

RC-A0750AK, RC-M0750AK Pressure Control Installation & Operation Manual



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Safety

Power supply must be disconnected before installation, calibration and maintenance.

Keep all components dry and free from damage.

Review applicable standards to ensure Robinson Pressure Control is the correct control for application.

Personnel must wear appropriate safety approved apparel for working environment.

Only qualified personnel should install the Robinson Pressure Control and accessories.

A qualified electrician is required to inspect wiring installation prior to applying electricity.

Ensure enclosure cover is in place prior to applying electricity

Quick Installation

(Assumes previous Pressure Control experience)

Inspect all threaded connections and ensure they are all damage free.

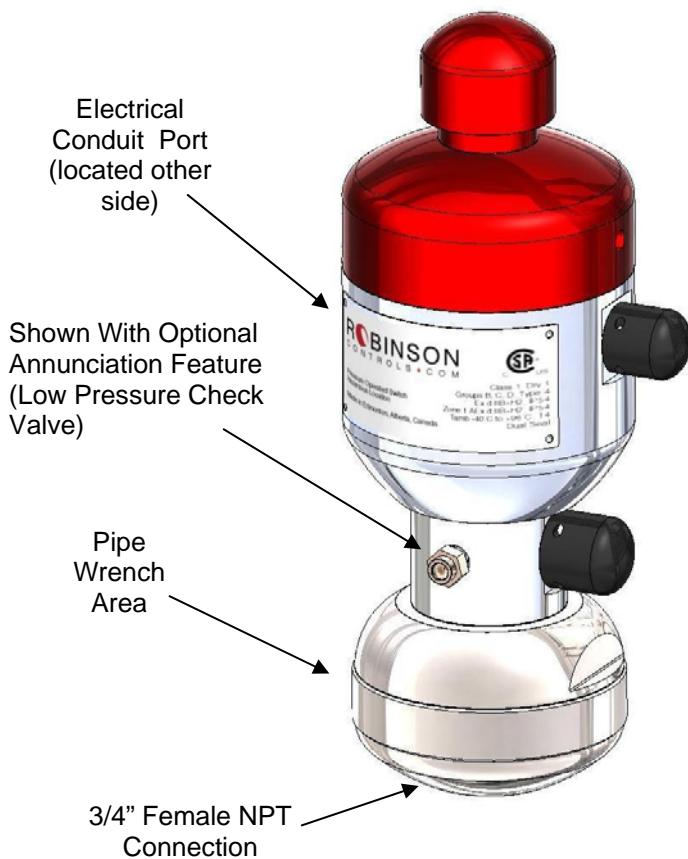
Screw pressure switch into place using a pipe wrench on the knurled portion of the trim bushing.

Critical Procedure:

Do Not use Wrench Flats for installation, they are for assembly only, damage will occur if torque is applied to the Wrench Flats or other components of the Robinson Pressure Control.

Inspect threads in the **Electrical Conduit Port** (1/2" npt) as well as the cable assembly fitting to ensure cleanliness and are not damaged.

Feed wire leads through the **Electrical Conduit Port** and tighten the cable assembly fitting. Refer to the wiring diagram on next page to attach wires to micro switch.



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Enclosure Cover

Wiring

- 1) Loosen screw (1/8" hex key) located on the side of the **Enclosure Cover**
- 2) Use a spanner wrench (1/4" pin, 2-4 3/4" span) to break loose the **Enclosure Cover**
Complete removal by hand.
- 3) Connect wires to micro switch as required.
- 4) Thread 1/2" Union into Electrical Port 5+ Turns
- 5) Thread **Enclosure Cover** onto Enclosure and ensure seated prior to applying electricity.

Notes Regarding Wiring

Connect Wires Firmly to Terminals

Ensure Wire Insulation is not Damaged

Wiring Must Meet or Exceed Circuitry Requirements

<p style="text-align: center;">Manual Reset</p>	<p style="text-align: center;">Automatic Reset</p>
<p>Single Pole Double Throw 15A—125, 250 or 480 VAC 1/4 HP—125 VAC, 1/2 HP— 250 VAC 1/2A—125 VDC, 1/4A—250 VDC</p>	<p>Single Pole Double Throw 15A—125, 250 or 480 VAC, 2A—600 VAC 1/8 HP—125 VAC, 1/4 HP—250 VAC 1/2A—125VDC, 1/4A—250 VDC</p>

Notes Regarding Calibration

- 1) Calibration is not required after re-setting & verifying trip pressure.
- 2) Calibration is required when the Microswitch has been replaced or if disassembly and re-assembly has occurred.

Refer to Repair Manual for calibration instructions www.robinsontcontrols.com

Setting & Verifying Trip Pressure

Note: pressure gauge and pressure source required to verify settings

1) Lower Security Cap

- Cut off Security Seal and remove Lower Security Cap.

2) Pressure Adjusting Screw

- Turn Screw inward (use 1/4" hex key).
- Turn inward until resistance changes and the limit is felt.

3) Pressure Setting

- Increase process liquid pressure acting on the pressure control to the desired trip pressure.

4) Pressure Adjusting Screw

- Turn the screw slowly outward until micro switch trips.

5) Verify Pressure Setting

- Relieve the pressure acting on the control, then bring it back up until the micro switch trips off.
- Note the resulting trip pressure and make fine adjustments (+/-) to Pressure Adjusting Screw to dial-in the desired setting.

Note: one full turn equals approximately 6 PSI

6) Security Cap, Security Seal

- Press the Security Cap in place over the Pressure Adjusting Screw.
- If desired, the Security Cap can be locked in place with a new Security Seal or 1/8" plastic zip tie.



Specifications

Model

RC-A0750AK and RC-M0750AK

Pressure Range 1 –30 (7 to 207 kPa)

(Other pressure ranges available)

Max Safety Pressure

200 psi (1379 KPA), all models.

Temperature Range

Auto Reset

Process temperature up to 140°C
Ambient Temperature -40°C to 60°C

Manual Reset

Process temperature up to 120°C
Ambient Temperature -40°C to 60°C

Optional Temperature Limits for Supply Wires at a Lower Temperature Rating

Process Temperature -40°C to 40°C
Ambient 40°C
Use Supply Wires Suitable For 60°C
(the enclosure would be rated T6 under these conditions)

Certification Markings

Class I, Division 1, Groups B, C and D; Type 4
Ex d IIB+H2; IP54
Zone 1 AEx d IIB+H2; IP54
Tamb -40°C to +60°C; T4
Use Supply Wires Suitable For 96°C

Process Connection; Nace MR0175-2003

3/4" NPT Female Threaded Connection (custom sizes available)
SA350 LF2 Class 1
Diaphragm -Teflon

CRN: 0F10753.2

Input Ratings (model dependant):

Refer to "Wiring" section on page 3 of this manual
Electrical Connection: 1/2" NPT Female thread



RC-A0750AK
Auto

RC-M0750AK
Manual

IMPORTANT INFORMATION PROCESS TEMPERATURE

When comparing the Robinson Pressure Control to other controls, be aware claims made regarding process temperature may reflect outdated standards.

The Robinson Pressure Control has been successfully tested to CSA C22.2 No. E60079-0:2007 (Electrical Apparatus for Explosive gas atmospheres 2007) which requires process temperature to be applied for certification testing.

Complete specifications available at www.robisoncontrols.com

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FEATURE	BENEFIT
Dual Seal Certification	Meets ANSI/ISA-12.27.01-2003 dual seal certification
Dual Seal Annunciation Pressure (in the event of primary seal failure.)	<ol style="list-style-type: none"> 1. Models with Check Valve - minimum of 34kPa (5 psi) to verify annunciation. 2. Models with Pressure Gauge - Annunciation pressure range is any indication of pressure.
Certification Areas	Class 1 - Flammable Gas or Vapour, Division 1 - Intermittent Hazard
Gas Groups B, C, D	Ensures safety for Hydrogen, Ethylene and Propane in environment
IEC	Robinson Pressure Control has been tested to international standards
External Adjustment	Pressure Adjustment Screw designed to allow pressure setting external adjustment. External adjustment prevents moisture and debris to enter Pressure Control internals, ensuring Robinson Pressure Controls protects against corrosion.
Security Seals	Technician can apply a security seal to the Pressure Control security cap after pressure setting and calibration.
Process Connection Nace	Process Connection Materials are chosen in accordance to NACE MR0175-2003
Piston Orientation	Eliminate the need for pulsation dampening
Field Service	Microswitch replaceable, no need to disassemble Pressure Control.
Low Ownership Costs	<p>Maintenance kits are available to renew pressure control for service.</p> <p>Performed by qualified technicians, Please contact Robinson Controls to schedule training.</p>

Recommend Service

3 month interval - Verify operation by pressure testing, most importantly prior to cold weather season.

Ensure Annunciation Gauge is not showing pressure. Gauge should read 0 PSIG at all times.

If in the unlikely event that any amount of pressure registering on the pressure gauge, a primary seal failure has occurred and the switch needs to be removed from service and rebuilt.

Visit www.robinsoncontrols.com for more information.



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