGS → DISPLAY SAVER.

NOTE: To avoid the risk of display deterioration caused by long term usage, it is recommended to select the setting → DISPLAY OFF.

Setting the fan mode

For operating environments where low-noise is a requirement or where the fixture will be operating in high temperatures, it is possible to adjust the default fan speed to low or high by going to SETTINGS → FAN MODE in the menu.

NOTE: In POI version, the fan mode adjustment is possible through RDM.

Control menu

Level 1	Level 2	Level 3	Function	
Mode	Select Mode	-	Select DMX mode.	
Test	Automated Test	-	Initiate a self-test sequence.	
	Display Test	-	Service use only.	
	Off	-	Stop test sequence execution.	
Manual	Quick Color	Red	Static quick color - red mix (0-255). Sets fixture to quick color startup mode.	
		Green	Static quick color - green mix (0-255). Sets fixture to quick color startup mode.	
		Blue	Static quick color - blue mix (0-255). Sets fixture to quick color startup mode.	
		White	Static quick color - white mix (0-255). Sets fixture to quick color startup mode.	
		Full color calibration	Enable or disable color calibration.	
	Macro Color	Macro color	Select macro color.	
		Macro intensity	Intensity level of the macro.	
	Run Program	1, 2 or 3	Run internal sequence 1, 2 or 3.	
	Stop Program	-	Stop current running internal sequence or Quick Color.	
	Editor	Program	Program	Currently selected program (1, 2 or 3).
		Scene	Scene	Currently selected scene (1-24).
		Red	Red	Red value in currently selected scene (0-255).
		Green	Green	Green value in currently selected scene (0-255).
		Blue	Blue	Blue value in currently selected scene (0-255).
		Shutter	Shutter	Shutter setting in currently selected scene (0-255). (According to latest DMX chart).
		Fade Time (Min.)	Fade Time (Min.)	Fade-in (transition) time to current scene in min. (0-511).
		Fade Time (Sec.)	Fade Time (Sec.)	Fade-in (transition) time to current scene in sec. (0-59).
		Wait Time (Min.)	Wait Time (Min.)	Wait (static) time in current scene in min. (0-998).
		Wait Time (Sec.)	Wait Time (Sec.)	Wait (static) time in current scene in sec. (0-59).
	Settings	Wireless DMX	Wireless log off	Send Log off command to the CRMX System.
			Signal strength	Display strength of the wireless connection.
Service PIN		-	-	
Service menu		-	-	
Factory Default		-	Reset the fixture to factory default settings.	
Fan Mode		Standard	Standard	Adjust fan speed relative to internal fixture temperature.
		Max Power	Max Power	High fan speed for maximum cooling effect.
		Silent	Silent	Low fan speed for quiet operation.
Display Saver		Display Dim	Display Dim	Dim the OLED display when the control panel is not in use.
		Display Off	Display Off	Turn off the OLED display when the control panel is not in use.
Flip Display		Enable	Enable	Flip control panel display.
		Disable	Disable	Select normal control panel display.
DMX Loss		DMX Hold	DMX Hold	Select what happens when DMX signal is lost.
		Quick color	Quick color	
		Blackout	Blackout	
		All ON	All ON	
Startup Mode		Select Startup Mode	Select Startup Mode	Default operating mode when fixture is powered on: 1. DMX (factory default). 2. Stand-alone. 3. Quick Color.
	Startup Program	Startup Program	Stand-alone program 1, 2 or 3. Only used if the startup mode is set to "standalone". Program 1 is default.	
Info	Product Type	-	Displays product type.	
	Firmware Version	-	Displays installed firmware version.	
	Serial Number	-	Displays SGM serial #.	
	RDM ID	-	Displays RDM ID. (Unique RDM ID for identification)	
	DMX View	Up to 504 DMX addresses	Displays received DMX levels.	
	Temperatures	Mainboard	Mainboard	Displays fixture temperatures.
		LED Left 1	LED Left 1	
LED Left 2		LED Left 2		
LED Left 3		LED Left 3		
LED Left 4		LED Left 4		

Level 1	Level 2	Level 3	Function	
Info	Temperatures	LED Right 1	Displays fixture temperatures.	
		LED Right 2		
		LED Right 3		
		LED Right 4		
	Power on time	Humidity head	Humidity head	Displays humidity in the head.
		Wireless signal	Wireless signal	Displays wireless signal strength.
		Wireless paired	Wireless paired	Shows if wireless is paired.
		Light pwm	Light pwm	Displays light output level.
		Voltage	Voltage	Displays power supply voltage.
		Power on time	-	Displays fixture total power on time.
LED On Time		-	Displays LED total power on time (R, G, B, W).	
Errors	-	Displays error codes.		

RDM

Supported RDM functions

The P-10 Series features support for various RDM functions.

RDM (Remote Device Management) is a protocol enhancement to USITT DMX512 that allows bi-directional communication between the fixtures and the controller over a standard DMX line. This protocol will allow configuration, status monitoring, and management.

An RDM controller is needed to get control over the supported parameters. See the tables below for supported RDM functions.

RDM functions

PID	Actions allowed	Name
0x0082	-	Device Label
0x0081	-	Manufacturer Label
0x00E0	-	DMX Personality
0x00E1	-	DMX Personality description
0x0200	-	Sensor Definition
0x0201	-	Sensor Value
0x0080	-	Device Model Description
0x0400	-	Device Hours
0x0051	-	Parameter Description
0x0501	-	Display Level
0x0500	-	Display Invert
0x0090	-	Factory Defaults

PID	Actions allowed	Name
0x1001	-	Reset Device
0x0120	-	Slot Info
0x0121	-	Slot Description
0x0122	-	Default Slot Value
0x8626	SET	CRMX Log Off
0x8060	GET	Serial Nr.
0x8632	GET/ SET	SMPs Calibration
0x8625	GET/ SET	FAN 0=AUTO 1=LOW 2=HIGH 3=FULL
0x8634	GET/ SET	0=HOLD 1=WHITE 2=OFF 3=Q COLOR

Please note: The RDM controller communicates with the fixtures to show only the available options for each RDM function. The table is subject to change without notice.

Sensors

RDM enables various sensor readouts for remote device monitoring. See the table below for sensors and sensor types.

Please note: The RDM controller communicates with the fixtures to show only the available sensors for this fixture. The table is subject to change without notice.

Name	Sensor Type
Mainboard	Temperature
LED Left 1	Temperature
LED Left 2	Temperature
LED Left 3	Temperature
LED Left 4	Temperature
LED Right 1	Temperature
LED Right 2	Temperature

Name	Sensor Type
LED Right 3	Temperature
LED Right 4	Temperature
Humidity Head	Other
Wireless Signal Strength	Other
Wireless Paired	Other
Light PWM	Other
Voltage	Voltage

Troubleshooting

Problem	Potential cause(s)	Remedies
Fixture does not respond or appears to be completely dead.	No power to the fixture.	Confirm that the power is switched on, confirm that the cables are plugged in.
	Main fuse is blown.	Contact SGM support or certified SGM service partner.
Fixture suddenly turned off.	Power was turned off.	Check the power supply, switches and breakers.
Fixture suddenly stopped responding.	The wireless transmitter or connections, was disconnected/ tampered with.	Inspect the wireless transmitter and connections.
	DMX cables was disconnected.	Inspect DMX cables.
Fixture operates irregularly/ abnormally.	DMX cable polarization is inverted (pin 2 + 3).	Install a phase-inverter or replace cables.
	DMX link is not terminated.	Install a XLR 120 ohm DMX termination at the end of the DMX link (POI n.a.).
	Corrupted DMX cable.	Replace or repair defective cables and/ or connectors.
	The fixture operates an internal program.	Go to MENU → MANUAL → STOP PROGRAM.
	A corrupted fixture generates noise/ disruptions on the DMX link.	Track and isolate the corrupted fixture.
Color is uneven.	The minimum values is out of calibration.	Contact your local SGM dealer or support@sgmlight.com.
	The SGM Calibration Data set has been lost.	Contact your local SGM dealer or support@sgmlight.com.

POI Permanent Outdoor Installation

The SGM POI versions are designed for permanent outdoor installation and are IP66-rated. POI versions are designed for use in maritime and offshore environments, as per the CX/C5-M corrosion-resistance class.

Physical differences

The POI version differs from the standard version by having fixed-chassis power and DMX cables, and heavy-duty cable glands. The display and control panel have been removed.

Configuration

The P-10 POI does not include a display, therefore it has to be configured through RDM (Remote Device Management). See "RDM" on page 15 for more information.

In P-10 POI, the DMX address and DMX mode can only be set through RDM. When addressing through USB powered DMX/ RDM devices, ensure DMX link is terminated, and keep a short cable length as much as possible.

Regarding the DMX modes for POI, they are the same as the P-10 standard. Visit www.sgmlight.com to see all DMX charts available under the respective product, or upon request via support@sgmlight.com.

PLEASE NOTE!!

Remote Device Management (RDM) requires a correct DMX cabled installation and termination.

When setting addresses through RDM and using USB dongles, disable the USB selective suspend to ensure a proper voltage on the DMX link. If any lag or trouble occurs when addressing, decrease the cable length range to <12 m. and only address one fixture at a time.

LED Indicator

The LED indicator is located on the fixture's head (same place where the display is located in standard P-10), and shows the current status of the fixture.

The LED indicator can have different colors and three possible stages: static, flashing, or off.

- **Solid Orange:** Fixture is starting up.
- **Blinking Green:** Wireless and/ or wired DMX connected.
- **Solid Green:** No wireless or wired DMX connection.
- **Blinking Red:** Wireless and/ or wired DMX connected but Error(s) occurred.
- **Solid Red:** No wireless or wired DMX connection but Error(s) occurred.
- **Off:** fixture is off or indicator LED is set to auto dimming (set via RDM).

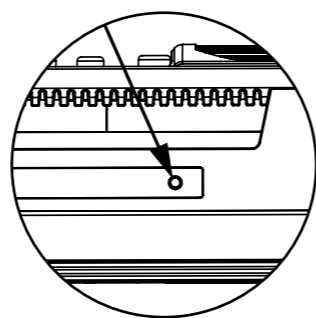


Figure 14: P-10 POI LED indicator

SGM Addressing Tool

SGM provides a windows software tool designed to allow the user to address and configure the fixtures through RDM. Changing the settings is done in the exact same way as it is in the display.

This tool is available for download at www.sgmlight.com, and has to be used with the SGM USB 5-Pin-XLR Uploader cable POI if the luminaire does not use XLR connectors in the DMX cable, or the SGM USB uploader cable if the luminaire uses XLR 5-pin DMX connectors (available from your SGM dealer).

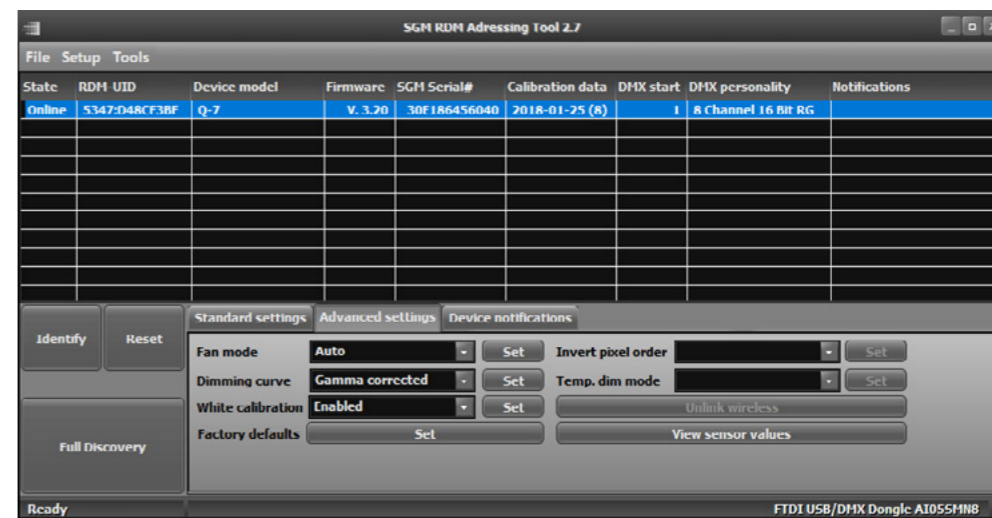


Figure 15: SGM Addressing tool

POI Spanner

The P-10 POI includes a spanner with a magnet, which function is to establish connection between the fixture and the wireless transmitter.

The spanner also has two types of pig-nose keys used for tilt adjustment in POI fixtures. Depending on the type of fixture, either use the large or the small pig-nose keys.

In P-10 POI devices the smallest pig-nose key is used for tilt adjustment.

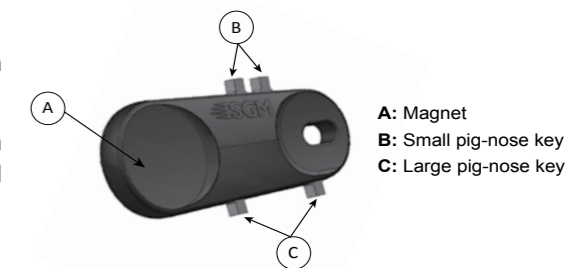


Figure 16: POI Spanner

POI Tilt lock

The tilt angle in POI fixtures may be adjusted by using the small pig-nose key provided in the spanner.

To adjust the tilt angle in P-10 POI, take the following steps:

1. Make sure the fixture has cooled down before handling.
2. Take the spanner and turn both tilt lock knobs (one on each side) counter-clockwise by using the small pig-nose key. Knobs are loosened by turning counter-clockwise.
3. Tilt the fixture to the desired angle and hold it.
4. Lock the position by tightening the tilt lock knobs clockwise with the same pig-nose key.

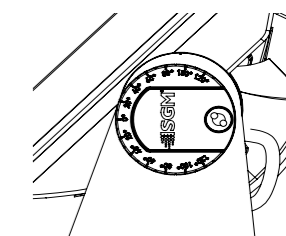


Figure 17: P-10 POI Tilt lock

Installation and rigging the P-10 POI

While the base of the standard products includes 1/4-turn fastener camlocks for omega brackets, the base of POI products comes with M-10 nuts for M-10 screws. The M-10 screws are included in the package in the same amount as the number of M-10 nuts at the base.

The P-10 POI base has six M-10 nuts that can be used for installation and rigging. The SGM Omega bracket (not included) or a customized bracket is needed to install the fixture. Consider the dimensions below of the P-10 POI base for customized mounting bracket purposes.

The SGM POI Omega bracket suited for M-10 holes can be ordered as an accessory. Contact your local SGM dealer for further information on correct POI-rated mounting.

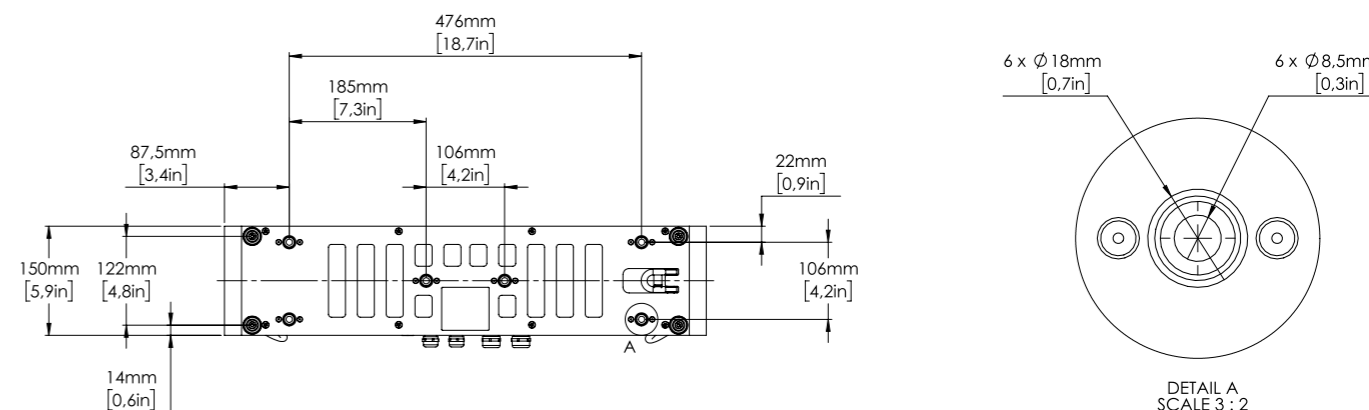


Figure 18: P-10 POI base with dimensions

Connecting DMX and AC power in POI

DMX in and DMX out are in the same cable. See more in figure 19 about the SGM POI DMX cable. Power is wired as in the standard version. See "Connecting AC power" on page 9.

For permanent installations, have a qualified electrician to wire the mains cable directly to a suitable branch circuit. The junction's ingress protection (IP) rating must be suitable for the location.

For a temporary installation, the mains cable may be fitted with a grounded connector intended for exterior use.

PLEASE NOTE!!

- **Standard microphone cable is not suitable for transmitting DMX.**
- **Up to 32 fixtures can be on the same DMX link. Additional fixtures will overload the link.**
- **The last fixture must always be fitted with a DMX termination plug to the fixture's DMX out.**
- **SGM fixtures provide a passive DMX Thru signal as DMX Out instead of an active output signal.**

P-10 POI connection diagram

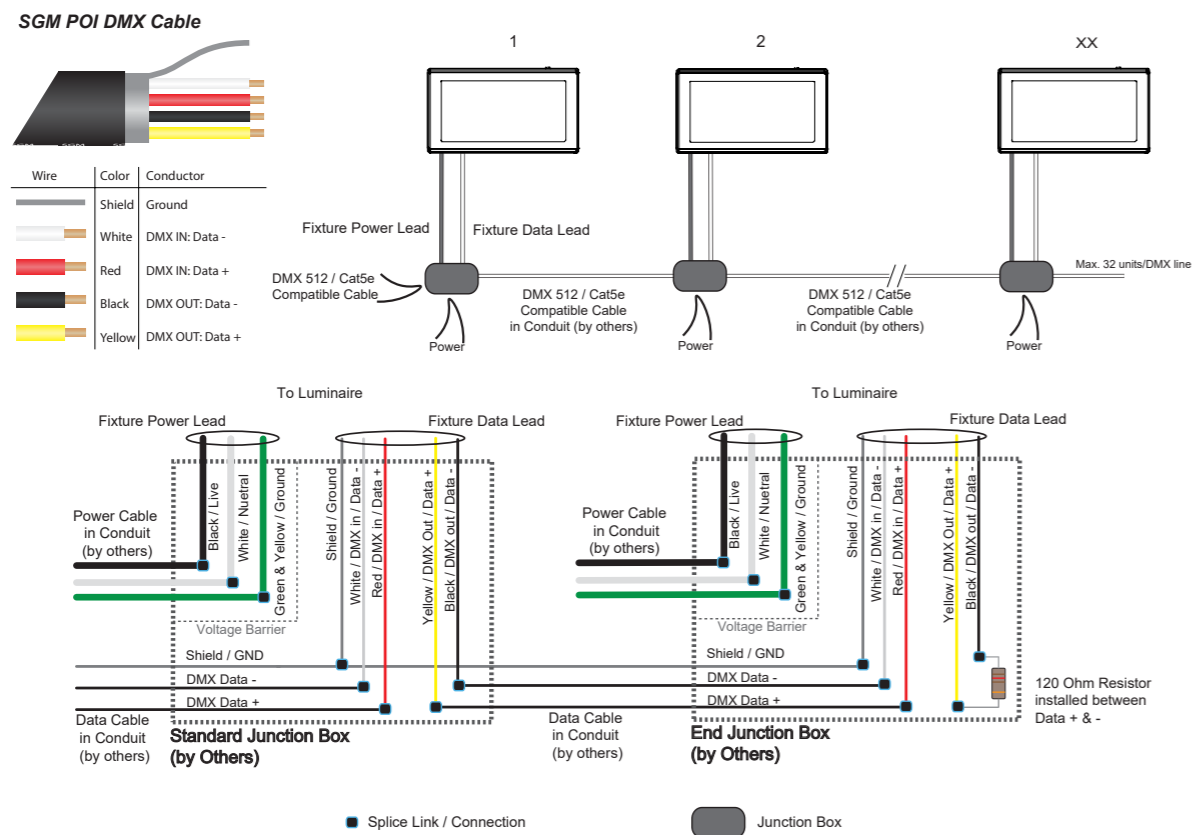


Figure 19: Connecting DMX and AC Power in P-10 POI

Connecting a wireless transmitter in POI

In POI versions with wireless, it is necessary to pair the fixture with a new transmitter (by default, the fixture is linked to the SGM factory transmitter).

In order to do so, make sure the fixture is powered on before taking the following steps:

1. Take the spanner that comes with the fixture, place the magnet close to the LED indicator, and wait for 3 seconds. The LED indicator will blink orange for 1-2 seconds, before switching to static green again. The fixture can now be paired with a new transmitter.
2. Go to the wireless transmitter and press "connect" or "link". Now the external third-party transmitter and the internal SGM receiver should be linked together.

Repeat the process to link the fixture to another transmitter.

Disconnecting a wireless transmitter in POI

To disconnect the P-10 POI from the currently paired wireless transmitter, simply hold the magnet for 3 seconds over the LED indicator. The LED indicator blinks orange for 1-2 seconds, switching later to green again. The fixture is now logged off.

Accessories

The P-10 Series can be used with various accessories such as cables, barndoors, filter frames, and anti-glare shields. To get to know all the available P-10 accessories, go to www.sgmlight.com or contact your local SGM dealer.

Barndoors

The P-10 Series features 4-way barndoors. The barndoors are designed and intended to be mounted on the fixture without the use of any tools.

To install the barndoors:

1. Attach the lower plug-in pins to the bottom part of the P-10 front.
2. Pull the two upper lock pins and fit the upper part of the barndoor in the P-10 head.
3. Release the lock pins and check that they are correctly in place.

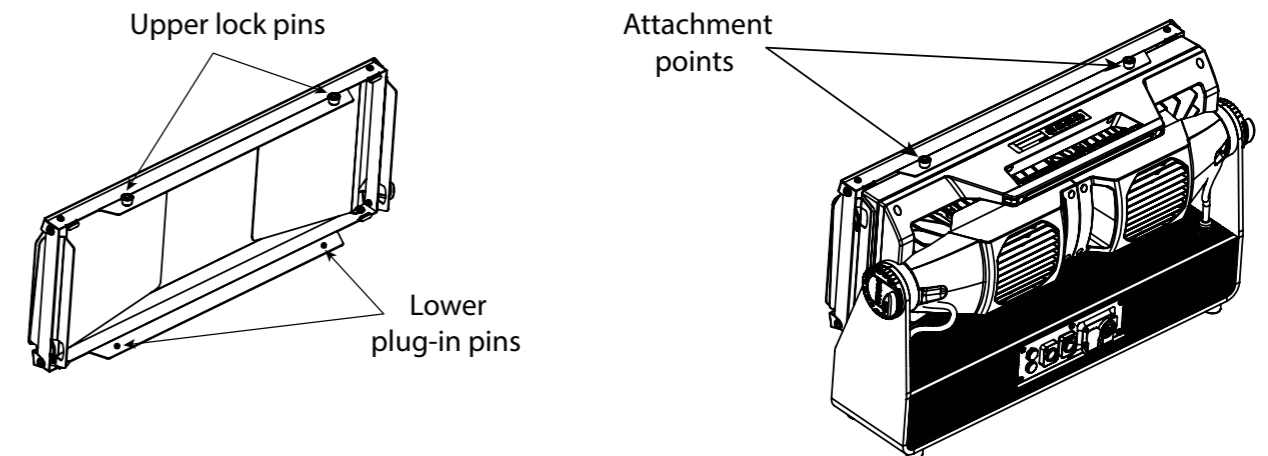


Figure 20: Barndoors

Filter frames

The P-10 Series features various optional, magnetic holographic filter frames:

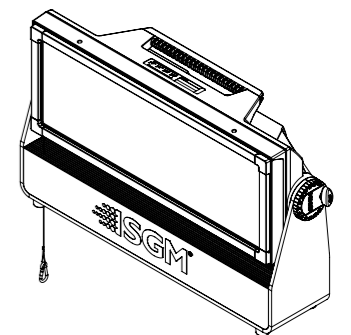
- Wide angle (45°).
- Medium angle (19°).
- Elliptical wide angle horizontal (63°x12°).
- Elliptical wide angle vertical (12°x63°).
- Empty frame for optional filters.

The type of filter is easily identified by the engraving in the corner of the filter.

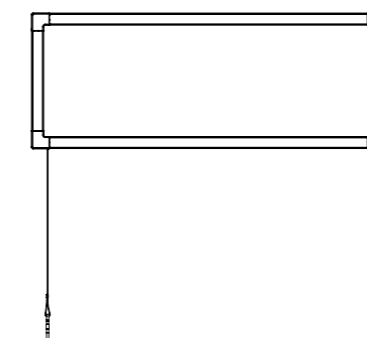
The filter frames are easily mounted due to their magnetic properties. To install them, it's only required to position the filter frame in front of the light, and it quickly snaps into place.

The frames are fitted with a safety wire to secure the frame to the yoke on the P-10.

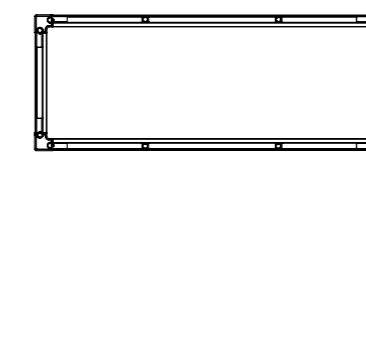
A filter frame can be mounted simultaneously with a barndoor.



Filter frame front view



Filter frame back view



P-10 with filter frame

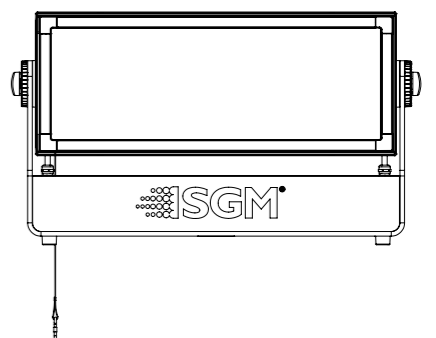


Figure 21: Filter frames

PLEASE NOTE!!

The barndoors and the filter frames are not intended for permanent outdoor installations.

Anti-glare shields

The P-10 Series supports two different types of optional anti-glare shields:

- **Full anti-glare shield** - covers the full fixture's opening.
- **Half anti-glare shield** - covers half of the fixture's opening.

Using the anti-glare shields will remove any unwanted glare and reflections.

The anti-glare shields are easily mounted by removing the two tilt lock bolts, one on each side of the fixture. Refit the anti-glare shield in position and screw both tilt lock bolts again.

Note: The anti-glare shields are suitable for both permanent outdoor and indoor installations.

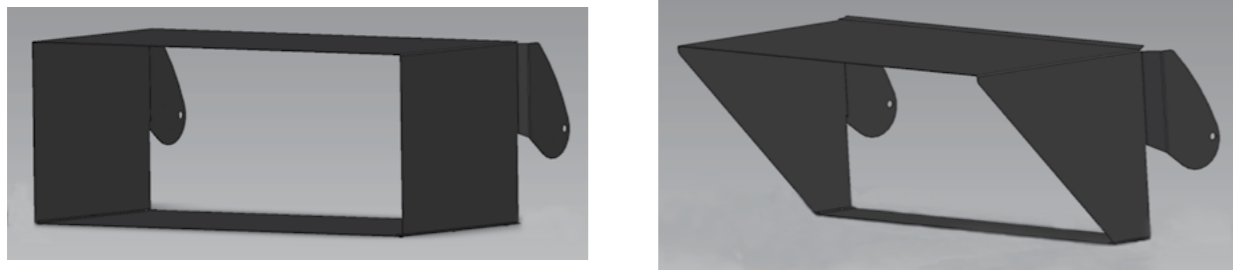


Figure 22: Full and half anti-glare shields

For further information and other possibilities see www.sgmlight.com or contact your local SGM dealer.

Maintenance

SGM Vacuum Test kit

The Vacuum Test Kit is an accessory suitable for all SGM IP-rated fixtures, made for testing the IP validity after having reassembled the fixture.

In order to ensure the IP rating of the P-2 Series, it's highly recommended that the fixture is always vacuum-tested after installing or swapping any part that might compromise the IP rating, e.g. swapping the front lens.

SGM disclaims liability for any damage occasioned by non-use or inability to use the vacuum test kit after reassembling the fixture.

SGM Uploader cable

The SGM USB to DMX cable is an accessory used mainly to update the fixture with the latest SGM firmware. See below how to update the fixture with the latest firmware.

Both the SGM Uploader cable and the SGM Uploader cable POI are also used for controlling the DMX values channel by channel through the Firmware Uploader Tool software (available for download at www.sgmlight.com).

SGM Uploader cable, POI

This cable is an accessory to upload firmware in fixtures not using XLR connectors, such as POI series. See below how to update the fixture with the latest firmware.

Upgrading the firmware

The firmware installed in the fixture can be identified in different ways:

- When powering on the fixture, the display shows the current installed firmware version (only standard).
- Go to MENU → INFO → FIRMWARE VERSION (only standard).
- Through RDM.

We recommend that the fixture's firmware is kept always up-to-date. The latest firmware version is available for download under the respective product at www.sgmlight.com.

To update your P-10 with the latest firmware, use an SGM USB 5-Pin-XLR uploader cable, and a Windows-based computer with the SGM Firmware Tool software installed (available for download at www.sgmlight.com).

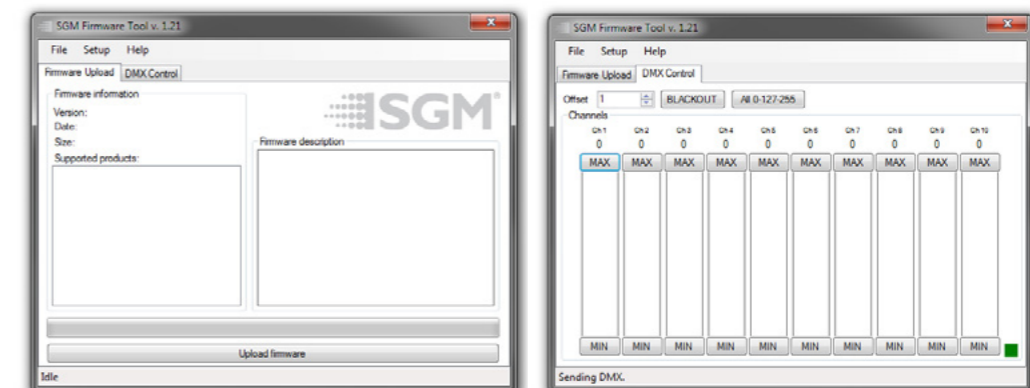


Figure 26: SGM Firmware tool

Additionally, the Firmware Tool software offers a simple DMX controller, featuring 512 DMX channels for test purposes.

Cleaning

SGM fixtures with IP65 or IP66 rating do not need any cleaning procedures inside the fixture. However, cleaning the front lens may be needed to achieve the maximum light output after exposure to dust, sand, or dirt. Exterior housing can also be cleaned to get a better look. To maintain adequate cooling, fans must be cleaned periodically.

Whenever necessary, clean the P-10 Series using a soft cloth dampened in a solution of water and mild detergent. Do not use products that contain solvents, abrasives, or caustic agents for cleaning, as they can cause damage to both hardware, cables, and connectors.

The level of cleaning required will vary greatly depending on the operating environment and installation. Therefore, it is recommended to do frequent check-ups during the first few weeks of operation to see how often cleaning is necessary.



Figure 23: SGM Vacuum Test Kit



Figure 24: SGM Uploader cable



Figure 25: SGM Uploader cable



SGM Light A/S

Sommervej 23

8210 Aarhus V

Denmark

Tel: +45 70 20 74 00

info@sgmlight.com

www.sgmlight.com