INSTALLATION GUIDE

KT-CDR2 & KT-CDR3

Including Mounting & Sealing of Housing & Electrical Details

For COOLDOME™ ENCLOSURE SERIES

KT-CDR2
For D2 COOLDOME™

KT-CDR3

For D3 COOLDOME™

PRODUCT INSTALLATION
PRECAUTIONS – WARNINGS – ADDITIONAL INFORMATION
(RETAIN THIS DOCUMENT)

IMPORTANT SAFEGUARDS

1 **Read Instructions** - All the safety and operating instructions should be read before the unit is operated.
2 **Retain Instructions** -The safety and operating instructions should be retained for future reference.
3. **Heed Warnings** - All warnings on the unit and in the operating instructions should be adhered to.
4. **Follow Instructions** -All operating & user instructions should be followed.
5. **Electrical Connections** - Only a qualified electrician should make electrical connections.
6. **Attachments** - Do not use attachments not recommended by the product manufacturer as they may cause hazards
7. **Cable Runs** - All cable runs must be within permissible distance
8. **Mounting** -This unit must be properly and securely mounted to a supporting structure capable of sustaining the weight of the unit. Accordingly:
   a. Installation should be made by a qualified installer.
   b. Installation should be in compliance with local codes
   c. Care should be exercised to select suitable hardware to install the unit, taking into account both the composition of the mounting surface and the weight of the unit. Be sure to periodically examine the unit and the supporting structure to make sure that the integrity of the installation
   is intact. Failure to comply with the foregoing could result in the unit separating from the support structure and falling, with resultant damages or injury to anyone or anything struck by the failing unit,

UNPACKING

Unpack carefully. Electronic components can be damaged if improperly handled or dropped. If an item appears to have been damaged in shipment, replace it properly in its carton and notify the shipper. ***Be sure to save***
*1.T*he shipping carton and packaging material. They are the safest material in which to make future shipments of the equipment.
2. These Installation and Operating Instructions.

CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT EXPOSE COMPONENTS TO WATER OR MOISTURE	
⚡	The lightning flash with an arrowhead symbol, within an equilateral triangle, is intended to alert the user to the *presence of non-insulated "dangerous voltage" within the* product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons
⚠	The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance

SERVICE

If the unit ever needs repair service, customer should contact Dotworkz Systems +1 (619) 224-LIVE (5483) for return authorization & shipping instructions

✓ For technical questions or product returns – call Dotworkz Customer Service (866-575-4689) 7:30 AM to 4:30 PM (PST). The proper technician will contact you as soon as possible.

▪ The External Nut on All electrical wire feed Glands must be tightened to create a weather tight seal prior to putting D2 in service. Failure to create this seal may result in water incursion into enclosure. This may lead to electrical shock, product failure and damage to electrical systems installed within enclosure, including but not limited to damage to camera, heater and blower circuitry, cooling circuitry and other systems installed in unit.

▪ All screws on hinged lower must be tightened to create seal on enclosure. Failure to create this seal may result in water incursion into enclosure. This may lead to electrical shock, failure and damage to electrical systems installed within enclosure, including but not limited to damage to camera, heater and blower circuitry, cooling circuitry and other systems installed in unit.

▪ Do not over tighten any Screws, Stand Offs, or other fasteners on this unit. Failure to heed this warning will cause damage or failure of the D2 enclosure.

▪ Be sure to take extra care to Protect Lens of unit prior to and during installation, and during service. Suspension packaging box is a handy platform to protect lens and enclosure, while installing camera and accessory electronics before installation. Failure to protect lens will adversely affect product perform

Electrical Conduit Guidelines

For optimal performance, your Dotworkz Enclosure is designed to be Air & Water Tight to eliminate any moisture, dust, and insect damage, safety, performance, reliability, and maintenance related issues.

Use of Electrical Conduit, *without sealing the entry ports/ inside wire feeds* within Camera Enclosure, will subject the inside of your enclosure to possibility of condensation driven moisture, dust, and insect contamination hazards.

Dotworkz has provided each enclosure with two Cable Gland Strain Relief seal ports that fully seal enclosure to an IP68 rating, Waterproof and Airtight Seal. To properly seal, only one round cable is used in each cable gland port. (Holes on enclosure are 7/8" diameter, ready for standard ½" I.D. NPT connector, or PG13 fittings.)

However, we realize our customers are retrofitting these connectors with electrical conduit fittings. We acknowledge this industry customization and installation practice, and would like to guide customers to properly install these products.
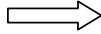
Conduit Guidelines:

1) If wires, cabling, or conduit are coming at enclosure wire entry level, or above, always create a drip loop.

2) Please use only approved <u>watertight</u> electrical conduit and connectors, IP66 or better, with proper seals and fittings installed & fully seal.

3) ***Then, after all wire and cables are installed into enclosure, <u>Seal wire entry ports inside of enclosure</u>*** with any number of commercially available sealing putty's, Silicone Sealant, or similar products that are approved by applicable local and relevant electrical codes.
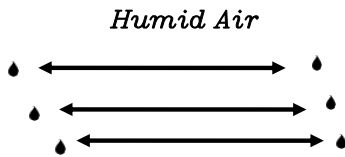
Dotworkz supplies two ½" diameter foam conduit plugs, that when installed, will assist in sealing off airflow in conduit feed thru, at cable entry inside of enclosure. Putty or Sealant can be used in conjunction with these plugs, to assure a full seal inside enclosure cable feed entry.

FORCES AT WORK IN ANY UNSEALED, CONDUIT WIRE FEED ENCLOSURE SYSTEM

WARM/MOIST IN UNSEALED CONDUIT MOVES THRU CONDUIT FEEDS EXPAND & CONTRACT WHEN CONDUIT HEATS & COOLS WITH OUTSIDE TEMPERATURES

EXPANDING HEATED AIR IS PUSHED INTO ENCLOSURE THEN COOLS & CONDENSES, HUMID AIR CONDENSES ON SURFACES INSIDE ENCLOSURE

Humid Air

Condensing to Water

<u>SHOCK HAZARD!</u> Failure to fully seal enclosure wire and cabling entry ports **may lead to <u>shock hazard,</u> unsatisfactory product performance, a possibility of damage to electronics in the Dotworkz enclosure product, including camera damage, and damage to integrated electronics** due to air driven moisture traveling thru the conduit, condensing and collecting in the enclosure creating a short circuit hazard.

Electrical Putty & Putty Tapes
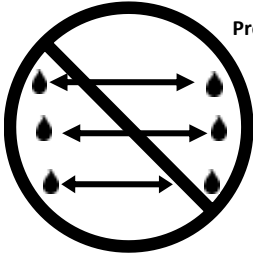
Silicone Sealants

Foam Sealants (use very sparingly)

Dotworkz does <u>not</u> endorse, nor has it evaluated any of these products. Test products first, and follow all manufacturers' instructions. Follow all applicable electrical and building codes and installation guidelines. End user assumes liability for applicability of these products and their effectiveness and incurred liability in using these products.

VENT STOPPER PLUGS for Conduit

Foam Conduit Feed Plugs for ½" I.D. (PG-13) Conduit

Prevents Humid Air exchange from venting thru electrical conduit into Dotworkz sealed enclosures,

Thus eliminating condensation issues within Dotworkz sealed enclosures.

QUICK INSTALLATION GUIDE

1) Pull wires to final installed length.

4) Push plug into conduit mouth with finger tips till it flush with outside of fitting

2) Open Vent Stop Plug and install over wire.

5) Repeat steps 1-4 for any other conduit feeds as needed.

3) Pinch Plug to compress over wire, and insert into conduit feed mouth.

6) To assure an airtight seal, caulk around wires and cables, coating entire plug surface with sealant.

COOLDOME™ Wiring

⚠️

NO 18 gg ⊘

**Dotworkz CD Series Operate using DC low voltage only, and creates ample currents when cooler is engaged.
18 gg wire is _Not_ recommended for cooler wiring.**

Follow relevant Cable Gauge Guidelines provide in this document applicable to your product model.

**CD's are _Dedicated_ 12 VDC _or_ 24 VDC models Only.
Use Step Down Power supply Included in CD Package to power from high voltage line supply.**

Dotworkz Humidity Removal Canister ✓

Dotworkz Provides a Humidity Removal Canister _must be installed into COOLDOME_ prior to entering enclosure into service.
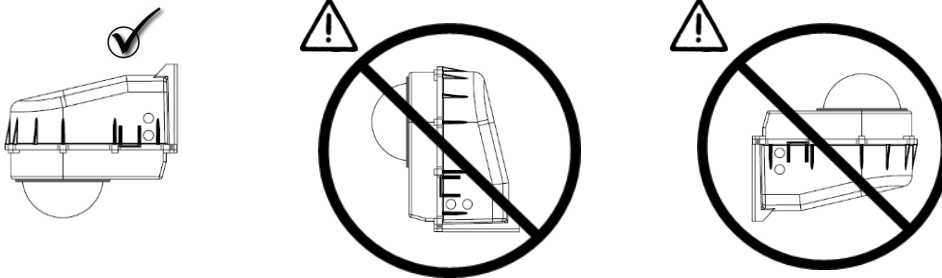Active Cooler within COOLDOME lowers temperature to at or near dew point within COOLDOME, so trapped air must be dried out to eliminate condensation issues. The sealed air is efficiently dried out by this desiccant canister, which provides a color coded saturation state window.
It must be removed from its foil envelope, and can be installed on shelf next to cooler, or above camera on camera mounting plate. See installation section for service info on this product.

Dotworkz D-Series Mounting Guidelines

Dotworkz D-Series Seals & drip edges are engineered for horizontal installation Only: Dome bubble faces down.

Vertical and dome-up installations are not advised, and will be prone to moisture incursion within housing, and will void warranty.

✓   ⚠️⊘   ⚠️⊘

COOLDOME™ Accessories & Mount Options
(some brackets only compatible with D-Series, consult Dotworkz Sales Representative for Details)

Your COOLDOME is wall mount ready, but can be Installed with a number of Dotworkz Optional Mounts (sold separately)

KT-CDR2 Outdoor CD Power Pole Mount Kit   **NM-CDPS NEMA for CD Power Supply**   **BR-PSA1**   **BR-APM1**

BR-MPM1   **BR-MPM1-AC**   **BR-CNR1**   **BR-ECB1**

BR-MPM1
With common
Pipe anchor for
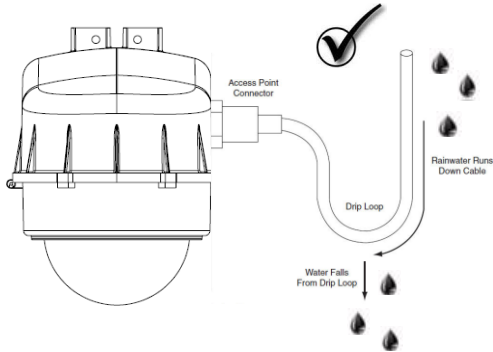pendant mounting

Proper Cable Management to Enclosure
Avoid common Installation Mistakes

⚠ Only Use Qualified Installation or Service Technician for Installing & Servicing Dotworkz Enclosures.
Power Must be disconnected and kept off while installing or Servicing Enclosure.
Follow All Local and Applicable Electrical Codes and Standards for Installation of Electrical components.

All Cable Ports, wire feeds, or Conduit **must be fully sealed** to eliminate moisture within Enclosure.
All Dotworkz Enclosures are required to be fully sealed before placing into service, to protect integrated products, to eliminate any moisture driven shock hazard, to perform optimally as designed.
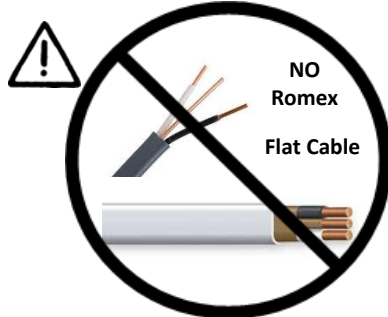
DRIP LOOPS

Always Create a Drip Loop for all Cables or Conduit Entering Dotworkz D2 Housing from level or Above D2
Conduit, Power, Data, & Antennae
To avoid gravity driven moisture entry into Enclosure
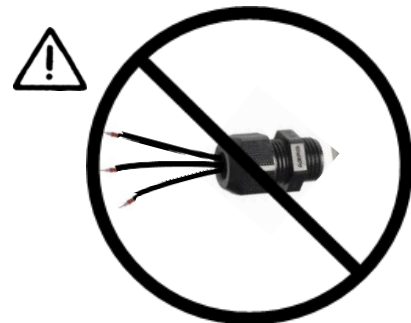
Cable Gland Strain Relief Port Seals
To properly seal, Dotworkz Cable Gland Strain Relief Ports will only accept **One** *single round cable per port*

* SJOOW
* Cat5/ Cat6
* Coaxial

NO
Romex

Flat Cable

Use Round Cable Only with provide Cable Gland Port Seal

Dotworkz Standard Cable Gland Port Seals are designed for **ONE** single round cable only per port

Cable can be multi-conductor in single round cable bundle such as Cat5/ 6e (burial rated), or Conductor cable SJ00W (water rated)

Conduit
If Conduit is used in Lieu of Cable Gland Port Seals provided,
Then Use Only Liquid Tight Conduit & fittings properly sealed.

Internal Wire feeds must be fully sealed prior to placing Enclosure into Service.
See Conduit Guidelines section of this manual.

+ + Silicone **=** ✓

Tools Recommended for Enclosure & Camera Mounting

Hand Tools   Drill & Bits   Pole Strapping Tools

- #1 & #2 Phillips head screw driver

-#1 Flat Blade screw driver *or smaller*

- 3/8 Socket wrench, nut driver, or adjustable wrench

- 5/16 Socket wrench, nut driver, or adjustable wrench

- 7/16 Socket wrench, nut driver, or adjustable wrench

- 7/32 Socket wrench, nut driver, or adjustable wrench

- 11/32 Socket wrench, nut driver, or adjustable wrench

- Wire stripping tool

- Caulk Gun & Silicone Sealant

For Wall Mounting
- Drill and Bits for user supplied fasteners for wall mounting enclosure

For Pole Mounting
- Strapping / Banding Tools for user supplied Stainless Steel Pole Straps

For other needed Mounting Styles:
**See Dotworkz for Available Optional Mounting Brackets for a wide selection of Enclosure Mounting Styles @ www.dotworkz.com, or ask your favorite distributor or Sales Associate, or call Dotworkz Support   (866) 575-4689

Dotworkz D2 COOLDOME accepts four (4) 3/8" Bolts or Lag Screws to Wall Mount
See Mounting Template at back of this manual for hole pattern.
(Customer provides enclosure mounting hardware)

KT-CDR2 & KT-CDR3: Power & Cable Hook Up

The provided Dotworkz D2 COOLDOME enclosure is **Powered by** _dedicated 12 VDC Only_, (or 24VDC on 24V models) and must use step down Power Pack Pole Mount to be powered by High Voltage
**Never** apply High Voltage directly to inputs directly inside enclosure to power COOLDOME.

Power must be shut off during installation. Installation must be done by a qualified electrical technician. Read and Understand all product instruction before installation.
**Always** follow local and applicable electrical codes and safety standards. Contact applicable manufacturer if you have any questions on any part of this product installation.

* **Water Proof Wire Nuts** are Provided with this kit-
Please use provided wire nut terminations or other waterproof connection solution for a complete seal

Pre-wiring High Voltage Input

Locate Power Pack Pole Mount high voltage input box

Remove High Voltage input Wiring Box by removing two machine screws that fasten it to metal bracket

Then, Pull customer provided wiring first thru one of the four round cable ports on metal bracket, then thread cable thru cable gland port on small electrical box

Using provided waterproof wire nuts, mate three corresponding wires to step down power supply input wiring

Tighten Strain relief nut around wire just installed, then Re-install plastic box onto Metal Bracket using original fasteners.

Mating Enclosure to Bracket

Locate 12VDC Cable from power supply output, this go into D2 enclosure

First feed thru round port on metal bracket as shown

Then install the lower mounting bolts 3/8"-18 x 1" on bracket, leaving hex head protruding about 3/8"

Slide D2 Keyhole mounts on rear of enclosure to mate to these lower bolts

Install two upper bolts on rear tabs including washers provided, securely fasten, but do not over-tighten

Low Voltage 12 VDC Cabling

First feed thru round port on metal bracket   Using a small flat blade screw driver, secure wires to color coded terminals as shown

D3 Model uses two separate 12VDC Power supplies, _**Do Not**_ jumper both 12VDC power sources together, as they were designed to be powered as two independent circuits. Wire two 12VDC pairs separately to color coded terminals provided in D3 COOLDOME; second independent pair is banded together to show second associated 12VDC pair.

Ethernet Cable Installation

Feed Cat5e/ 6e cable thru port as shown

Plug into any open port on Cisco router

Securely tighten seal nuts on all cabling for proper seal and cable strain protection

Close enclosure by shutting lower hinged clamshell Tighten all Six closure screws around sides and rear of D2 to fully seal
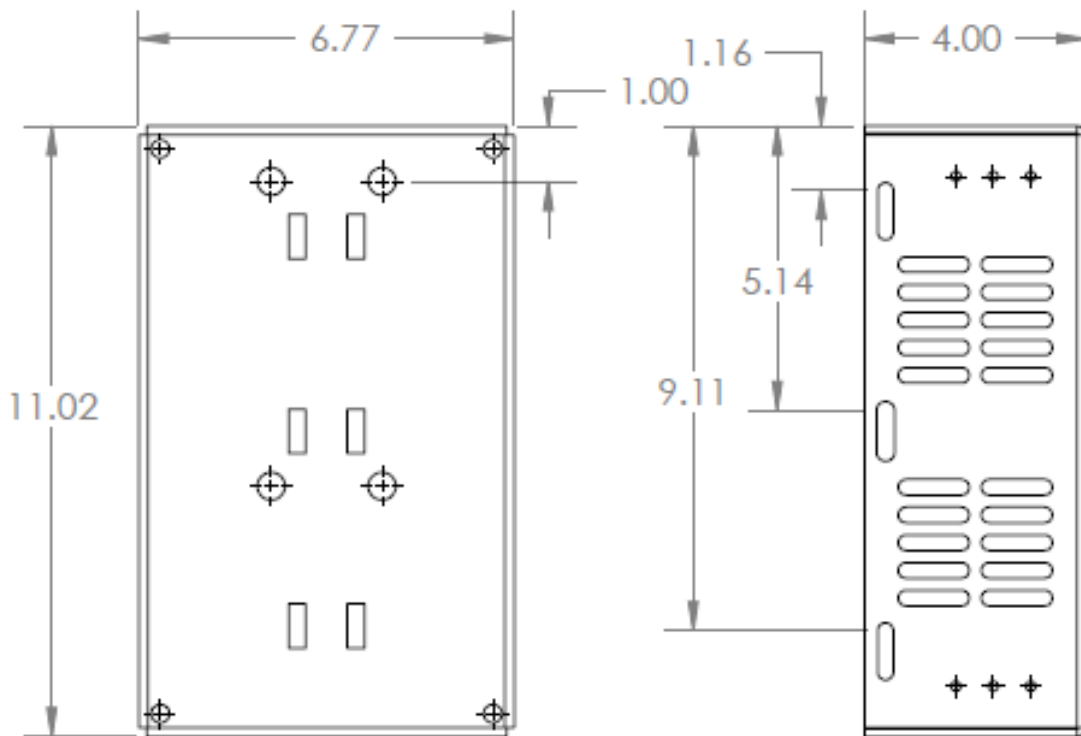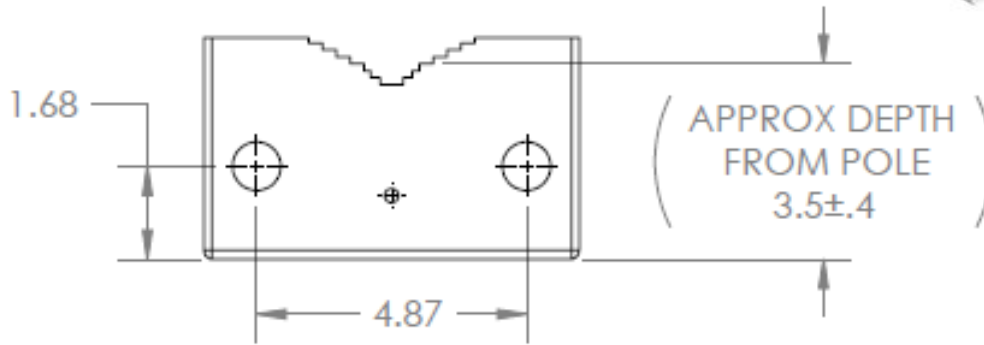
Shown is an example of enclosure ready to Strap mount to a pole

If wall mounting, long lag bolts (customer provided) must be used in four 5/16" corner clearance holes are used to affix KT-CDR2 or KT-CDR3 to wall

Bracket depth is 4.0"

Detail Specifications

1.68

4.87

APPROX DEPTH FROM POLE
3.5±.4

6.77

1.00

1.16

4.00

11.02

5.14

9.11

STRAPPING: Slots Compatible with All DOT-rated ½" minimum, to 3/4" wide max. Stainless Steel Strapping Bands

Use Center face slots for Strapping onto small diameter poles (1-7" dia.), Use Side slots for larger diameter poles

Lag Bolting: Four (4) x 0.35" diameter corner holes for wall mounting using Lag Bolts