

RTP3034SPG

RTP Surge Protector with Isolated Ground

1. PREPARATION



DANGER: Possible electrical shock or burn hazard.

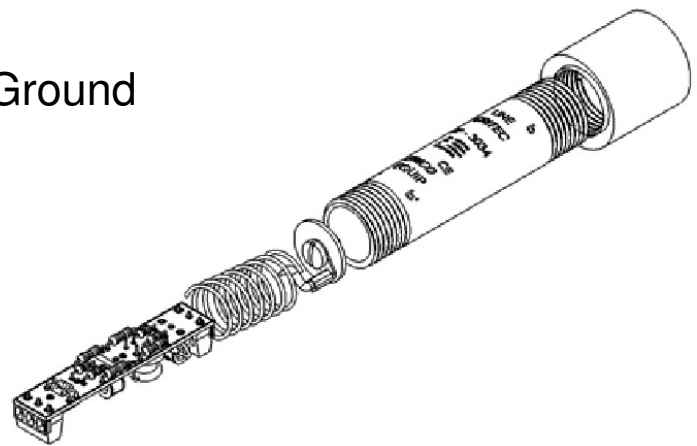
Only qualified personnel should install this product. Failure to lockout electrical power during installation or maintenance can result in fatal electrocution or severe burns. Before making any connections please ensure that power has been removed from all associated wiring, electrical panels, and other electrical equipment.



CAUTION:

1. The installation of this Remote Transmitter Protector (RTP) should follow and observe nationally recognized codes of authorities having jurisdiction to ensure correct and safe operation.
2. Check to ensure that the maximum continuous operating voltage U_c of the RTP is higher than that expected on the circuit being protected.
3. It is important to ensure that the maximum line current rating I_L of the RTP is not exceeded.
4. The ground (earth) terminal must be connected to a low impedance earth (<10 ohms) for correct operation.
5. Do not perform a "Flash Test" or use a Megger to test circuits that are protected with these RTP units. This may damage the RTP(s) and affect the insulation readings being performed.
6. The RTP must be installed in a dry non-condensing environment.
7. Do not attempt to tamper with the RTP unit in any way as this may compromise performance and will void warranty.

Nominal System Voltage	U_n	21VAC, 30VDC
Max. Cont. Operating Voltage	U_c	23VAC, 33VDC
Voltage Protection Level, L-L	U_p	44V @3kA
Max. Discharge Current, L+L-PE	I_{max}	20kA 8/20 μ s
Rated Load Current	I_L	355mA
Loop Resistance		18 Ω
Protection Modes		Common, Differential
Connection		$\leq 2.5\text{mm}^2$ (#14AWG)
Enclosure Material		304 Stainless Steel
Temperature		-40 to 149°F
Thread Size		3/4" NPT
Enclosure Dimensions		3/4" x 5"



2. INTRODUCTION

The ERICO CRITEC Remote Transducer Protector (RTP) has been designed to protect field 4-20mA transducers and transmitters from the damaging effects of surges on low voltage data, control and signaling lines. Its stainless steel 3/4" (NPT thread) pipe housing makes the unit ideal for direct connection to the spare transducer port or installation into the wiring conduit. The unit is suitable for use in outdoor environments. The internal protective module provides screw terminals for connection of field wiring.

The RTP3034SPG provides both a nonisolated and optional isolated grounding connection to provide grounding for shield wires.

For control side protection applications, ERICO recommends the DIN rail mount ERICO CRITEC Universal Transient Barrier (UTB) series.

3. MOUNTING

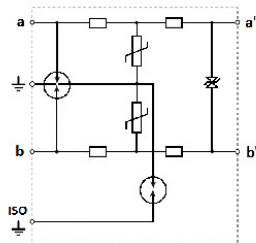
Mounting methods for the RTP include:

- Connecting to the spare port of the transducer
- Connecting in-line with wiring conduit
- "T" connecting to wiring conduit

For the "in-line" connection, the end cap, grounding wire, spring and grounding disk should be removed. The electrical grounding connection at the transducer should be made with field wiring to the center (ground) terminal located at the LINE end of the protective module. An optional isolated grounding connection can be made with shield wiring at the transducer by connecting field wiring to the center (ground) terminal located at the EQUIP end of the module.

Pipe adapters can be installed to connect to non-3/4 NPT systems.

WIRING DIAGRAM



WARNING:

1. Pentair products shall be installed and used only as indicated in Pentair product instruction sheets and training materials. Instruction sheets are available at www.erico.pentair.com and from your Pentair customer service representative.
2. Pentair products must never be used for a purpose other than the purpose for which they were designed or in a manner that exceeds specified load ratings.
3. All instructions must be completely followed to ensure proper and safe installation and performance.
4. Improper installation, misuse, misapplication or other failure to completely follow Pentair's instructions and warnings may cause product malfunction, property damage, serious bodily injury and/or death, and void your warranty.

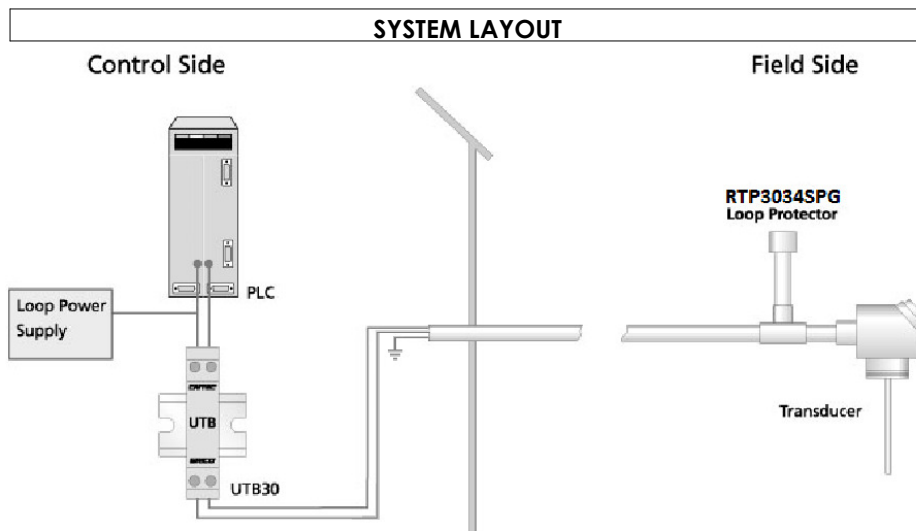
SAFETY INSTRUCTIONS:

All governing codes and regulations and those required by the job site must be observed. Always use appropriate safety equipment such as eye protection, hard hat, and gloves as appropriate to the application.

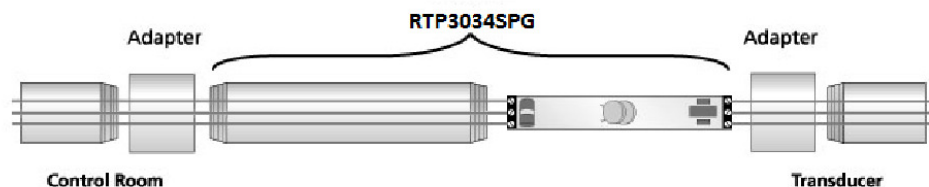
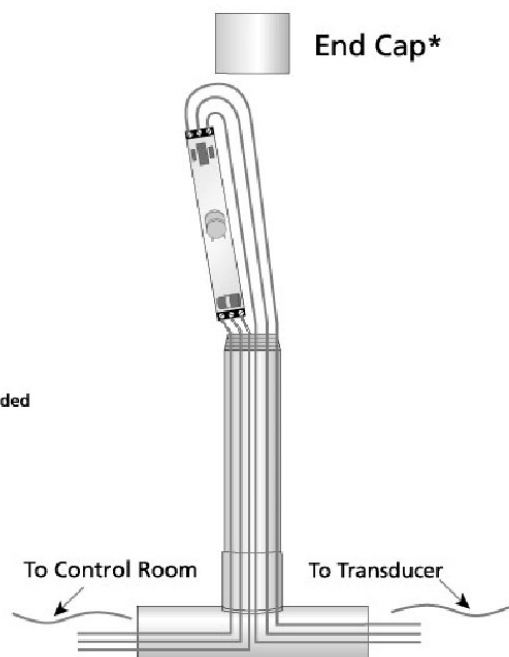
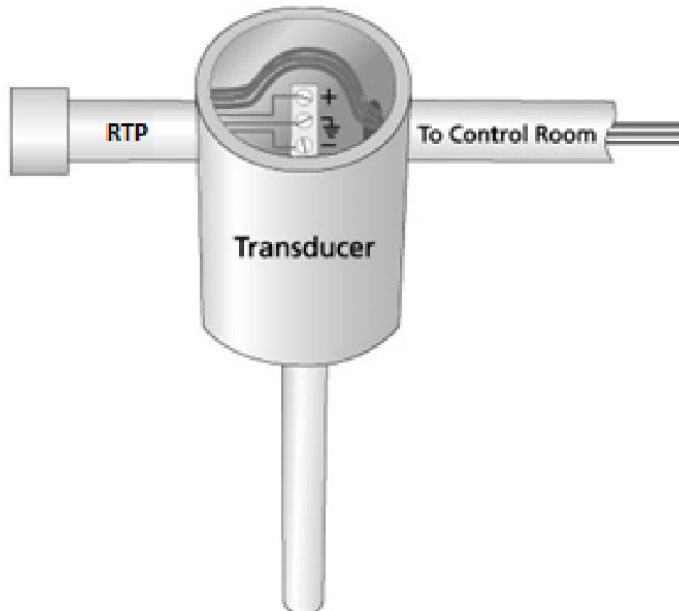
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4. GENERAL INSTALLATION REQUIREMENTS

1. First, ensure that power is removed from the area and the circuits to be connected.
2. Identify the line and equipment sides of the RTP (marked on the enclosure) and then remove the protection circuit from the stainless steel enclosure.
3. If appropriate, feed the connecting wires through the enclosure.
4. Connect line side wiring to the RTP screw terminals marked LINE (a, b). The "line side" of the RTP is the "exposed side" where the surge is expected to originate.
5. Connect equipment side wiring to the RTP screw terminals marked EQUIP (a', b'). The "equipment side" of the RTP is the protected side and wires to the equipment being protected.
6. Connect line side ground; using supplied grounding disk or separate field ground connection. When grounding disk is used, ensure pipe work is electrically connected to transducer body and adequately connected to ground.
7. Connect equipment side ground if desired to provide isolated grounding for shield wires.
8. Assemble enclosure and fit to transducer or conduit.

**5. MAINTENANCE**

Failure of the RTP is usually indicated by interruption of data or a fault on the signal (control) line. If failure of the RTP is suspected, replace or bypass the RTP.

MOUNTING OPTIONS**IN-LINE CONNECTION****T CONNECTION****TRANSDUCER CONNECTION**

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