

INSTRUCTIONS

MTM MOUNTING KIT



INTRODUCTION

The Dairyland mounting kits MTM-SSD and MTM-OVP2 are used for mounting SSD decouplers and OVP2 over voltage protectors across monolithic isolation joints. The kits minimize the lead length across the joint, thus ensuring the lowest voltage drop across the joint in the event of a lightning strike. The kits mount directly to the joint so no ground-mounted posts or supports are required. Each kit comes complete with the bracket (if required), the lead assembly and hardware needed to mount one SSD or OVP2 to existing weld tabs on the monolithic joint.

The standard lead assembly that is provided with the kits is 36 inches (0.91 m) long and may be cut to length to match the span between the weld tabs. If the span between the weld tabs requires a longer lead assembly, contact Dairyland for options. The #2 AWG lead assembly is sized to accommodate all SSD and OVP2 fault ratings.

These instructions outline how to use the MTM kits to mount Dairyland SSD and OVP2 devices across monolithic joints.

WELD TAB REQUIREMENTS

The MTM-SSD and MTM-OVP2 mounting kits require there to be existing weld tabs on the joint. The tabs must be installed by the joint manufacturer or by using a process that is approved by the joint manufacturer. To ensure proper installation of the mounting kits, the weld tabs should be dimensioned as specified on sheet 2 of Dairyland document 100104, which is attached to these instructions.

WORKER SAFETY

For worker safety during installation, it is recommended that the user obtain certain equipment; namely a pair of electrically insulated gloves, a shorting cable approximately 3 foot (0.91m) long with insulated clamps on each end, and a multi-meter to measure AC voltage. (Of these items, Dairyland offers a suitable 3 foot long 1/0AWG shorting cable with insulated clamps, Model# BCL-1/0 for decouplers rated 10kA or higher or Model# BCL-2 for decouplers rated less than 10kA.) The following installation procedure assumes that these items are available. It is suggested that a grounding jumper be used as a safety precaution in the event the voltage drop across the isolation joint rises to an unsafe potential during installation. Be sure to remove the grounding jumper after the SSD or OVP2 is completely installed. If the structure voltage is not at a safe touch potential (i.e., >15VAC to ground), then insulating gloves should be used.



Dairyland model MTM-SSD

WARNING

When working on isolation joints which have no protective devices or bonding jumpers installed across the joint, the voltage drop across the joint may rise to an unsafe level (i.e., due to induced ac, ac fault or lightning on the pipeline). Therefore, safety precautions should be taken by the user to protect from coming in contact with high voltages. Dairyland provides suggested procedures for installing and operating this equipment. But the user must be responsible for and approve the procedures to be used by its workers when initially installing the equipment in a field retrofit installation because Dairyland cannot be familiar with each user's safety guidelines.

WARNING

Before contacting the pipeline, measure the AC voltage as outlined in step 1, and follow the described safety procedures.

NOTICE

Welding on the isolation joint using methods unapproved by the joint manufacturer may cause permanent internal damage to the joint which may affect its operation and warranty. Refer to the joint manufacturer's installation guidelines.

NOTICE

The OVP2 should not be used on structures having induced ac voltage.



REQUIRED TOOLS

Required installation tools include:

- a) Multimeter to measure AC voltage
- b) Ratchet wrench with 1/2" and 13mm sockets
- c) 1/2" and 13mm box end wrench
- d) Suitable grounding jumper cable and electrically insulated gloves as described under "WORKER SAFETY".
- e) 1/4" hex key
- f) Reference cell or long-shank screwdriver

INSTALLATION PROCEDURE

(Refer to Dairyland document 100104, attached)

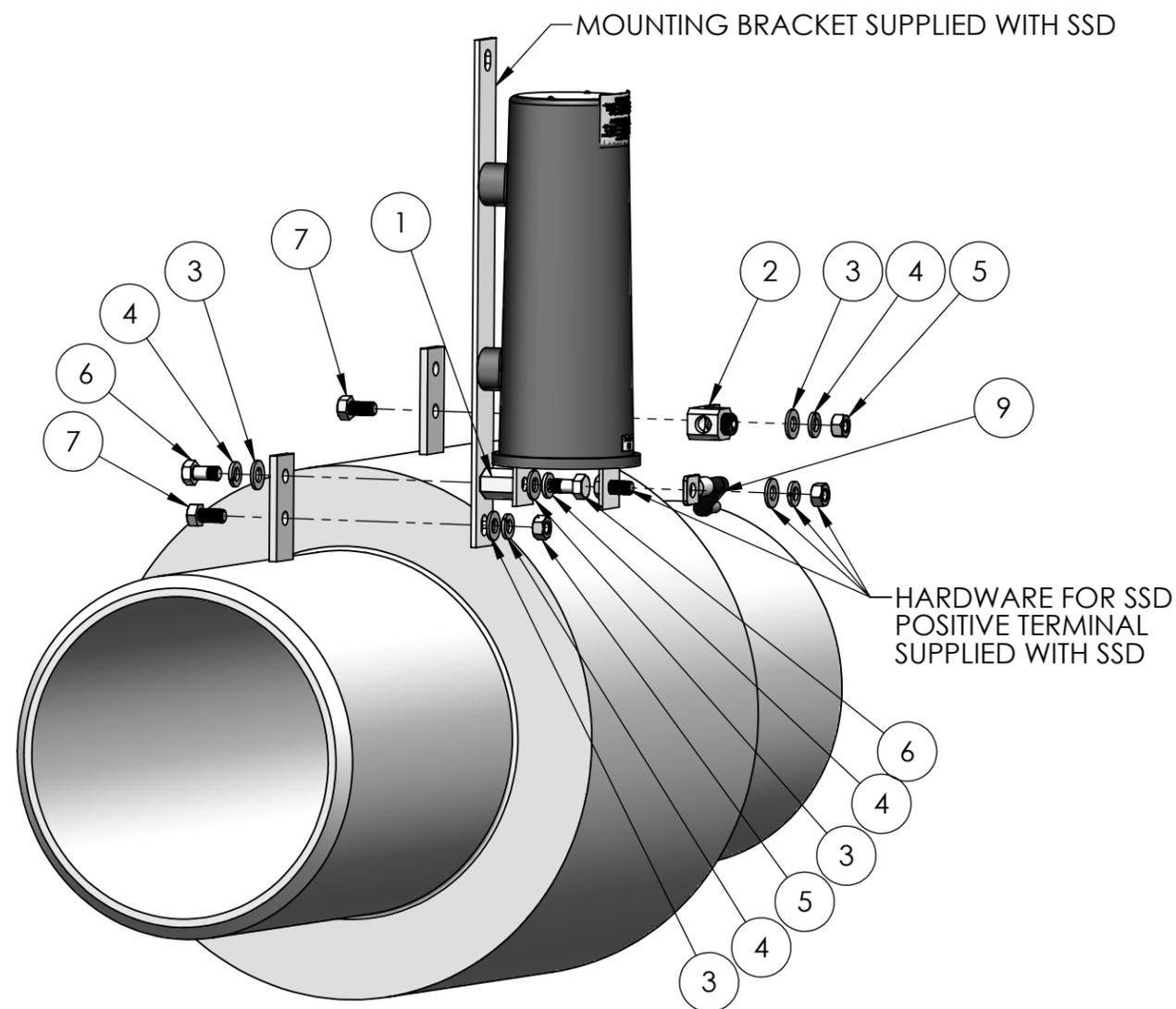
1. Before beginning the installation, it is important to know the voltage associated with the pipeline connections that will be handled during the installation process. Do not contact the pipe or isolation joint before determining if such action is safe as determined by your company's safety guidelines. It is recommended that the installer measure the AC voltage on the pipeline on each side of the isolation joint between the pipeline and an earth reference (e.g., a long shank screwdriver or a reference cell). The earth reference should contact the earth where the worker will be standing to install the equipment, as this will represent the worker touch potential. In addition, the AC voltage across the isolation joint should be measured. If any of the voltages measured are not considered safe then use electrically insulated gloves when handling components connected to the pipeline.
2. Regardless of the voltage measured in Step 1, as a precaution, use the grounding jumper cable to temporarily bond one side of the isolation joint to the other. The purpose of this step is to ensure that there is no voltage drop across the isolation joint that could cause an unsafe current to pass through the body of the installer as they contact opposite sides of the joint. Leave the grounding jumper connected throughout the installation process.
3. Determine which weld tab to mount the SSD/OVP2. Since the mounting bracket will be connected to the negative terminal of the SSD/OVP2, the SSD/OVP2 should be mounted to the side of the joint which is most electronegative. However, if the SSD/OVP2 is a symmetric model (i.e., voltage threshold -2/+2), then it may be mounted on either weld tab.
4. On each of the weld tabs, remove the paint from the area of the tabs that will come in contact with the connection points (i.e., the mounting bracket on one tab and the bolted terminal on the other).
5. For MTM-SSD, skip to step 6. Otherwise, use the 10-32 x 1/2" screw provided to attach the OVP2 mounting bracket to the OVP2 housing. The end of the bracket with two holes must be aligned with the terminals on the OVP2.
6. Apply a thin layer of Tef-Gel corrosion inhibitor (provided) to all flat mating surfaces of the weld tabs, the mounting bracket, the hex coupling nut, the SSD/OVP2 terminals, the bolted terminal and bolt threads.
7. Insert the hex coupling nut (item 1) between the negative terminal of the SSD/OVP2 and the mounting bracket. Use a M8-1.25x16mm screw (item 6), 5/16" flat washer (item 3) and lock washer (item 4) to attach the hex coupling nut to the negative terminal of the SSD/OVP2 and tighten firmly.
8. On the weld tab used to mount the SSD/OVP2, insert a 5/16"-18 x 5/8"L screw (item 7) through both the lower hole of the weld tab and the lower hole of the mounting bracket. Place a 5/16" flat washer (item 3), lock washer (item 4) and nut (item 5) on the other end of the screw and finger tighten. Place a 5/16" flat washer (item 3) and lock washer (item 4) over a M8-1.25x16mm screw (item 6), insert through the upper hole on the weld tab and the mounting bracket and thread into the end of the hex coupling nut (item 1). Finger tighten.
9. Use the 5/16" hardware supplied with the SSD/OVP2 to attach the end of the lead assembly (item 8) with the ring terminal to the positive terminal of the SSD/OVP2.
10. Determine the proper length of the lead assembly (item 8) and cut to length. NOTE: IT IS RECOMMENDED THAT THE LEAD ASSEMBLY BE AS SHORT AS POSSIBLE TO MINIMIZE THE VOLTAGE DROP THAT WOULD OCCUR ACROSS THE LEAD ASSEMBLY IN THE EVENT OF A LIGHTNING STRIKE. Remove about 5/8" (16mm) of the insulation from the opposite end of the lead assembly and apply Tef-Gel to the bare lead end. Insert the lead into the bolted terminal and tighten with a 1/4" hex key. Then attach the bolted terminal to the remaining weld tab using the 5/16" screw, flat washer and lock washer (items 3,4,5)
11. Tighten all screws firmly and ensure that the SSD/OVP2 is securely mounted to the weld tab.
12. Remove the grounding jumper that was used in step 2.

BILL-OF-MATERIAL (BOM) TABLE - ITEM 3884

LINE NO.	DESCRIPTION	QTY.
1	NUT HEX COUPLING SSD/OVP2 PLATED	1
2	Terminal Bolted Hex Socket HD #8-1-0 Plated	1
3	WASHER FLAT 5/16"	4
4	WASHER SPLIT LOCK 5/16"	4
5	NUT HEX 5/16-18	2
6	SCREW HEX M8-1.25X16MM	2
7	SCREW HEX 5/16-18X0.625"	2
8	TEF-GEL	1
9	LEAD ASM 36"L, #2-5/16" COMP TERMINAL + UNFINISHED END	1

ORDERING INSTRUCTIONS

REQUIRES SSD MODELS WITH NON -R TERMINAL ARRANGEMENT
 FOR USE WITH SSD: USE ITEM 3884, MTM-SSD
 FOR USE WITH OVP2: USE ITEM 3885, MTM-OVP2



SSD INSTALLATION ON MONOLITHIC JOINT

NOTES: APPLICABLE FOR BOTH OVP2 AND SSD

1. MOUNT NEGATIVE TERMINAL OF DECOUPLER TO THE SIDE OF MONOLITHIC JOINT WITH MOST ELECTRO-NEGATIVE POTENTIAL.
2. BEFORE ASSEMBLY, REMOVE PAINT ON ALL METAL-TO-METAL INTERFACES AND APPLY A THIN LAYER OF TEF-GEL.
3. BEFORE ASSEMBLY, CUT LEAD ASSEMBLY (ITEM 8) TO THE SHORTEST PRACTICAL LENGTH, TRIM INSULATION AND ATTACH BOLTED TERMINAL (ITEM2).

ANSI Y14.5M 1994 APPLIES
 UNLESS NOTED
 UNITS: INCHES
 3-PLACE: ±.005
 2-PLACE: ±.015
 1-PLACE / FRAC: ±.03
 ANGULAR: ±1

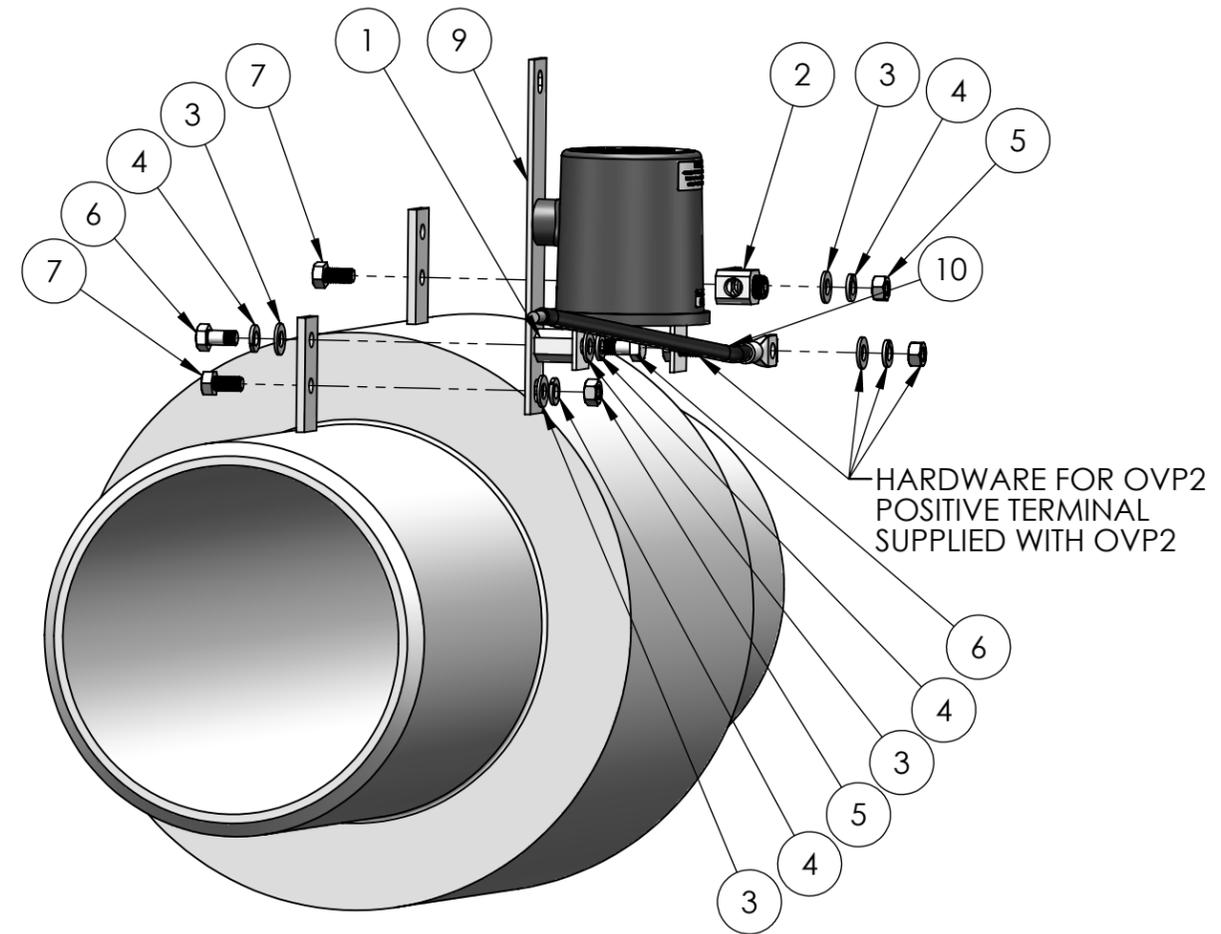


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DESCRIPTION				
OVP2/SSD INSTALLATION ON MONOLITHIC JOINT				
DOCUMENT #	REV	DATE DRAWN	DWG SIZE	DATE APPROVAL
100104	C	2017-11-15	B	11/13/2020
SCALE 1:4	DRAWN: SVS	SHEET: 1 OF 3	DWG APPROVAL: RJH	

BILL-OF-MATERIAL (BOM) TABLE

LINE NO.	DESCRIPTION	QTY.
1	Nut Hex Coupling SSD/OVP2 Plated	1
2	Terminal Bolted Hex Socket HD #8-1-0 Plated	1
3	Washer Flat 5/16"	4
4	Washer Split Lock 5/16"	4
5	Nut Hex 5/16-18	2
6	Screw Hex M8-1.25x16mm	2
7	Screw Hex 5/16-18x0.625"	2
8	Tef-Gel	1
9	Bracket OVP2 Mounting	1
10	Lead Asm 36"L, #2-5/16" Comp Terminal + Unfinished End	1



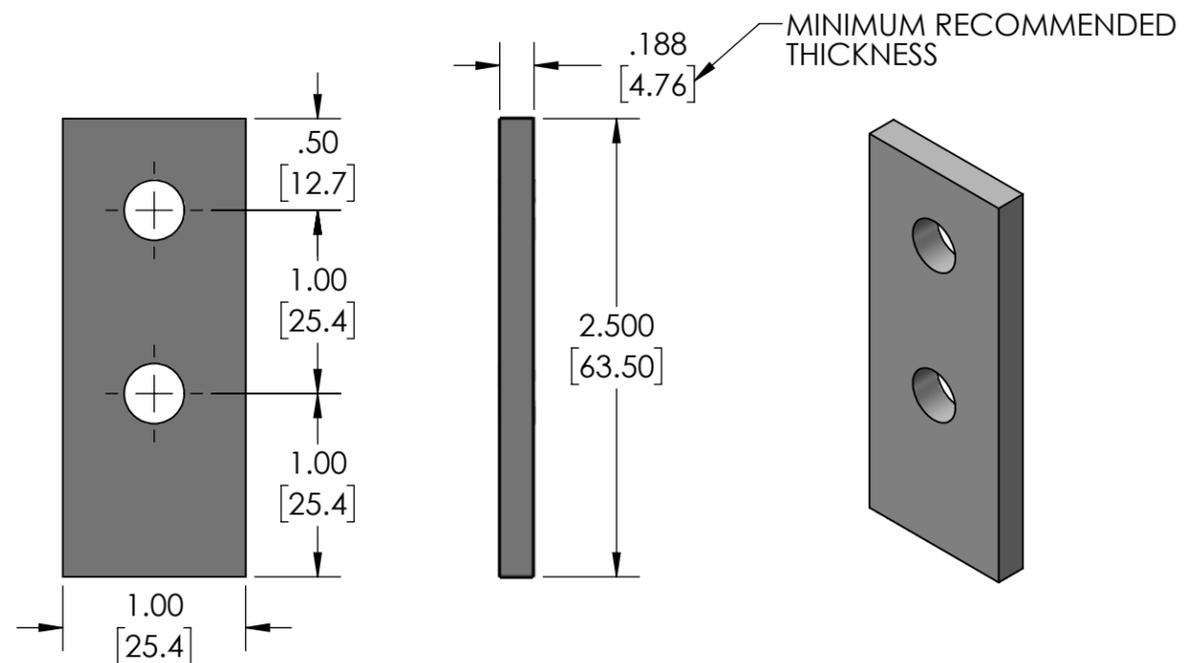
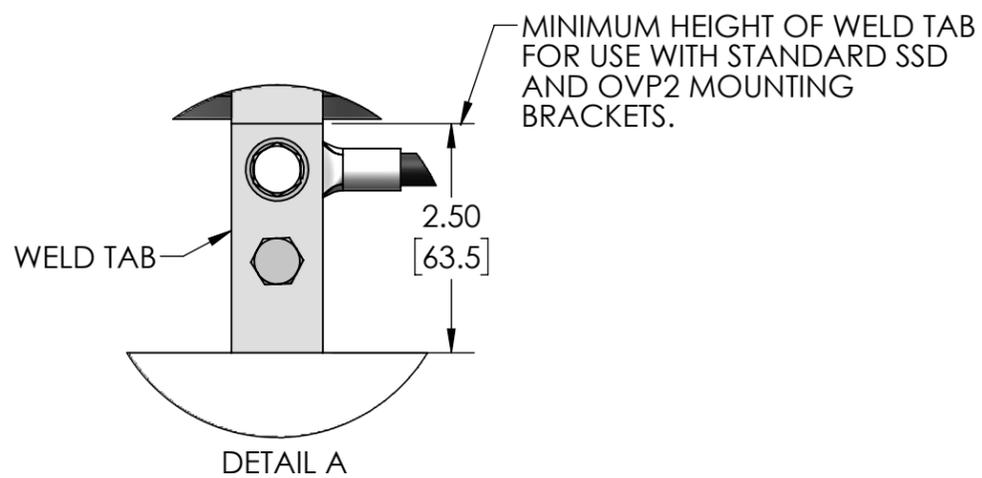
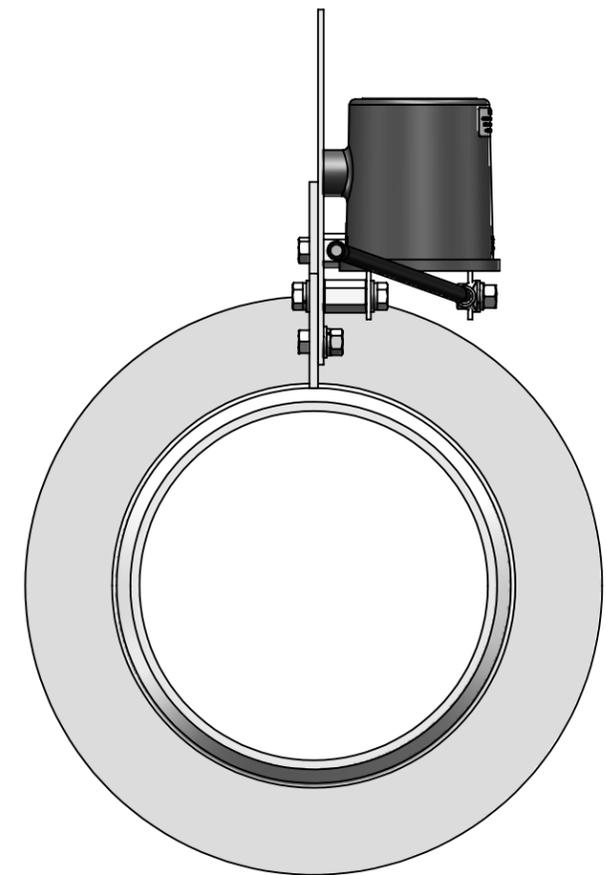
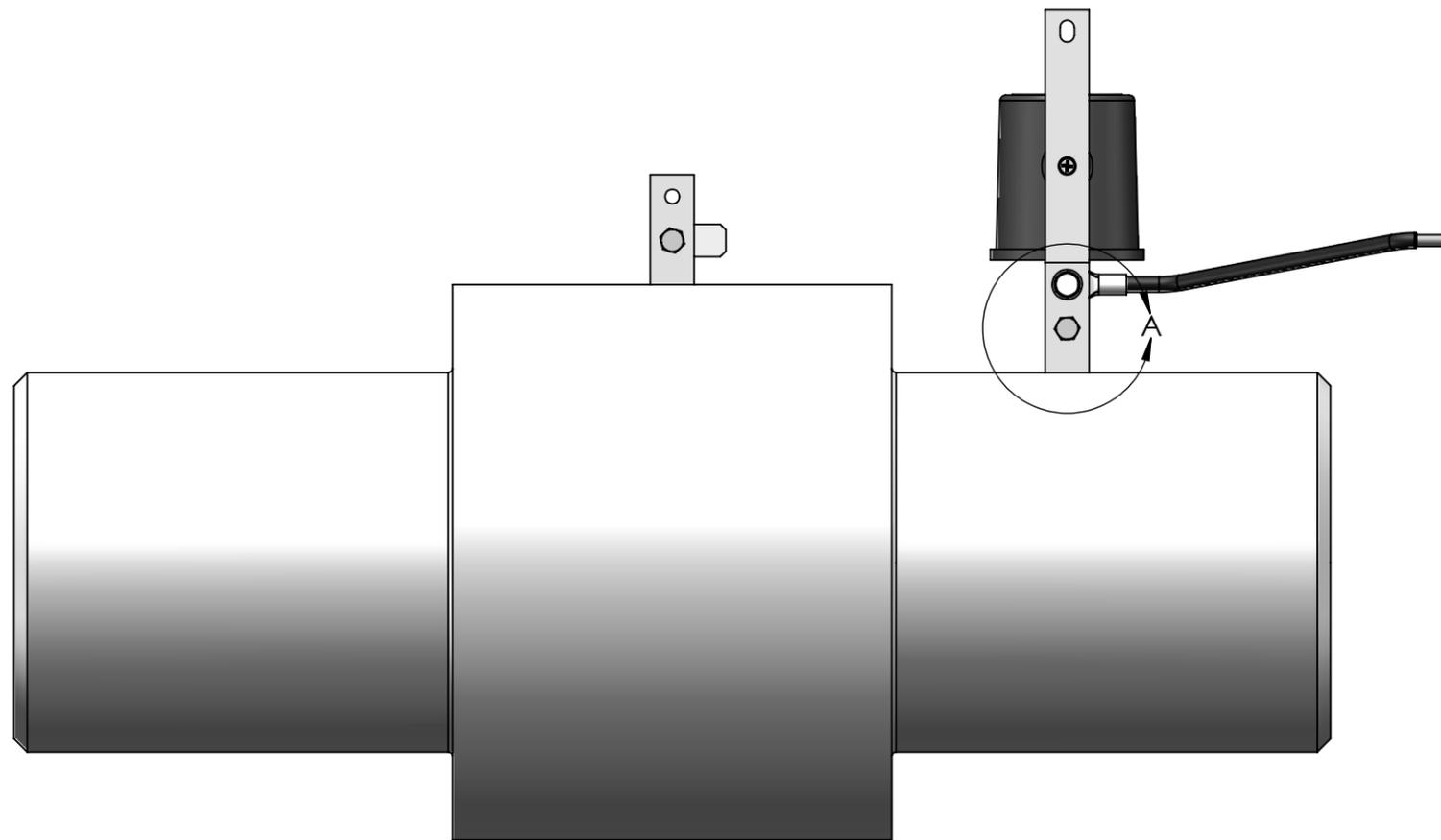
OVP2 INSTALLATION ON MONOLITHIC JOINT

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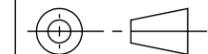


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DOCUMENT #	REV	DATE DRAWN	DWG SIZE	DATE APPROVAL
100104	C	2017-11-15	B	11/13/2020
SCALE 1:4	DRAWN: SVS	SHEET: 2 OF 3	DWG APPROVAL: RJH	



ANSI Y14.5M 1994 APPLIES



UNLESS NOTED
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DOCUMENT # 100104	REV C	DATE DRAWN 2017-11-15	DWG SIZE B	DATE APPROVAL 11/13/2020
SCALE 1:3	DRAWN: SVS	SHEET: 3 OF 3	DWG APPROVAL: RJH	