RETRO 16

PRODUCT OVERVIEW

INTENSE LIGHT ENGINE



KEY FEATURES

Beam Options: 6 | 10 | 16 | 30 | 50
Light Engine Performance: 653lm | 8.40W
Movement: 360 Pan | 90 Tilt
Tool-less field changeable optics
Ultra narrow high intensity beams
Interchangeable accessories
UK Part L1 / L2 (Display) Compliant

OVERVIEW

Retro 16 is a Constant Voltage single source LED spotlight that is machined from aerospace grade aluminium 6063-T6 and comes as standard in white, black and brushed aluminium along with three premium brass finishes. It has five site-changeable optics for flexible beam distribution. Our 653lm | 8.40W light engine has a max peak intensity of 28223cd. An accessory holder is available separately that can accommodate 55mm (2.16") lenses and louvers. The Jack Plug is compatible with Precision Lighting's 24V Jack systems. The onboard 24V DC driver ensures overcurrent protection and is not polarity sensitive. An external AC to 24V DC power supply is required.

PERFORMANCE

	Intense				
	U. Narrow	Narrow	Medium	Flood	W. Flood
FWHM	6°	10°	16°	30°	50°
Luminous Flux	650 lm	653 lm	623 lm	637 lm	605 lm
Peak Intensity	28223 cd	15476 cd	5671 cd	1652 cd	633 cd
CCT	2700K | 3000K | 3500K | 4000K				
CRI Min.	92 | 92 | 92 | 90				
LED Current	0.700 A				
Voltage	24 V				
Input Wattage	9 W				
Efficacy	77.7 lm/W				
Driver Type	Constant Voltage | Remote AC to 24VDC				
Class	SELV | Class III				

ORDER CODE

Model	Type	Output	CCT	Beam Angle	Finish
RET16 *Retro 16*	**MJ** *No mounting* [2]	**IO** *Intense Output*	**27K** *2700K*	**UN** *Ultra Narrow 6°*	**WH** *White*
	FMJ *Flat Monopoint*		**30K** *3000K*	**NR** *Narrow 10°*	**BK** *Black*
	SMJ *Surface Monopoint*		**35K** *3500K*	**ME** *Medium 16°*	**AL** *Br. Aluminium*
	NMJ *Node Monopoint*		**40K** *4000K*	**FL** *Flood 30°*	**RBZ** *Rubbed Bronze*
	TMJ *Trimless Monopoint*			**WF** *Wide Flood 50°*	**BR** *Br. Brass*
	BT *Basis Track* [1]				**PB** *Polished Brass*
	BTW *Basis Track Wall* [1]				

Example code: RET16-MJ-IO-27K-UN-WH

[1] *BT and BTW are available for AL and RBZ only* [2] *MJ requires the specification of a separate mounting point.*

See Drivers, Power Supplies and Accessories sections for further order codes

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LIGHT ENGINE SELECTION

This product is available with our Intense static white light engine option outlined below.

▸ intense ◂

Precisions signature intense light engines offer tight, surgical beams combined with the highest peak intensity values available.

- Ultra-tight beams
- High Peak Cd

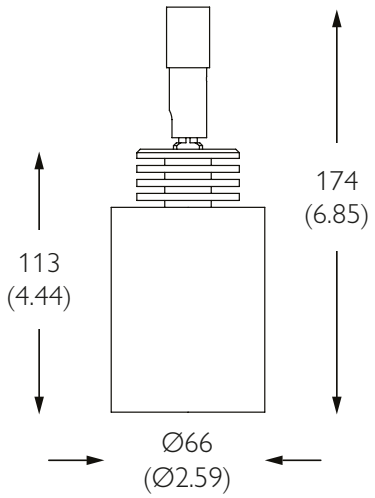
LIFETIME & ENVIRONMENTAL

At Precision, we design and engineer our products with longevity in mind. Many of the components that make up our light fixtures are both modular and re-usable, making it possible to service and repair them throughout their life in service. Once our products reach the end of their useful life, it is possible to re-work and renew them in to a new product. We prioritise the use of recyclable materials in both our products and packaging, and encourage our customers to engage responsibly in the correct disposal of any materials we supply.

CIBSE TM65	18.69 Kg/CO2e
CIBSE TM66	2.4
RoHS Compliance	Yes
REACH Compliance	Yes
WEEE Compliance	Yes - Registered Producer
Declare	LBC Red List Approved
Lifetime	L90B10 100,000hrs
Warranty	5 Years

UK PART L	
Part L1A / L1B (Dwellings) *≥75 lm/W source lumens*	*Compliant 105 lm/W* *Source lm (882 lm) / Source W (8.40 W)*
Part L2A (General) *≥95lm/W delivered lumens*	-
Part L2A (Display) *≥80 lm/W source lumens*	*Compliant 105 lm/W* *Source lm (882 lm) / Source W (8.40 W)*

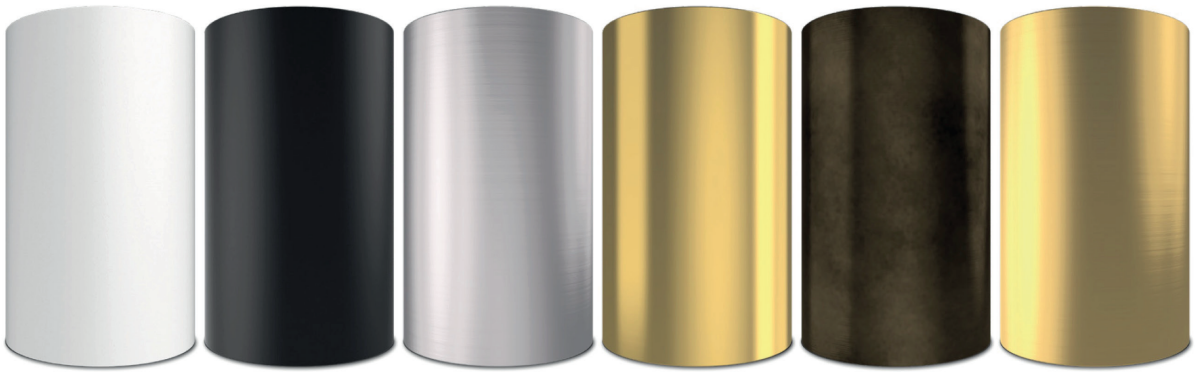
DIMENSIONS



MECHANICAL

Location	IP20 | Indoor Dry Location Only	**Cutout**	N/A
Mounting	Basis Track | 24V Monopoints	**Ceiling Thickness**	N/A
Adjustability	360 Pan | 90 Tilt	**Product Class**	SELV | Class III
Lockable	N/A	**Material**	Machined AL 6063-T6 | Machined Brass
Accessories	Louver | Lenses	**Weight**	440g | 0.97lb

FINISHES



White | Black | Brushed Aluminium | Polished Brass | Rubbed Bronze | Brushed Brass

100W | 0-10V | Remote | Constant Voltage

Input Voltage	230VAC | 50/60 Hz
Driver Type	Remote | Constant Voltage
Location	IP20 | Indoor Location Only
Dimming Control	0-10V
Min. Dim Level	1.0%
Flicker	IEEE P1789 Compatible | No Observable Effect
Wiring Distance	12 AWG - 10m (33')



	All CCT's		L	W	H
Max. Lights	1 to 9	**mm**	240	50	34
Order Code	PSCV-100-24-A-OS	**in**	9.45	1.97	1.34

130W | 0-10V | Remote | Constant Voltage

Input Voltage	230VAC | 50/60 Hz
Driver Type	Remote | Constant Voltage
Location	IP20 | Indoor Location Only
Dimming Control	0-10V
Min. Dim Level	1.0%
Flicker	IEEE P1789 Compatible | No Observable Effect
Wiring Distance	12 AWG - 10m (33')



	All CCT's		L	W	H
Max. Lights	1 to 12	**mm**	240	63	37
Order Code	PSCV-130-24-A-OS	**in**	9.45	2.48	1.46

100W | DALI-2 | Remote | Constant Voltage

Input Voltage	230VAC | 50/60 Hz
Driver Type	Remote | Constant Voltage
Location	IP20 | Indoor Location Only
Dimming Control	DALI-2
Min. Dim Level	1.0%
Flicker	IEEE P1789 Compatible | No Observable Effect
Wiring Distance	12 AWG - 10m (33')



	All CCT's		L	W	H
Max. Lights	1 to 10	**mm**	388	42	30
Order Code	PSCV-100-24-D-EL	**in**	15.28	1.65	1.18

INSTALLATION

To ensure consistent dimming performance when using monopoints, it is recommended to use a 12 AWG / 4 mm² cable. The increased cross-sectional area of 12 AWG / 4 mm² cable minimizes voltage drop between lights, maintaining consistent brightness levels across the entire circuit, especially when dimmed.

Minimize Total Circuit Length:

- To reduce voltage drop, the total length of the lighting circuit should be kept as short as possible.

Close the Loop:

- Arranging the circuit in a U-shape, L-shape, or ring configuration (by joining the first and last lights) helps to balance voltage distribution.
- This technique effectively reduces voltage variation between lights, promoting uniform brightness.

Wiring in a Ring:

- Creating a ring circuit allows current to flow from both ends, significantly reducing the impact of voltage drop along the line.
- This approach is especially beneficial in larger installations or where long cable runs are unavoidable.

Positioning the Power Supply:

- Place the power supply as centrally as possible to reduce voltage drop to the furthest points.
- Consider using multiple supplies for larger installations to maintain consistent voltage.

100W | 0-10V | Remote | Constant Voltage

Input Voltage	120V AC Only | 50/60 Hz
Driver Type	Remote | Constant Voltage
Location	IP20 | Indoor Location Only
Dimming Control	0-10V
Min. Dim Level	1.0%
Flicker	IEEE P1789 Compatible | No Observable Effect
Wiring Distance	12 AWG - 10m (33')



	All CCT's		L	W	H
Max. Lights	1 to 9	**mm**	550.0	65.0	57.0
Order Code	USCV-100-24-A-MW-ENC	**in**	21.65	2.56	2.24

96W | Phase | Remote | Constant Voltage

Input Voltage	120V AC Only | 50/60 Hz
Driver Type	Remote | Constant Voltage
Location	IP20 | Indoor Location Only
Dimming Control	Phase
Min. Dim Level	1.0%
Flicker	IEEE P1789 Compatible | No Observable Effect
Wiring Distance	12 AWG - 10m (33')



	All CCT's		L	W	H
Max. Lights	1 to 8	**mm**	380.0	77.0	57.0
Order Code	USCV-96-24-P-LU	**in**	14.96	3.03	2.24

100W | DALI-2 | Remote | Constant Voltage

Input Voltage	120-277V | 50/60 Hz
Driver Type	Remote | Constant Voltage
Location	IP20 | Indoor Location Only
Dimming Control	DALI-2
Min. Dim Level	1.0%
Flicker	IEEE P1789 Compatible | No Observable Effect
Wiring Distance	12 AWG - 10m (33')



	All CCT's		L	W	H
Max. Lights	1 to 9	**mm**	550	65	57
Order Code	USCV-100-24-D-EL-ENC	**in**	21.65	2.56	2.24

INSTALLATION

To ensure consistent dimming performance when using monopoints, it is recommended to use a 12 AWG / 4 mm² cable. The increased cross-sectional area of 12 AWG / 4 mm² cable minimizes voltage drop between lights, maintaining consistent brightness levels across the entire circuit, especially when dimmed.

Minimize Total Circuit Length:

- To reduce voltage drop, the total length of the lighting circuit should be kept as short as possible.

Close the Loop:

- Arranging the circuit in a U-shape, L-shape, or ring configuration (by joining the first and last lights) helps to balance voltage distribution.
- This technique effectively reduces voltage variation between lights, promoting uniform brightness.

Wiring in a Ring:

- Creating a ring circuit allows current to flow from both ends, significantly reducing the impact of voltage drop along the line.
- This approach is especially beneficial in larger installations or where long cable runs are unavoidable.

Positioning the Power Supply:

- Place the power supply as centrally as possible to reduce voltage drop to the furthest points.
- Consider using multiple supplies for larger installations to maintain consistent voltage.

RETRO 16

PHOTOMETRY

INTENSE LIGHT ENGINE

OUTPUT SCALING

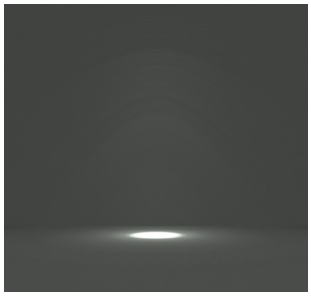
CCT	Output Multiplier	CRI	R9 Typ.	TM-30: Rf	TM-30: Rg	Max Lm
2400K	-	-	-	-	-	-
2700K	0.90	92	50	90	99	588
3000K	1.00	92	50	90	99	653
3500K	1.00	92	50	90	99	653
4000K	1.00	90	50	90	98	653

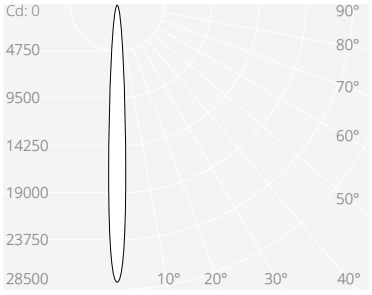
Colour Consistency: 2 SDCM at 2700K / 3000K, 3DCM at 3500 / 4000K

PHOTOMETRY

ULTRA NARROW

FWHM	6°
Delivered Flux	650 lm
Peak Intensity	28223 cd

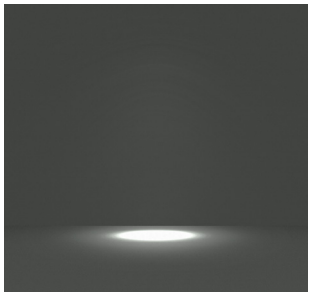


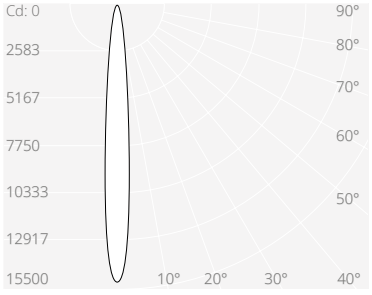


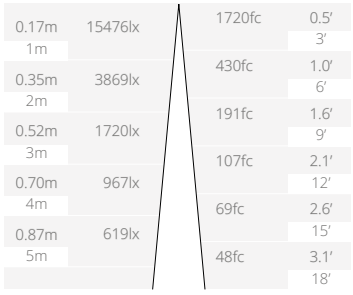


NARROW

FWHM	10°
Delivered Flux	653 lm
Peak Intensity	15476 cd

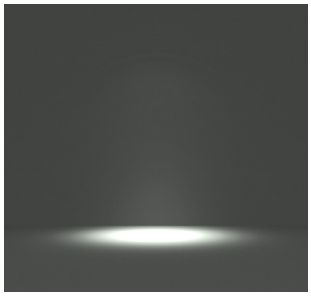


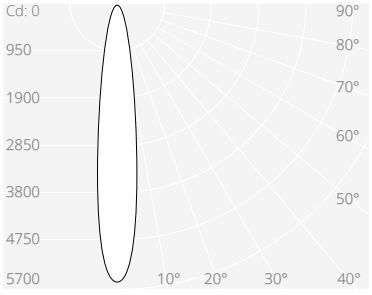


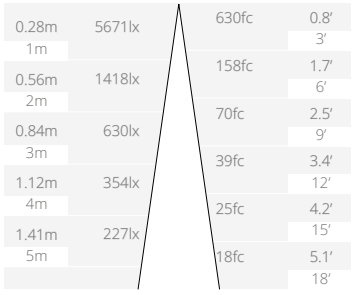


MEDIUM

FWHM	16°
Delivered Flux	623 lm
Peak Intensity	5671 cd

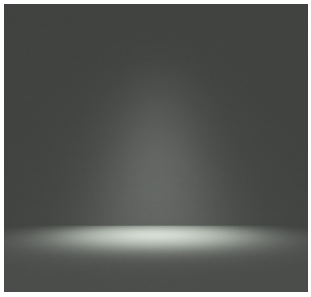


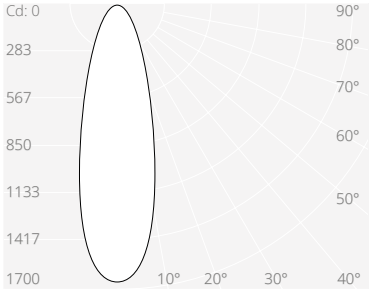


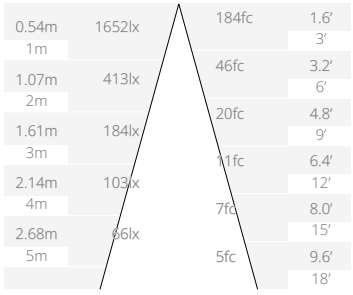


FLOOD

FWHM	30°
Delivered Flux	637 lm
Peak Intensity	1652 cd

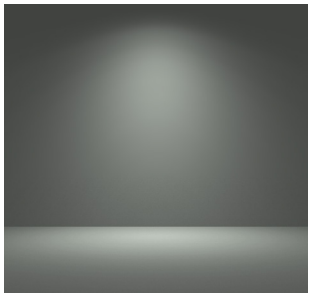


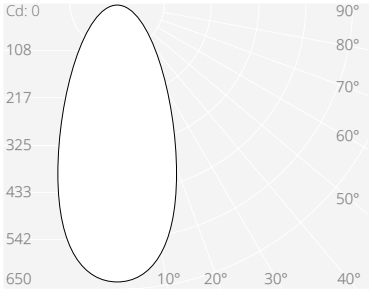


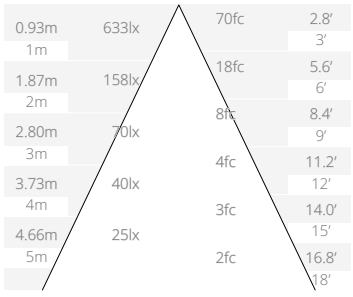


WIDE FLOOD

FWHM	50°
Delivered Flux	605 lm
Peak Intensity	633 cd



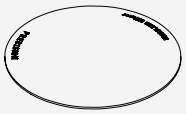
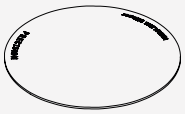
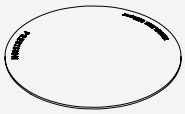
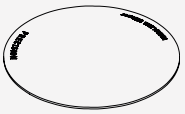
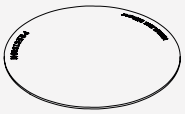




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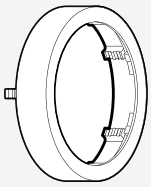
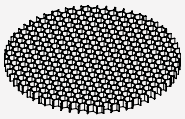
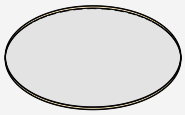
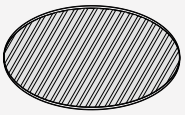
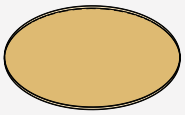
OPTICS

There are 5 tool-less interchangeable optics, cross reference the text on the optic disc for beam.

Optic Disc	Optic Disc	Optic Disc	Optic Disc	Optic Disc
				
Ultra Narrow Disc	**Narrow Disc**	**Medium Disc**	**Flood Disc**	**Wide Flood Disc**
FWHM 6 deg	FWHM 10 deg	FWHM 16 deg	FWHM 30 deg	FWHM 50 deg
Order Code	**Order Code**	**Order Code**	**Order Code**	**Order Code**
931-01	**931-02**	**931-03**	**931-04**	**931-05**

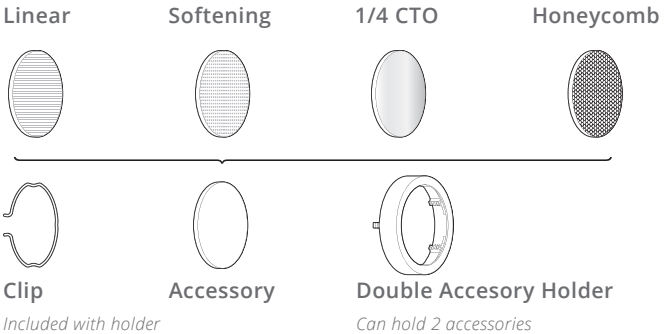
ACCESSORIES

This product can hold 2 x accessories using the double accessory holder. Accessories are pre-installed unless otherwise requested.

Accessory Holder	Glare Control	Beam Shaping	Beam Shaping	Colour Change
				
Double Accessory Holder	**Honeycomb Louver**	**Softening Lens**	**Linear Lens**	**1/4 CTO**
W63xH14mm | W2.48xH0.55"	W55xH3.2mm | W2.17xH0.13"	W55xH3.2mm | W2.17xH0.13"	W55xH3.2mm | W2.17xH0.13"	W55xH1.8mm | W2.17xH0.07"
Order Code	**Order Code**	**Order Code**	**Order Code**	**Order Code**
254-BK	**995-55-BK**	**991-55**	**992-55**	**997-1/4CTO-55**

Colour Change

Custom Colour Filter
W55xH1.8mm | W2.17xH0.07"
Order Code
Contact Sales Rep

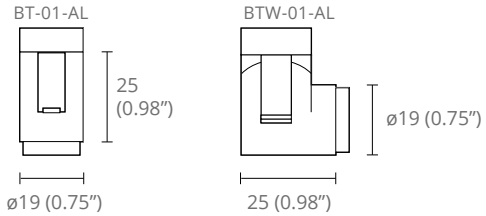


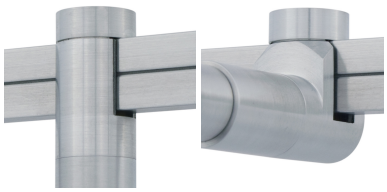
MOUNTING OPTIONS

BT & BTW - BASIS TRACK

For use with Precision Lighting Basis Track

ADAPTOR CODE	FINISH
BT-01-AL	Brushed Aluminium
BT-01-RB	Rubbed Bronze
BTW-01-AL	Brushed Aluminium
BTW-01-RB	Rubbed Bronze

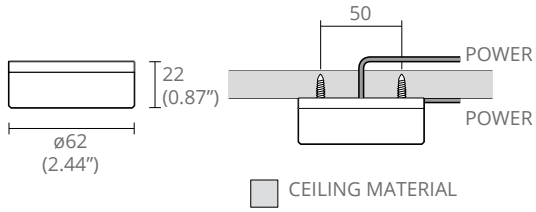




MPZ - SURFACE MONOPOINT

For blind mounting on solid surfaces

MONOPOINT CODE	FINISH
MPZ-01-AL	Brushed Aluminium
MPZ-01-WH	White RAL 9010
MPZ-01-BK	Black RAL 9005
MPZ-01-RB	Rubbed Bronze
MPZ-01-PB	Polished Brass
MPZ-01-SB	Brushed Brass



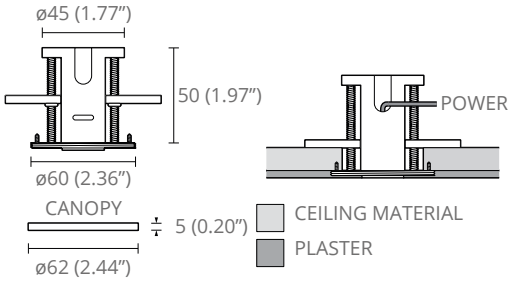


MPS - TRIMLESS MONOPOINT

For use with plasterboard / sheetrock
Note: Canopy not standard, for non-trimless install.

MONOPOINT CODE	FINISH
MPS-01-AL	Brushed Aluminium

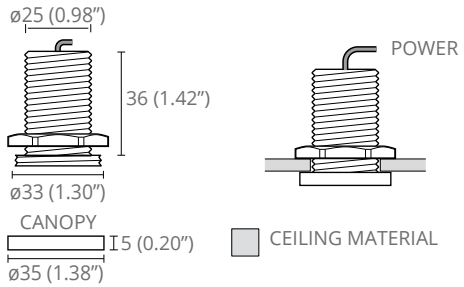
CANOPY CODE	FINISH
MPS-02-AL	Brushed Aluminium
MPS-02-BK	Black RAL 9005
MPS-02-WH	White RAL 9010



MPY - NODE MONOPOINT

For use in cabinetry
Note: rear access required after install

MONOPOINT CODE	FINISH
MPY-05-AL	Brushed Aluminium
MPY-05-WH	White RAL 9010
MPY-05-BK	Black RAL 9005
MPY-05-RB	Rubbed Bronze
MPY-05-PB	Polished Brass
MPY-05-SB	Brushed Brass





MPX - FLAT MONOPOINT

For use with most mounting surfaces
Note: wiring void required

MONOPOINT CODE	FINISH
MPX-02-AL	Brushed Aluminium
MPX-02-WH	White RAL 9010
MPX-02-BK	Black RAL 9005
MPX-02-RB	Rubbed Bronze
MPX-01-PB	Polished Brass
MPX-01-SB	Brushed Brass

