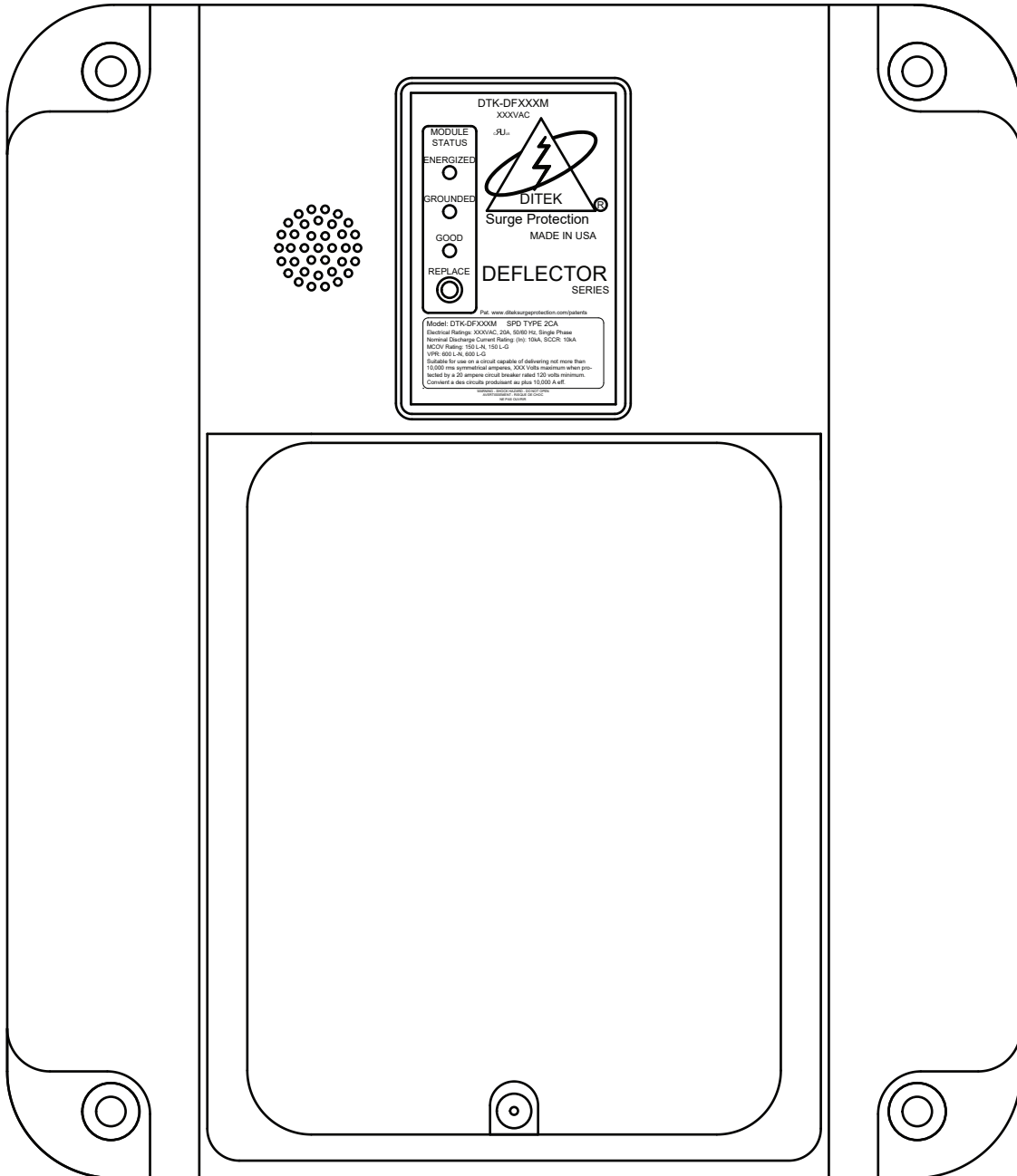




DTK-120X12

User Guide



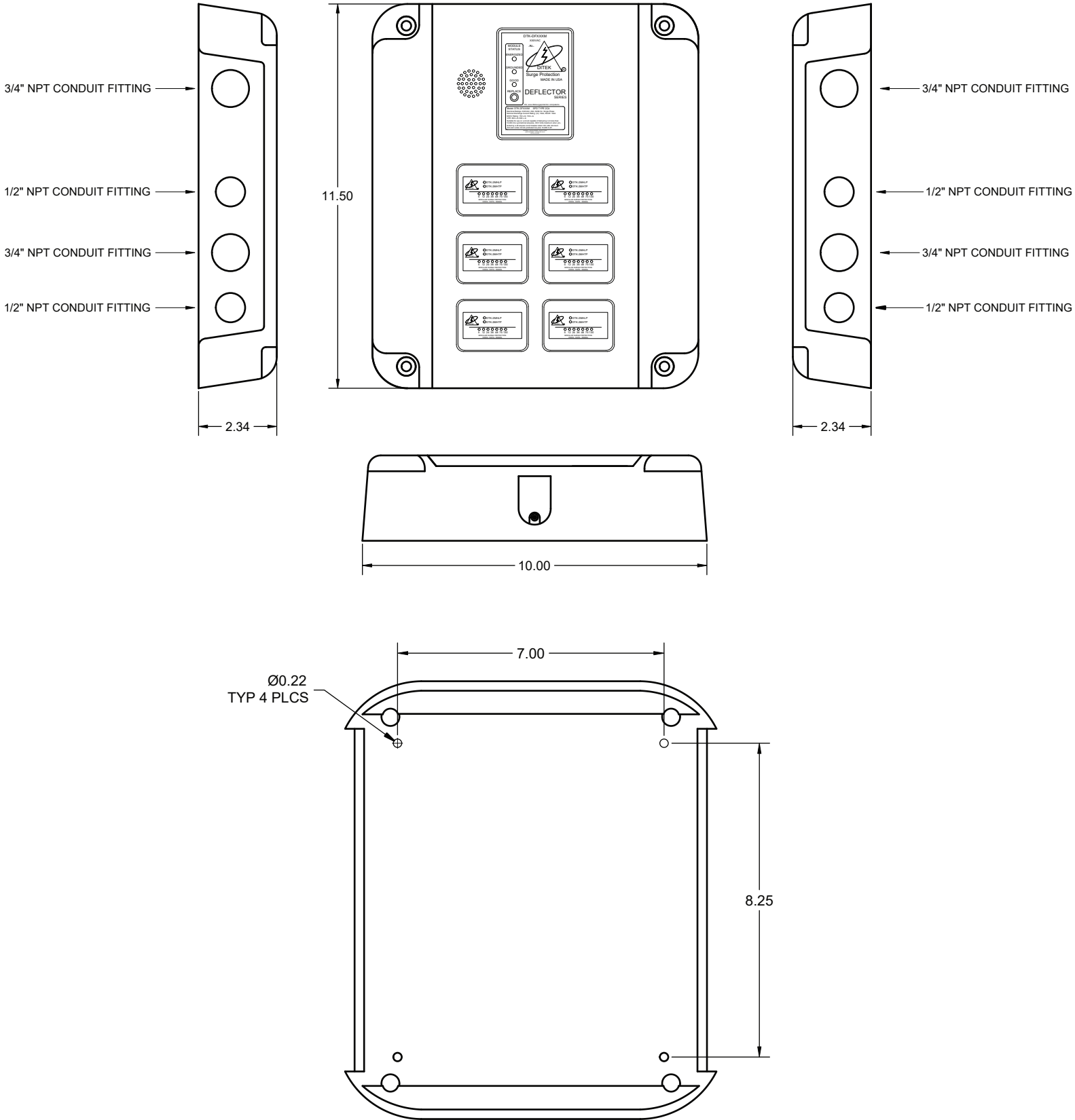
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One DITEK Center 1720 Starkey Road Largo, FL 33771
1-800-753-2345 www.ditekurgeprotection.com



DTK-120X12 (Mounting Dimensions)

Use appropriately sized conduit fittings and conduit. (Not Included)



DTK-120X12 (120VAC 20A + 12 Low Voltage Circuit Series Surge Protective Device)

Read All Instructions Before Beginning Installation!

CAUTION: Risk of Electric Shock - Only intended for installation in accordance with National Electric Code, ANSI/NFPA-70, Article 398.

Warning: Turn power off at the main circuit breaker panel before beginning install.

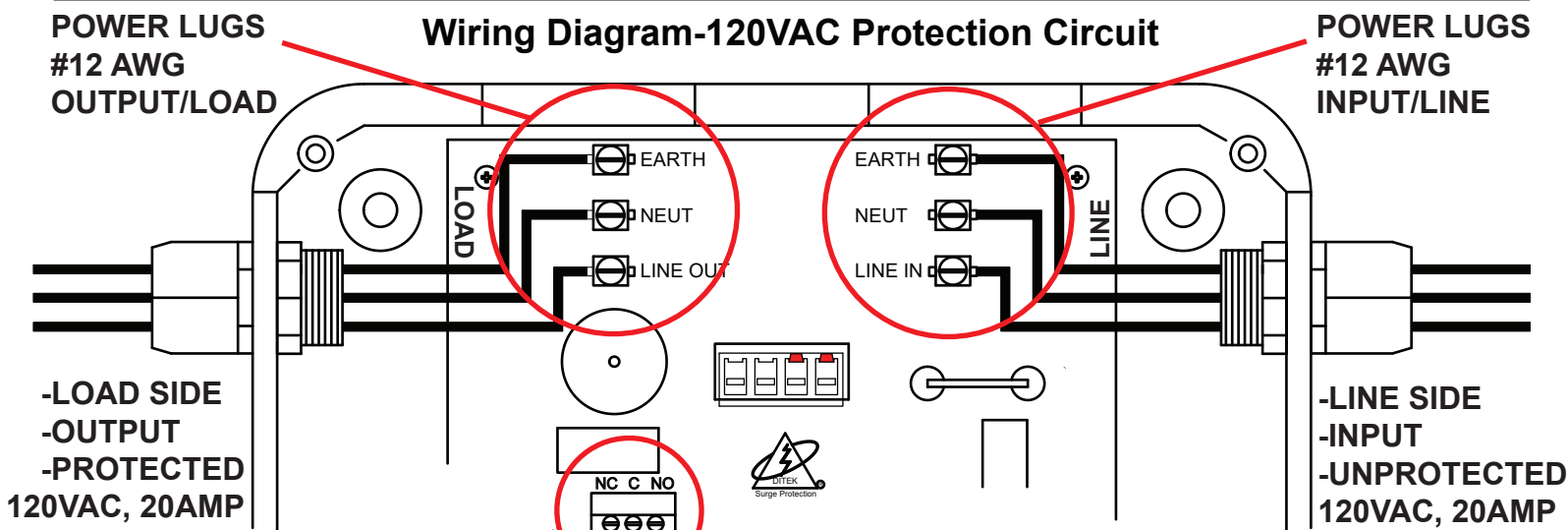
Note: Connect this device in series between the 120VAC power supply and the load that requires protection. Use 12 AWG Stranded, Cu only conductors with a 3/8" strip length when terminating the wires at the power lugs. The conductors used to connect the SPD, to the supply or buss and to ground, shall not be any longer than necessary and shall avoid unnecessary bends.

1. Remove (4) screws securing the cover, save screws.
2. Remove cover.
3. Connect a Ground (green or bare conductor) to the **EARTH** lug at the **LINE** side.
4. Connect the Neutral (white conductor) supply wire to the **NEUT** lug at the **LINE** side..
5. Connect the Phase (black conductor) supply wire to the **LINE IN** lug at the **LINE** side.
6. Connect the Ground, Neutral and Phase wires from the **LOAD** side to the control panel, or your equipment's AC inputs.

Note: Tightening torque for the 120VAC power connections is 20 in-lb.

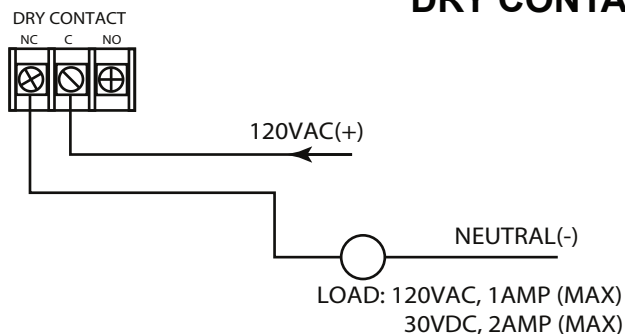
7. Use 3/4" conduit fittings for the AC circuit and a 1/2" conduit fitting for dry contacts. Best practice dictates the use of separate conduit feeds to isolate the unprotected "**LINE**" wiring from protected "**LOAD**" wiring

8. After all connections have been made and no hazards exist, proceed to the Low Voltage Surge Module Wiring Diagram.

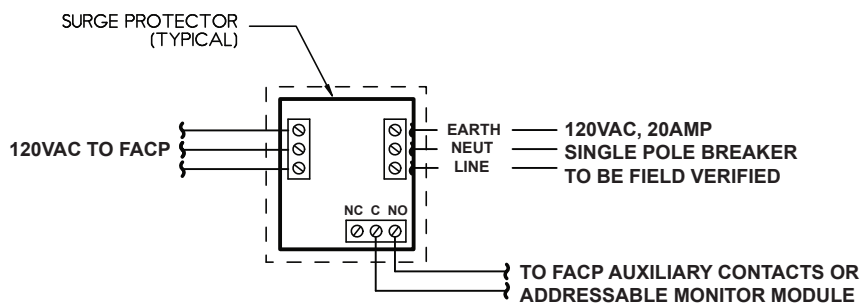


#30-12 AWG

DRY CONTACT CIRCUIT INFORMATION



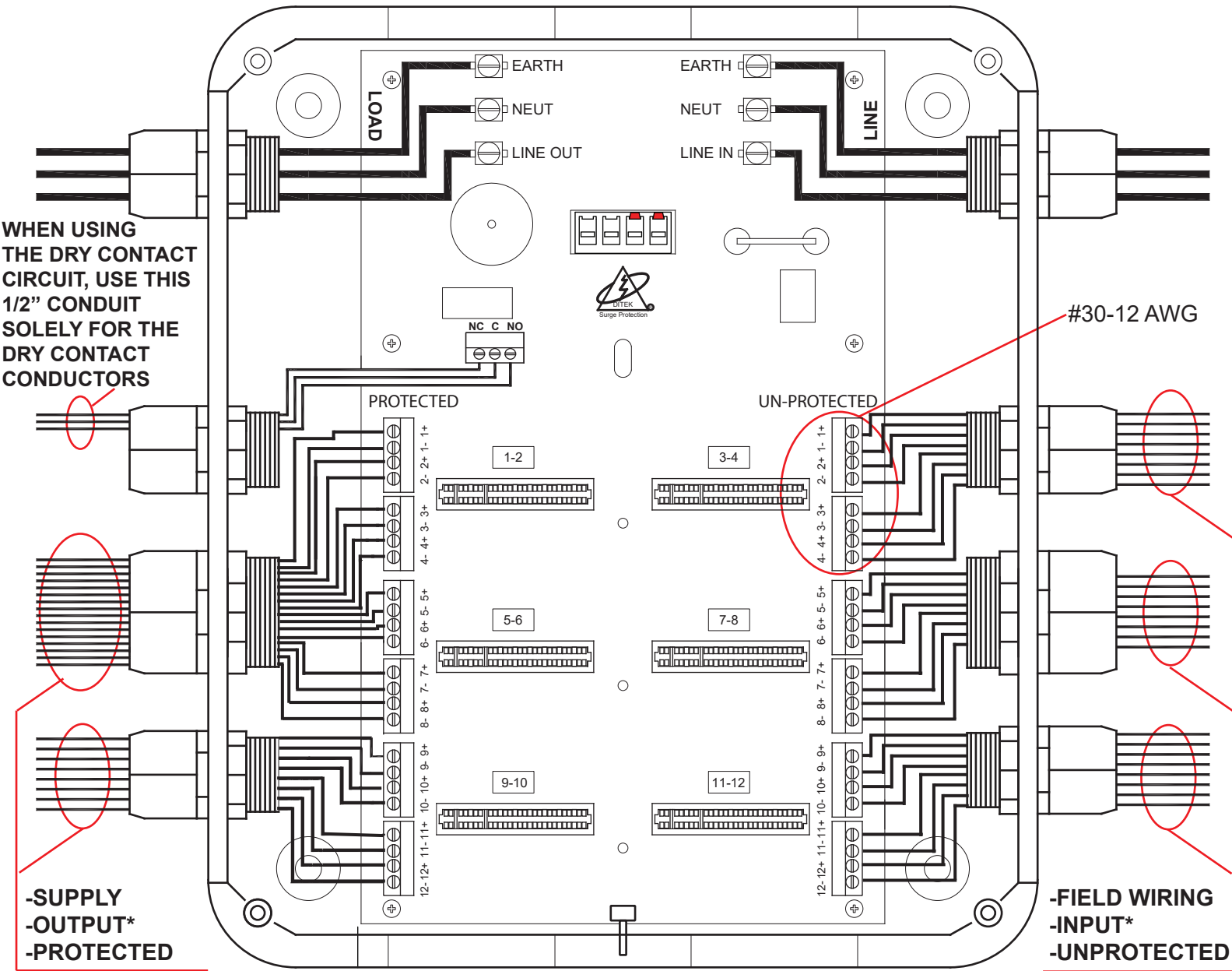
EXAMPLE MONITORING CIRCUIT



EXAMPLE REMOTE MONITORING USING FACP FOR NOTIFICATION

DTK-120X12

(Wiring Diagram-Low Voltage Surge Modules With Dry Contact Circuit)



- Notes:** Connect this device in series between the field wiring and the control panel supply wiring.
- These Low Voltage protection circuits are equipped with a removable plug and header assembly. Simply remove the plug from the header, terminate your wires, then replace the plug making sure it seats and snaps into place.
 - There are up to 6 positions for surge modules available for protection of any combination of Dialer Circuit, SLC (Signaling), IDC (Initiating), PIV (Valve) or NAC (Notifying) circuits. Each module will protect 2 pairs or circuits of the same voltage.
 - All modules have been factory pre-wired for ground. It is not necessary to make any additional ground connections.
 - Allow for sufficient reaction time by providing a minimum of 3 wire feet between the DTK-120X12 and the alarm panel inputs.
 - Use separate conduit feeds to isolate the unprotected "INPUT" wiring from the protected "OUTPUT" wiring.
 - Use appropriately sized conduit fittings and conduit (not included).

DTK-2MHTP (2-Pair Modular Hybrid Telco Protector)

1. Connect the tele-communication circuit(s) from the field to the side marked **UN-PROTECTED**. The first pair is connected to the terminals marked 1+ and 1- . If a second pair is used, connect to the terminals marked 2+ and 2- .
2. Connect the tele-communication circuit(s) for the alarm panel supply wiring, for the dialer circuit, to the side marked **PROTECTED**.

DTK-2MHLPXXB, DTK-2MHLPXXF (2-Pair Modular Hybrid Line Protector)

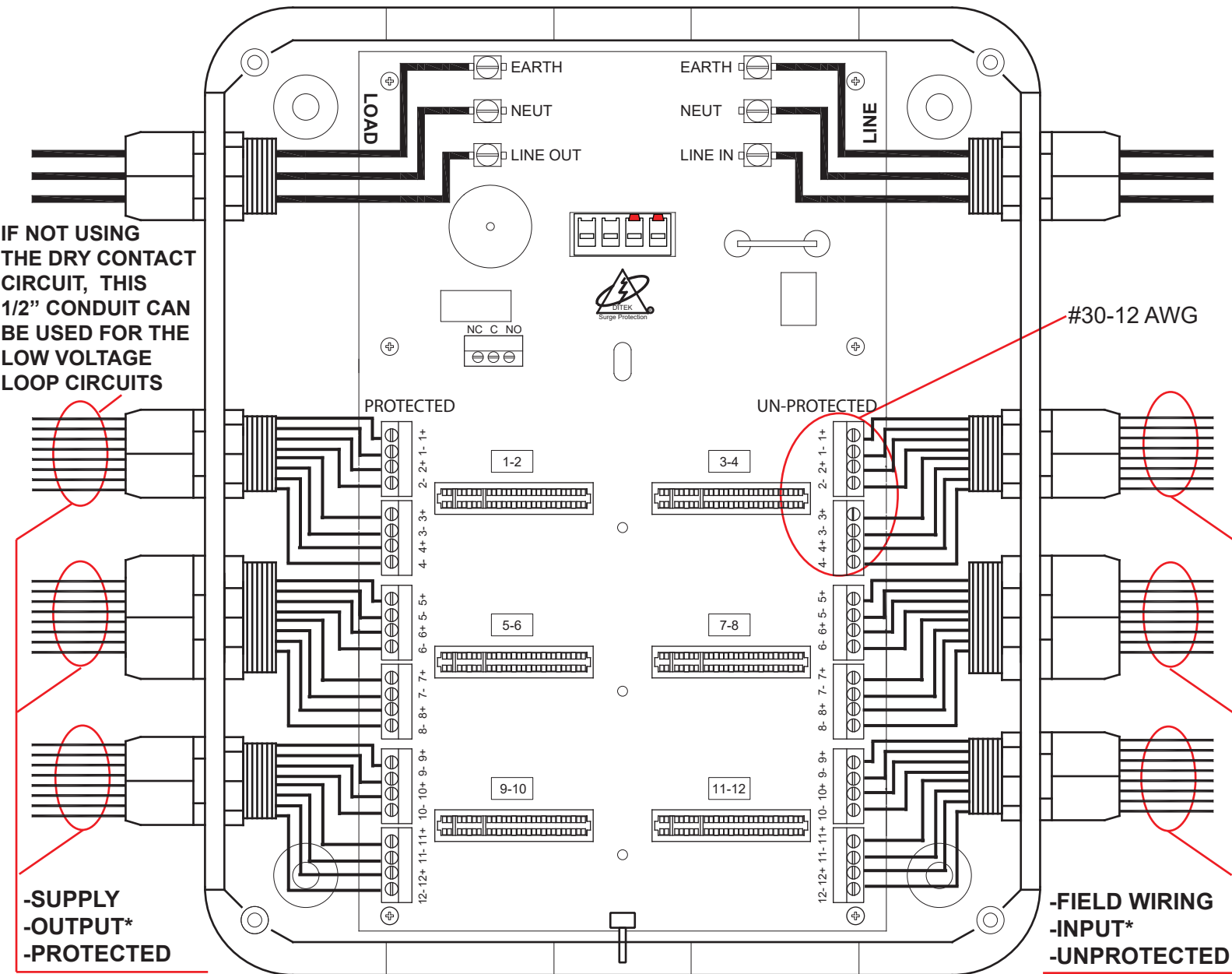
1. Connect the SLC, IDC, PIV* or NAC* loop circuit wiring from the field to the side marked **UN-PROTECTED**. The first pair is connected to the terminals marked 3+ and 3- . If a second pair is used, connect to the terminals marked 4+ and 4- . If additional circuits need to be protected, continue with 5+, 5- and 6+, 6- through 12+, 12-.

* Do not use DTK-2MHLPxxF for PIV or NAC circuits.

2. Connect the SLC, IDC, PIV or NAC loop circuit wiring, for the alarm panel inputs, to the side marked **PROTECTED**.
3. After all connections have been made and no hazards exist, replace cover, and proceed to the surge module installation sections.

DTK-120X12

(Wiring Diagram-Low Voltage Surge Modules Without Dry Contact Circuit)



- Notes:** Connect this device in series between the field wiring and the control panel supply wiring.
- These Low Voltage protection circuits are equipped with a removable plug and header assembly. Simply remove the plug from the header, terminate your wires, then replace the plug making sure it seats and snaps into place.
 - There are up to 6 positions for surge modules available for protection of any combination of Dialer Circuit, SLC (Signaling), IDC (Initiating), PIV (Valve) or NAC (Notifying) circuits. Each module will protect 2 pairs or circuits of the same voltage.
 - All modules have been factory pre-wired for ground. It is not necessary to make any additional ground connections.
 - Allow for sufficient reaction time by providing a minimum of 3 wire feet between the DTK-120X12 and the alarm panel inputs.
 - Use separate conduit feeds to isolate the unprotected "INPUT" wiring from the protected "OUTPUT" wiring.
 - Use appropriately sized conduit fittings and conduit (not included).

DTK-2MHTP (2-Pair Modular Hybrid Telco Protector)

1. Connect the tele-communication circuit(s) from the field to the side marked **UN-PROTECTED**. The first pair is connected to the terminals marked 1+ and 1- . If a second pair is used, connect to the terminals marked 2+ and 2- .
2. Connect the tele-communication circuits(s) for the alarm panel supply wiring, for the dialer circuit, to the side marked **PROTECTED**.

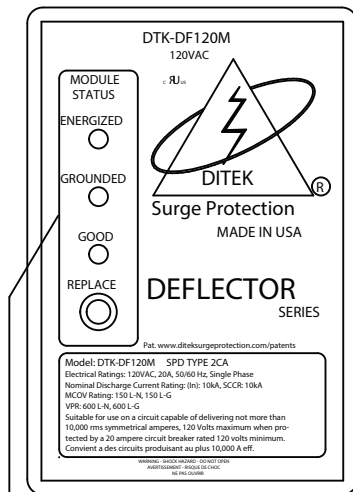
DTK-2MHLPPXB, DTK-2MHLPPXF (2-Pair Modular Hybrid Line Protector)

1. Connect the SLC, IDC, PIV* or NAC* loop circuit wiring from the field to the side marked **UN-PROTECTED**. The first pair is connected to the terminals marked 3+ and 3- . If a second pair is used, connect to the terminals marked 4+ and 4- . If additional circuits need to be protected, continue with 5+, 5- and 6+, 6- through 12+, 12-.

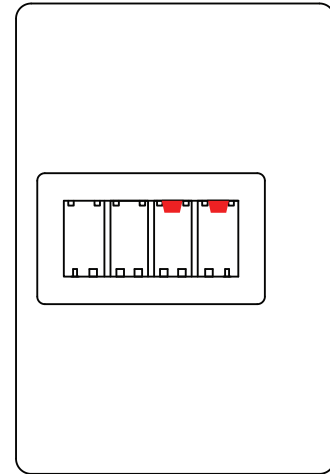
* Do not use DTK-2MHLPPxF for PIV or NAC circuits.

2. Connect the SLC, IDC, PIV or NAC loop circuit wiring, for the alarm panel inputs, to the side marked **PROTECTED**.
3. After all connections have been made and no hazards exist, replace cover, and proceed to the surge module installation sections.

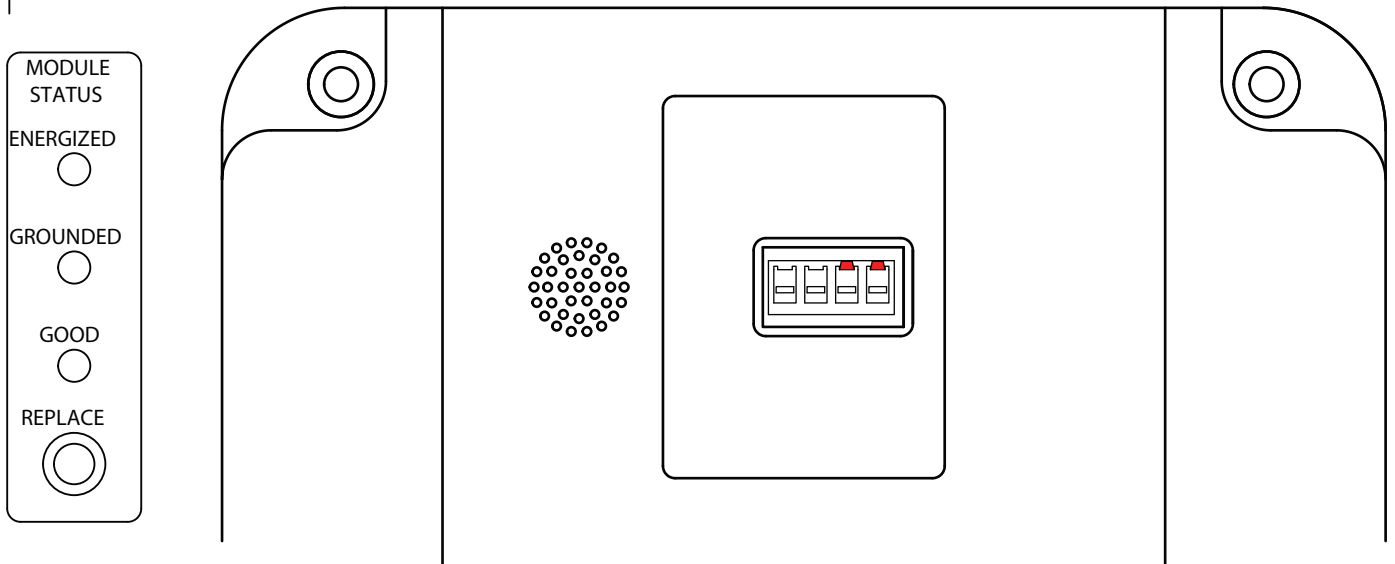
DTK-DF120M (120VAC Surge Module Installation)



Front



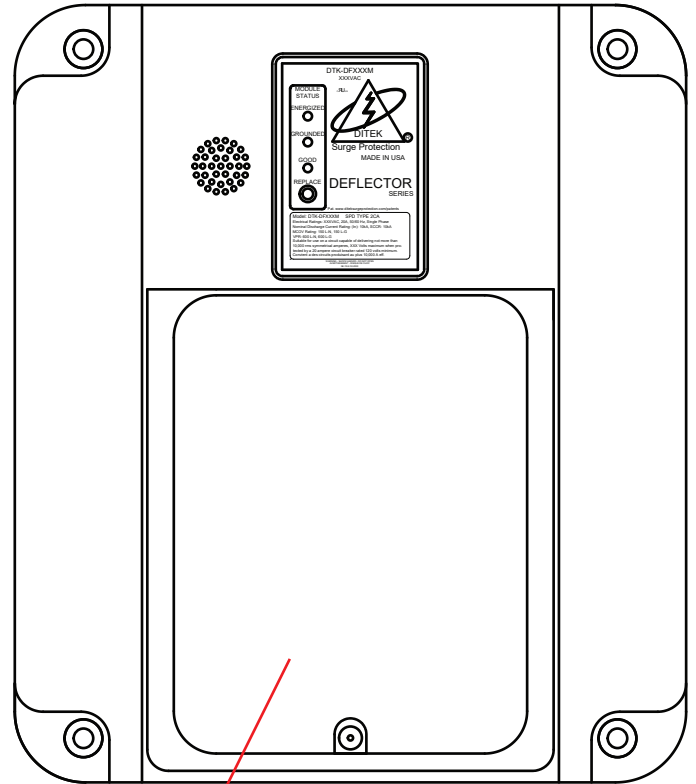
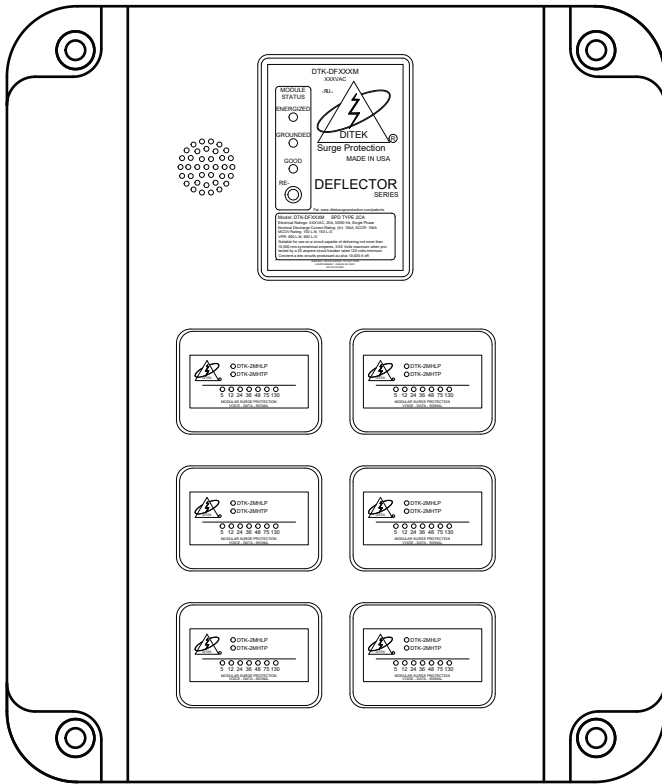
Back



The DTK-120X12 is a series connected Surge Protective Device, for 120VAC power plus up to 12 individual low voltage circuits, with a replaceable surge module for the 120VAC power and every 2-Pairs of low voltage circuits. The LED indicators on the top face of the DTK-DF120M surge module provide power, ground and surge module health status. When the DTK-DF120M surge module has gone end of life, the large “REPLACE” RED LED will illuminate and the “GOOD” Green LED will turn off. Also, the audible alarm will sound to provide an extra alert to indicate the surge module’s health. To silence the alarm, remove the dead module and replace it with a new, unused module. If a new module is not available, the alarm can be silenced by pressing the tactile switch, located at the end of the enclosure, into BYPASS mode for 24 hours. When a new DTK-DF120M surge module is installed, the audible alarm will be cancelled. The red polarizing keys insure that the correct voltage module will mate with its correct base.

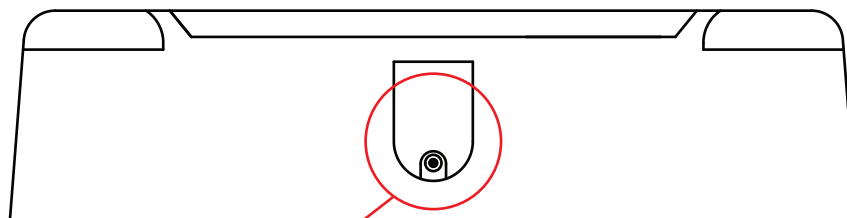
WARNING: When the DTK-DF120M module has gone end of life, or is missing, the base is susceptible to damage from surge energy. Make sure you always have a spare module available. No substitutions shall be permitted.

DTK-120X12 (Low Voltage Surge Modules Installation)



Slide Cover

Remove the slide cover from the low voltage surge modules compartment. Insert the appropriate low voltage surge module into the corresponding position according to your connection circuits. When a **DTK-2MHTP** tele-communications surge module has expired (gone end of life), there will be interference or an open circuit to the control panel, indicating the circuit requires service. When a **DTK-2MHLPxxB** low voltage surge module has expired (gone end of life), there will be a ground fault indicating the circuit requires service. When a **DTK-2MHLPxxF*** low voltage surge module has expired (gone end of life), there will be an open circuit, indicating the circuit requires service. ***Do not use with PIV or NAC circuits.** After all modules are inserted, replace slide cover and fasten. Restore power and verify correct operation.



Audible alarm bypass switch. This is push button tactile switch that will silence the alarm for 24 hours. When a new DTK-DF120M surge module is installed, the alarm will reset.



DTK-120X12

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DITEK CORPORATION

Drawn By: B. Aycock 5-7-2020
Revised By: R. Mitchell 5-12-2021

One DITEK Center 1720 Starkey Road Largo, FL 33771
1-800-753-2345 www.diteksurgeprotection.com

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