

Thermo Scientific Ramsey TRX Series Rotary Point Level Controls

Thermo Scientific Ramsey TRX Series rotary point level controls can eliminate spills, material waste and downtime by preventing bin overflows, plugged chutes and empty bins. They work equally well as high or low-level indicators in plastic, food, chemical, raw ore, aggregate and many other solid material applications. This gives you the flexibility and control you need to maximize the performance of your process and improve your bottom line.



Thermo Scientific Ramsey TRX rotary level controls are designed for point level monitoring of solids in bins, vessels and chutes. They can eliminate spills, material waste, and downtime by preventing bin overflows, and by detecting plugged chutes and empty bins. These controls work equally well with plastics, food, chemicals, raw ores, aggregate, and other solid materials.

The Ramsey TRX design eliminates the most common causes of rotary control failure and is extremely easy to use. The control's de-energizing motor will shut off when material is present, rather than entering a stalled condition. This reduces wear and operating temperature, thereby extending motor life. Four drive shaft bearings and a sealed, lubricated gear assembly make these the most reliable rotary level controls on the market.

The controls can be installed vertically on the top of a bin or chute, or horizontally on the side. Simple installation is achieved using the optional top or side mounting plates. As an alternative, they can be mounted using a standard 1/4-in pipe coupling.

Options

- Multiple input voltages
- Rigid couplers or Flexible couplers
- Many paddles for different materials and applications
- Mounting plates with half or full couplings in mild steel or stainless steel
- Shaft Extensions: Galvanized or Stainless Steel
- Pipe Guards: Galvanized or Stainless Steel

Features & Benefits

- Simple, rugged construction using fewer parts for more reliable operation
- Easy to install with a screw on cover, dual conduit entrances, and removable wiring terminals
- De-energizing motor for extended motor life
- Four shaft bearings for greater shaft support and dependability
- Dust-tight, die-cast aluminum housing with powder coat finish
- Approved for Class I Group C & D; Class II Group E, F, & G hazardous areas

Power Pacs

The power pac is the heart of a rotary point level control. The housing contains the drive motor, relay switches, wiring connections, and output shaft. Standard TRX power pacs are available in 120 VAC, 240 VAC, and 24 VDC models. Also available are TRX-PLUS units with enhanced fail safe capabilities.

Couplers

Couplers connect a rotary power pac to a paddle or an extension. There are two versions available. A rigid coupler can be used in side mount applications or top mount applications without an extension. A flexible coupler is used for top mount applications where a shaft extension will be used.

Paddles

Paddles provide the surface area to push against so the bulk material can stop the power pac's rotation. The lighter the material, the more surface area is needed. An assembled rotary level control with a single blade "insertable" paddle can be inserted through a pipe coupling from the outside of a bin without needing interior access. Triple blade paddles provide greater surface area but require access inside the bin to connect the paddle or a larger entrance hole in combination with a mounting plate.

Shaft Extensions (Optional)

Shaft extensions can be used in top mount installations when the rotary paddle needs to be at a lower level. The shaft extension is a length of 1/4-in pipe that is threaded on both ends. The top of the extension is screwed into the flexible coupling and at the bottom of the extension a standard 1/4-in pipe coupling is used to attach the paddle. The maximum length for a shaft extension is 3.66 m (144 in). Shaft extensions are available in stainless steel or galvanized steel and come with a matching 1/4-in coupling.

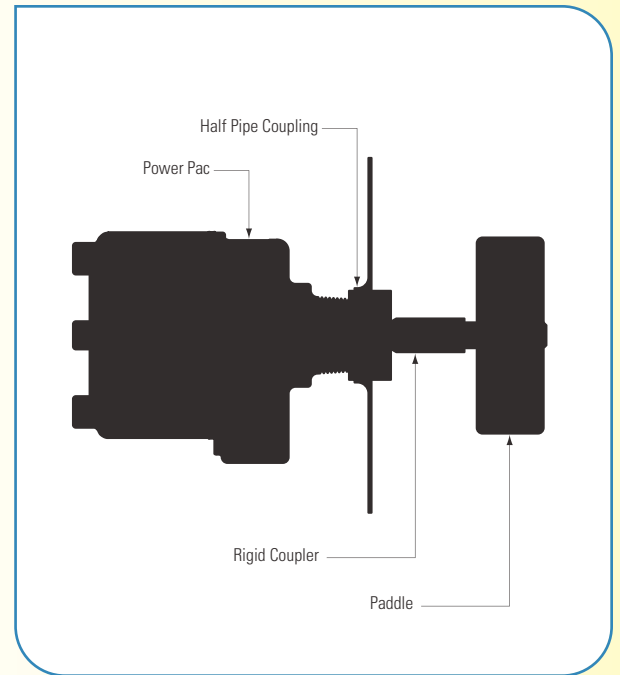
Pipe Guards (Optional)

A pipe guard protects a long vertical shaft extension from side load damage and should be used with all extensions longer than 610 mm (24 in). The pipe guard is a simple length of 1 1/2-in pipe with one end threaded to screw into the bottom of a standard 1 1/4-in pipe coupling attached to the top of the vessel and shared by the TRX power pac. The pipe guard should be the same length as the shaft extension to allow attachment of the paddle at the bottom and should be adequately braced on long extensions.

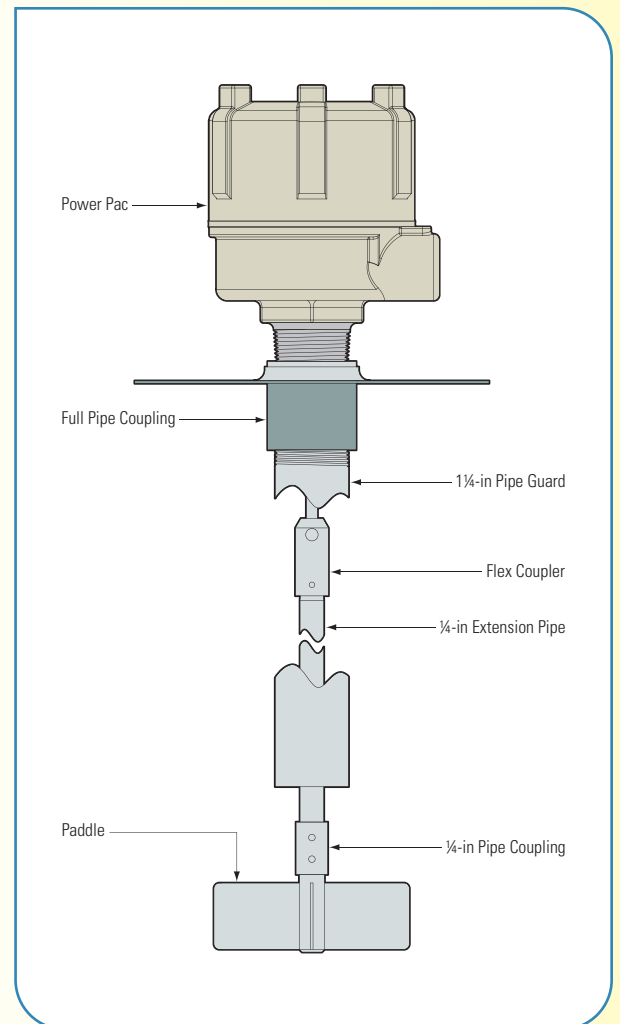
Mounting Plates (Optional)

Mounting plates assist with installing a completely assembled unit from the outside of a curved or flat surface. The rotary level control connects to a 1/4-in pipe coupling on the mounting plate. The model TMP mounting plate is used in top mount installations and has a full pipe coupling so that a pipe guard can be attached to the bottom of the mounting plate. The model SMP mounting plate has a half pipe coupling for side mount applications and top mount applications that do not need a pipe guard. A hole is cut into the vessel large enough for a triple bladed paddle to fit through. The mounting plate fits over the clearance hole and attaches to the vessel with six bolt holes. All mounting plates are available in stainless steel or powder coated mild steel.

Typical side mount installation



Typical top mount installation



**RC Coupler**

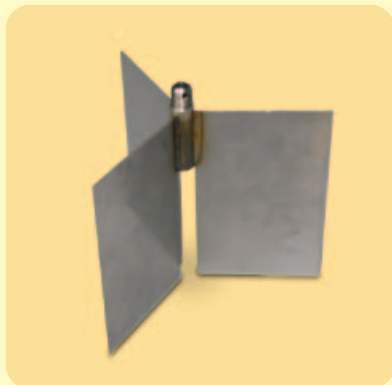
- Rigid coupler for side mount applications
- Stainless steel

**FC Coupler**

- Flexible coupler for top mount applications
- Stainless steel with SST flex cable connection

**FS Coupler**

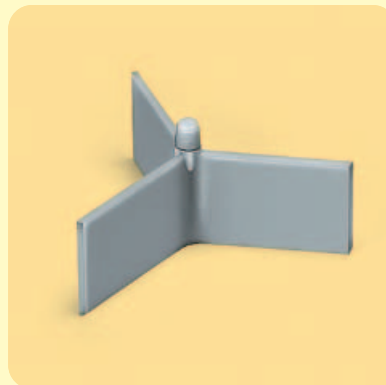
- Semi-rigid coupler for top or side mount applications
- Stainless steel with internal spring shaft and neoprene cover

**RP-28 Paddle**

- For very light materials, 2 lb/ft³ to 20 lb/ft³
- Three (3) blades
- Stainless steel

**RP-1 Paddle**

- For light materials, 15 lb/ft³ to 30 lb/ft³
- Three (3) blades
- Stainless steel
- RP-26 is direct connect version with integral RC coupler

**RP-2 Paddle**

- For medium materials, 30 lb/ft³ to 70 lb/ft³
- Three (3) blades
- Stainless steel
- RP-30 is direct connect version with integral RC coupler

**RP-3 Paddle**

- For heavy materials, over 50 lb/ft³
- Single blade, insertable
- Stainless steel

**RP-23 Paddle**

- For medium materials, 30 lb/ft³ to 70 lb/ft³
- Single blade, insertable
- Stainless steel
- RP-27 is direct connect version with integrated RC coupler

Contact Thermo Fisher Scientific for information about other available paddle options.

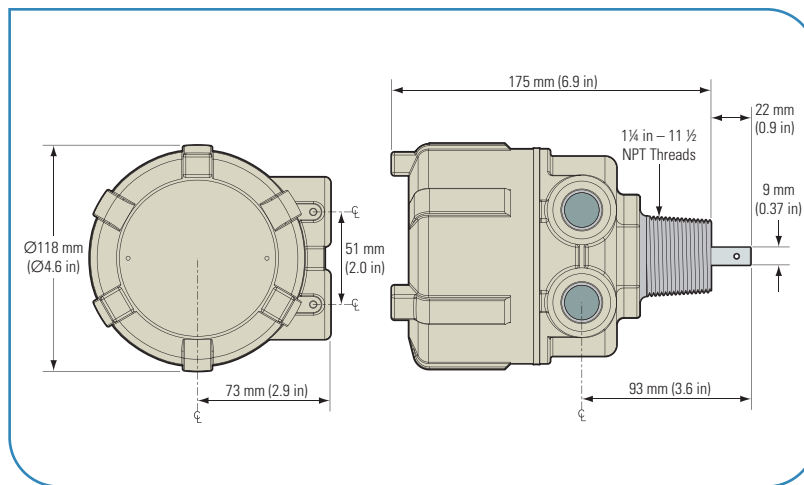
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General Specifications

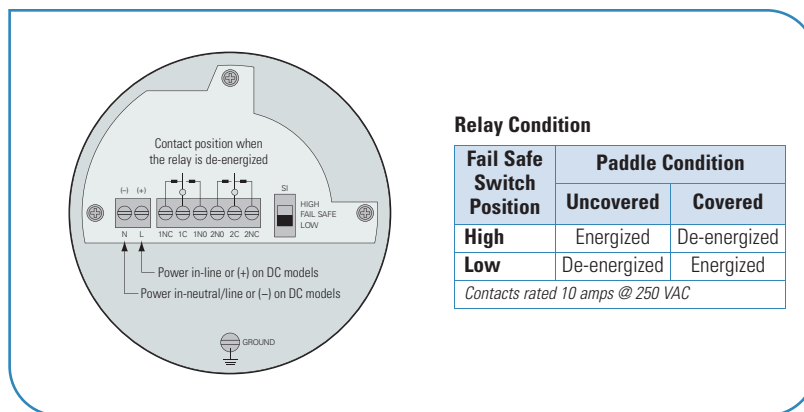
| | | |
|------------------------|---|----------------------------|
| Input Power | TRX-120 | 120 VAC 50/60 Hz +10%/-15% |
| | TRX-240 | 240 VAC 50/60 Hz |
| | TRX-24DC | 24 VDC |
| Output Relay | (1) DPDT—10 Amp @ 250 VAC; Switch selectable High/Low fail safe modes | |
| Enclosure | Cast aluminum with white powder coat finish, NEMA 4X, three-turn screw-on cover, SST Shaft | |
| Temperature | -40°C to +85°C (-40°F to +185°F) ambient temperatures; Up to +200°C (+400°F) process temperatures | |
| Pressure | 30 PSI, 0.5-micron particle size | |
| Mounting | 1¼-in NPT | |
| Conduit Entry | Dual ¾-in NPT | |
| Hazardous Area Ratings | CSA - Class I, Groups C & D CSA - Class II, Groups E, F, & G | |

Note: For additional information on the TRX-PLUS units with enhanced fail safe and monitoring capabilities, please contact Thermo Fisher Scientific.

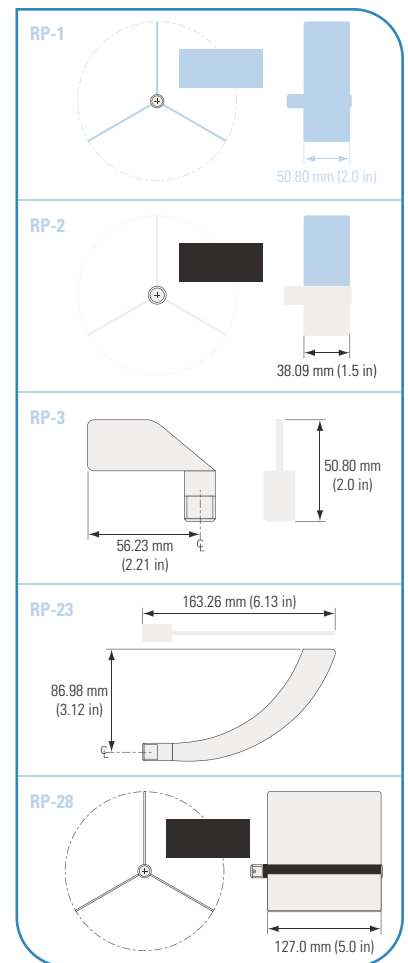
Thermo Scientific Ramsey TRX Series Rotary Point Level Control Specification Drawing



Thermo Scientific Ramsey TRX Series Rotary Point Level Control with cover removed



Sample Paddle Specification Drawings



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