VHW-HWPS-CXT

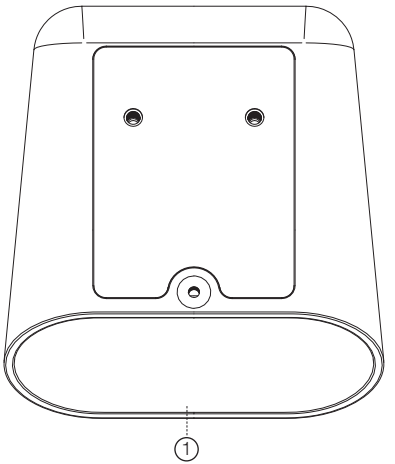
QUICKSTART GUIDE

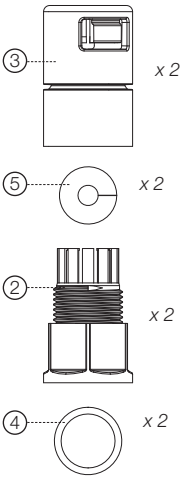
EXTERNAL ETHERNET & POE OVER COAX

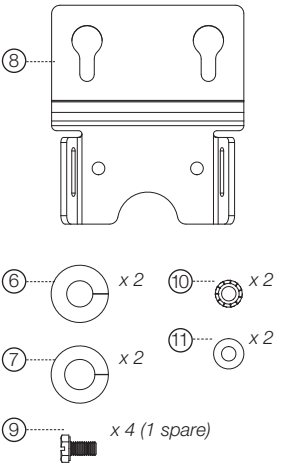
HIGHWIRE® POWERSTAR XT

veracity

WHAT'S IN THE BOX



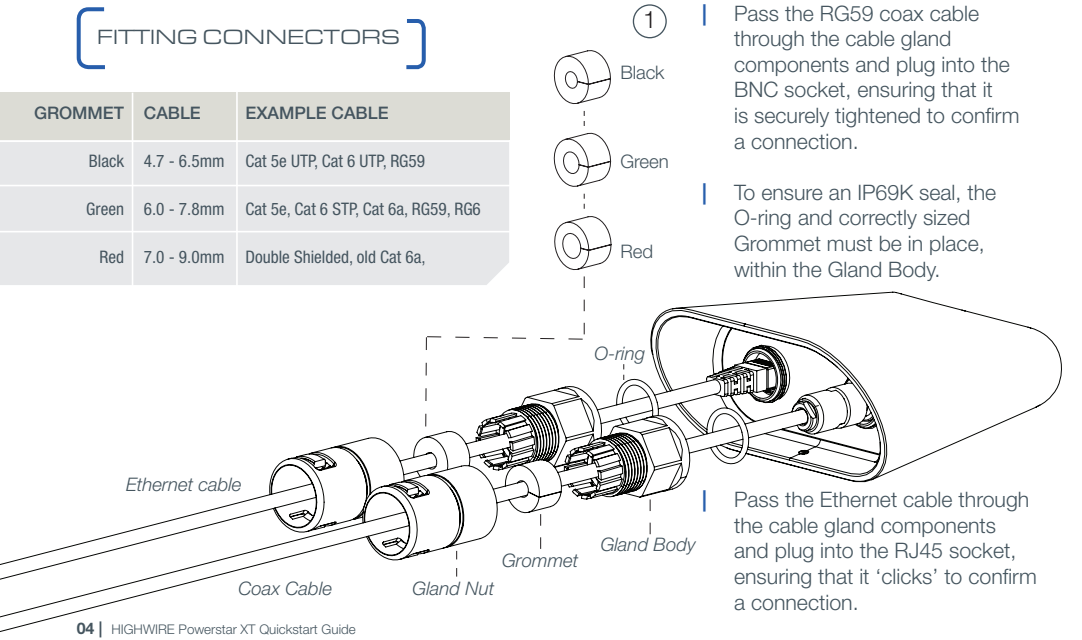




LIST OF CONTENTS

FITTING CONNECTORS

GROMMET	CABLE	EXAMPLE CABLE
Black	4.7 - 6.5mm	Cat 5e UTP, Cat 6 UTP, RG59
Green	6.0 - 7.8mm	Cat 5e, Cat 6 STP, Cat 6a, RG59, RG6
Red	7.0 - 9.0mm	Double Shielded, old Cat 6a,



Pass the RG59 coax cable through the cable gland components and plug into the BNC socket, ensuring that it is securely tightened to confirm a connection.

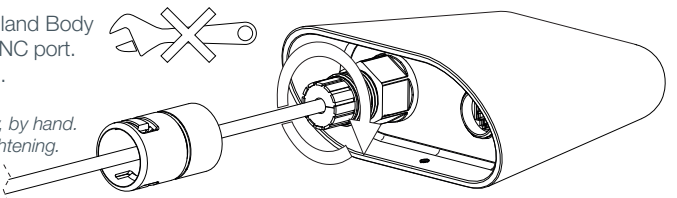
To ensure an IP69K seal, the O-ring and correctly sized Grommet must be in place, within the Gland Body.

Pass the Ethernet cable through the cable gland components and plug into the RJ45 socket, ensuring that it 'clicks' to confirm a connection.

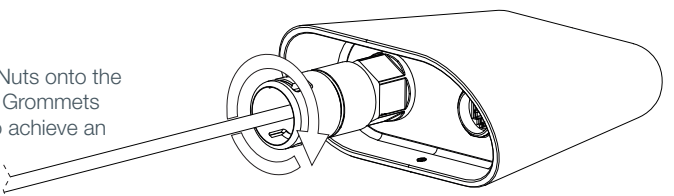
2 | Tighten the Cable Gland Body onto the threaded RJ45 port. This seals the O-ring.

| Tighten the Cable Gland Body onto the threaded BNC port. This seals the O-ring.

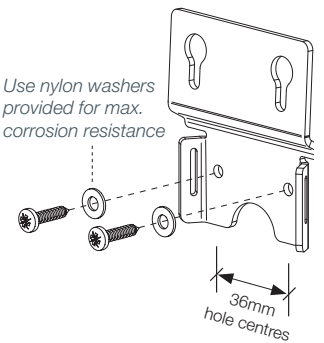
Tighten the gland firmly, by hand. Do not use tools for tightening.

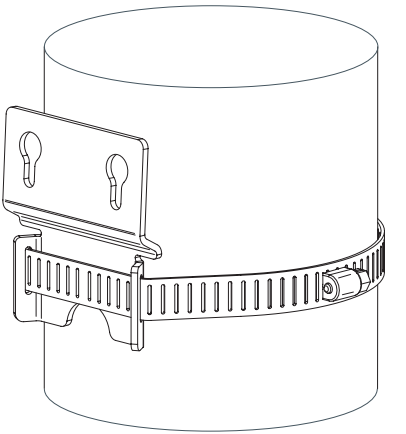


3 | Tighten both Gland Nuts onto the Body. This seals the Grommets around the cables to achieve an IP69K seal.



MOUNTING PLATE



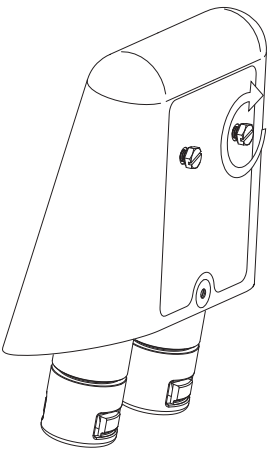


- Mounting to flat surfaces:
  Maximum screw size 3.5mm (#6)

- Mounting to poles:
  Maximum band width 12.5mm (1/2”)

MOUNTING THE DEVICE

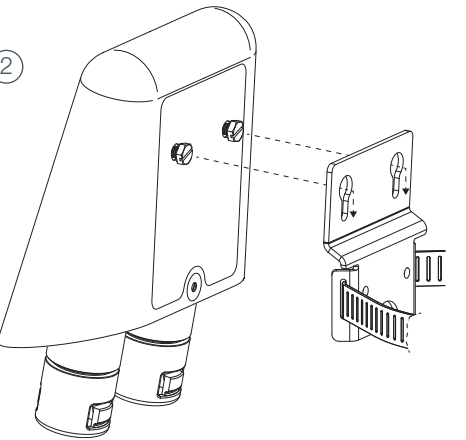
1



- Manually adjust the mounting screws to allow for the mounting bracket thickness.

HIGHWIRE Powerstar XT should always be installed this way up.

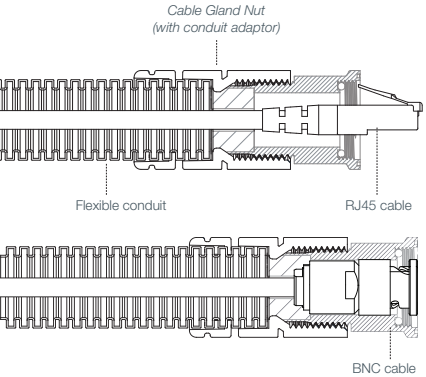
2



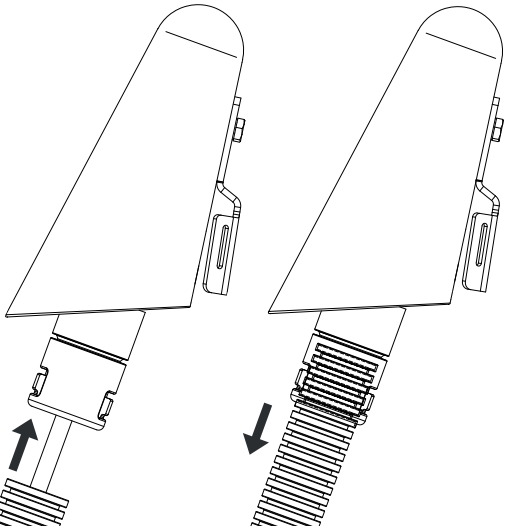
- Mount the device to the bracket to assess the fit. Repeat until a tight fit is achieved. In applications subject to vibration, use a light to medium threadlocker on the mounting screws.

CONDUIT ADAPTOR

- The Conduit Adaptor section of the Cable Gland Nut is designed for use with 20mm (ISO) or 1/2-inch (US) flexible conduit.
- It is compatible with various types with an outer diameter ranging 20mm - 21.5mm



- With the POE cable connected to the device, firmly push the conduit into the Conduit Adaptor until it's fully inserted and held securely in place.



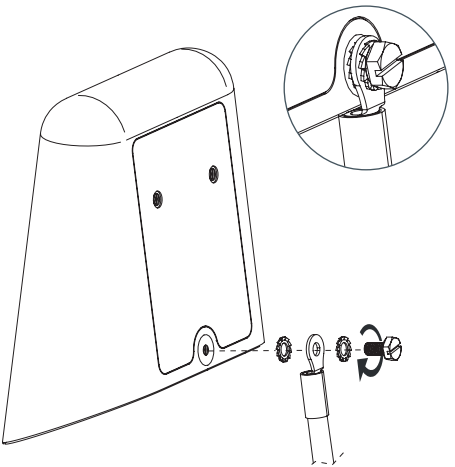
GROUNDING THE DEVICE

Grounding the HIGHWIRE Powerstar XT case is generally NOT required.

Therefore the following steps can be bypassed unless grounding is specifically required due to local conditions or specifications.

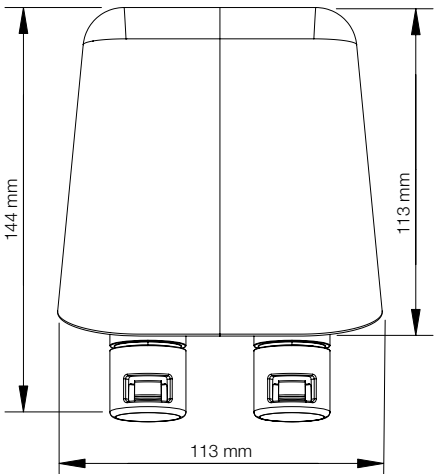
If grounding IS required, carry out the following steps:

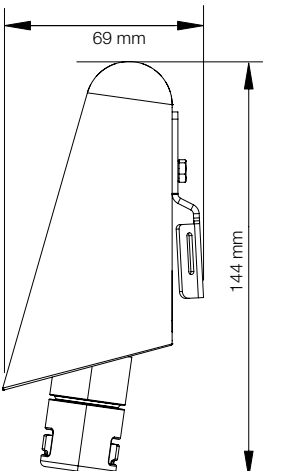
- The grounding point is designed for use with M4 ring terminals and lugs. Assemble in the order shown.
- Always use the toothed washer to maximise electrical connection and prevent loosening.
- Always use plated terminals. Never use bare copper terminals.



- Recommendation: once assembled, cover the grounding components in a waterproof, dielectric grease. This will form a protective barrier to help protect against galvanic corrosion.

DIMENSIONAL DRAWINGS





VHW-HWPS-CXT POE OVER COAX RANGE

POWER SOURCE	POE OR POE PLUS SWITCH					VERACITY POWER SUPPLY				
Camera Power (watts)	**5**	**10**	**15**	**20**	**25**	**5**	**10**	**15**	**20**	**25**
RG-59 (22AWG core) *Copper Core*	300m 1000ft	300m 1000ft	265m 880ft	195m 650ft	N/A N/A	300m 1000ft	300m 1000ft	300m 1000ft	300m 1000ft	300m 1000ft
RG-59 (20AWG core) *Copper Core*	300m 1000ft	300m 1000ft	300m 1000ft	300m 1000ft	N/A N/A	300m 1000ft	300m 1000ft	300m 1000ft	300m 1000ft	300m 1000ft
RG-59 (22AWG CCS) *Copper Coated Steel*	225m 750ft	125m 420ft	100m 330ft	60m 200ft	N/A N/A	270m 900ft	265m 880ft	185m 620ft	140m 460ft	110m 360ft

COMPATIBILITY

HIGHWIRE Powerstar XT devices are compatible with all standard HIGHWIRE Powerstar Base 8, HIGHWIRE Powerstar Base and HIGHWIRE Base devices.

Details of distances, and available POE are shown in the tables on Page 11.

POE POWER BUDGET LEDS

The POE power budget is the measured total available power for POE devices powered by the HIGHWIRE Powerstar XT device.
POE power is limited by the cable type, cable distance and power injected at the Base end. See table for POE power vs distance on page 11.

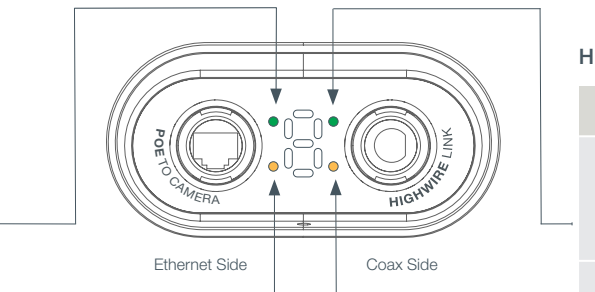
CONNECTIONS & LEDS

Ethernet and POE to Camera/Device
10Base-T/100Base-TX, auto speed, crossover, full duplex. IEEE 802.3af/at compliant.

LED (LHS)	FUNCTION
Green	POE at Camera End On = POE enabled Blink = POE error Off = POE device not detected. Ethernet only
Yellow	On = Link Blink = Activity at the Camera end

(LHS) Left Hand Side

CONNECTIONS & LEDS



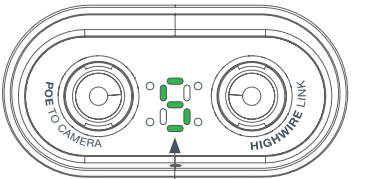
HIGHWIRE Link and 802.3at POE Input

LED (RHS)	FUNCTION
Green	On = Coax Link active Off = No power
Yellow	On = Link Blink = activity at the Base end

(RHS) Right Hand Side

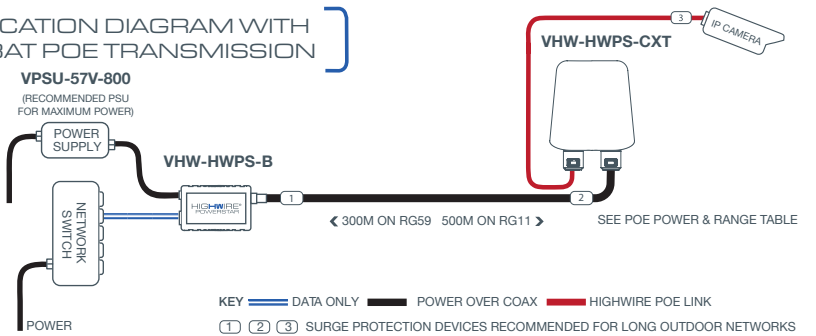
POWER LED INDICATOR

The 7 Segment Power LED indicators are shown here. The LED indicator for Power shows a green '**P**' The display will flash between 'P' and 'n' (where 'n' indicates power level 0 - 5) at a period of about 1second. The code repeats.



POWER WATTS	GREEN LED Power Available	YELLOW LED Close to Power Limit	RED LED Exceeded Power Limit
< 5W	P0	P0	P0
5W	P1	P1	P1
10W	P2	P2	P2
15W	P3	P3	P3
20W	P4	P4	P4
25W	P5	P5	P5

APPLICATION DIAGRAM WITH 802.3AT POE TRANSMISSION



- Connect HIGHWIRE Powerstar Base to HIGHWIRE Powerstar XT Camera and then to a POE camera, or other POE device.
- The HIGHWIRE Powerstar Base device may be powered either by a POE network switch or for maximum power, by a separate Veracity 56-57V DC power supply.
- A good quality Coax cable is recommended for increased POE delivery at distance.
- The HIGHWIRE Powerstar Base device can output a maximum of 30W POE depending upon the optional PSU, with 25W deliverable at the camera.
- See HIGHWIRE Powerstar Tables on Page 11 or the datasheet tables for distance vs power levels.
- HIGHWIRE Powerstar XT will only deliver >25W POE to 802.3at compatible IP cameras or other devices.

SURGE PROTECTION

Any HIGHWIRE network design for outdoor applications must incorporate the appropriate level of surge protection to avoid invalidation of warranty due to electrical storm damage. It is the responsibility of the system installer to ensure the correct level of protection.

All Veracity products have been independently tested to verify their resilience to the stringent immunity levels of international standards. Users should note that no electronic equipment can be guaranteed to be completely protected at levels beyond the defined standard; therefore product warranty cannot include damage to products which has been caused by surges exceeding those of the standards specified, for example lightning strike activity.

It is the user's responsibility to implement relevant surge protection measures, as appropriate to the installation. This may include the fitting of additional surge protection devices where required.

FCC CERTIFICATION

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

Veracity UK Ltd. Prestwick International Aerospace Park, 4 Dow Road, Prestwick, KA9 2TU. UK

Veracity's Authorised Representative in the EU (as required by EU law for CE marked goods) is: Comply Express Unipessoal Limitada, StartUp Madeira, EV141, Campus da Penteada, 9020 105 Funchal, Portugal.