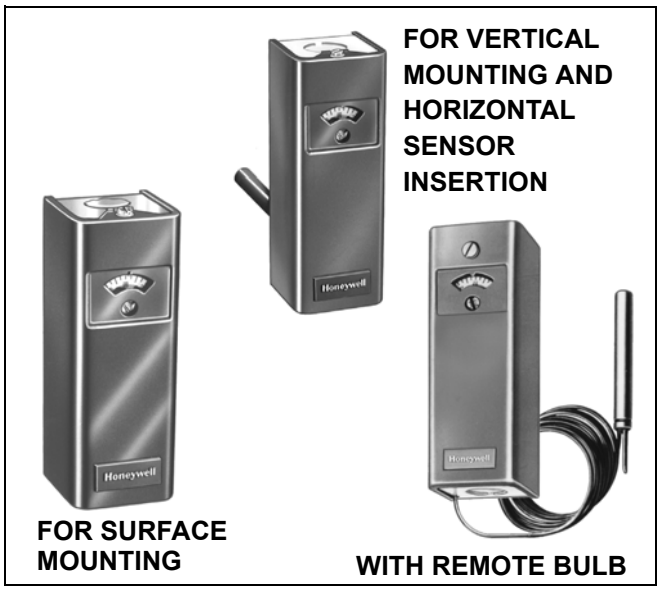
Honeywell

L4006,7,8; L6006,7,8 Aquastat® Controllers

L4008A1015

PRODUCT DATA



GENERAL

Aquastat® Controllers are immersion type devices for limiting or regulating the temperature of liquids in boilers, storage tanks, and other applications where temperature control is required.

FEATURES

- **L4006, 7, and 8 provide Spst switching for high or low limit or circulator control.**
- **L4006G includes two Spst switches that provide high limit and circulator control.**
- **L4006,7; L6006,7 models are available for insertion in: vertical or horizontal immersion well, vertical or horizontal direct immersion, and surface mounting.**
- **L4008, L6008 include remote bulb for mounting controller at a location away from the sensing element.**
- **Totally enclosed Micro Switch™ snap-acting switches operate on temperature rise to set point.**
- **Models calibrated for high limit use are also suitable for low limit control if a separate high limit controller is used.**
- **Visible control point scale and external adjustment screw, permit easy setting.**
- **Remote bulb models may be used to sense air temperature in ducts and in outside air sensing applications.**

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SPECIFICATIONS

IMPORTANT

The specifications given in this publication do not include normal manufacturing tolerances. Therefore, this unit may not exactly match the listed specifications. Also, this product is tested and calibrated under closely controlled conditions, and some minor differences in performance can be expected if those conditions are changed.

SUPER TRADELINE®/TRADELINE MODELS

SUPER TRADELINE controls offer features not available on TRADELINE or standard models, and are designed to replace a wide range of Honeywell and competitive controls.

TRADELINE models are selected and packaged to provide ease of stocking, ease of handling, and maximum replacement value. Specifications of SUPER TRADELINE and TRADELINE controls are the same as those of standard models except as noted below.

SUPER TRADELINE Model: L6006A Aquastat Controller.

SUPER TRADELINE Features:
SUPER TRADELINE package with cross reference label and special instructions.
Factory-set stop at 240° F (116° C).
Vertical or horizontal mount.
Tube of heat-conductive compound.
Insulation: 1-1/2 in. to 3 in. (38 mm to 76 mm).

TRADELINE Models: L4006A,B,E; L4008E; L6006C; L6008A Aquastat Controllers.

TRADELINE Features Available:
TRADELINE package with cross reference label and special instructions.
Some TRADELINE models include immersion well.
Factory-set stops at 180° F, 240° F, or 250° F (82° C, 116° C, or 121° C).
Vertical or horizontal mount.
Tube of heat-conductive compound.
Insulation depths of 1-1/2 in. or 3 in. (38 or 76 mm).

NOTE: The following specifications are standard. Variances, available as options, are listed in Tables 1 and 2.

Electrical Ratings (A):
Models with 2° F (1° C) fixed differential:

	120 Vac	240 Vac
Full Load	2.6	1.3
Locked Rotor	15.6	7.8

Models with 5° F (3° C) fixed differential or 5° F to 30° F (3° C to 17° C) adjustable differential:

	110/120 Vac	200/240 Vac	277 Vac[a]
Full Load	8.0	5.1	4.2
Locked Rotor	48.0	30.6	25.2
Millivoltage	0.25 at 0.25 to 12 Vdc		

[a] L6008G only.

Switching:
L4006, L4007, L4008: Spst.
L6006, L6007, L6008: Spdt (breaks R-B and makes R-W on temperature rise at setpoint).

Pressure Rating:
Capillary Bulb (Direct Immersion): 200 psi (1379 kPa).
Immersion Well: 255 psi (1758 kPa).

Sensing Bulb Material: Copper.

Sensing Bulb Fill: Liquid—toluene or silicone oil.

Sensing Bulb Dimensions: 2-7/8 in. (73 mm) long, 3/8 in. (10 mm) diameter.

Wiring: Screw terminals.

Maximum Ambient Temperature: 150° F (66° C).

ORDERING INFORMATION

When purchasing replacement and modernization products from your TRADELINE® wholesaler or distributor, refer to the TRADELINE® Catalog or price sheets for complete ordering number.

If you have additional questions, need further information, or would like to comment on our products or services, please write or phone:

1. Your local Honeywell Automation and Control Products Sales Office (check white pages of your phone directory).
2. Honeywell Customer Care
   1885 Douglas Drive North
   Minneapolis, Minnesota 55422-4386

In Canada—Honeywell Limited/Honeywell Limitée, 35 Dynamic Drive, Scarborough, Ontario M1V 4Z9.
International Sales and Service Offices in all principal cities of the world. Manufacturing in Australia, Canada, Finland, France, Germany, Japan, Mexico, Netherlands, Spain, Taiwan, United Kingdom, U.S.A.

Approvals:
Underwriters Laboratories Inc:
Remote bulb devices and well-mounted devices shipped without well are component recognized: File No. MP466, Guide No. MBPR2.
L4006A shipped with well, L4006G, L4007A,B; L6006C for surface mounting, L6006B for direct immersion mounting, and L6007A are listed: File No. MP466, Guide No. MBPR.
L6008G is listed: File No. E4436, Guide No. XAPX.
Canadian Standards Association: File No. LR1620, Guide No. 400-E-O.

ANSI Miswiring: Models with 1/4 in. (6.35 mm) tab terminal meet ANSI Appliance Miswiring Standard.

Mounting:
Horizontal and vertical models mount directly to an immersion well installed in a boiler fitting. L4006H and L6006C contain a bracket and clamp for surface mounting on the pipe or tank. Remote bulb models have three mounting holes in rear of case for screw mounting to a vertical surface. The L6006B direct immersion model also mounts directly to a boiler fitting.

Finish: Gray.

Dimensions:
Installation: (See Figures 1, 2, and 3).
Immersion Well: (See Fig. 4).
Boiler Fitting and Bulb: (See Fig. 5).

Accessories and Parts:
137536A Scale Lock Assembly: Includes one 137536-767 Scale Lock and one 80844C-767 Screw, No. 3-48 x 3/16 (5 mm).
Q615A1004 Weatherproof Enclosure (for remote bulb devices only).
107408 Heat-Conductive Compound (4-oz. can).
104488 Spring Clip (stainless steel).
124904 Well Adapter.
Immersion Well Assemblies and Compression Fittings: See form no. 68-0040, Wells and Fittings for Temperature Controllers, for list and ordering information.

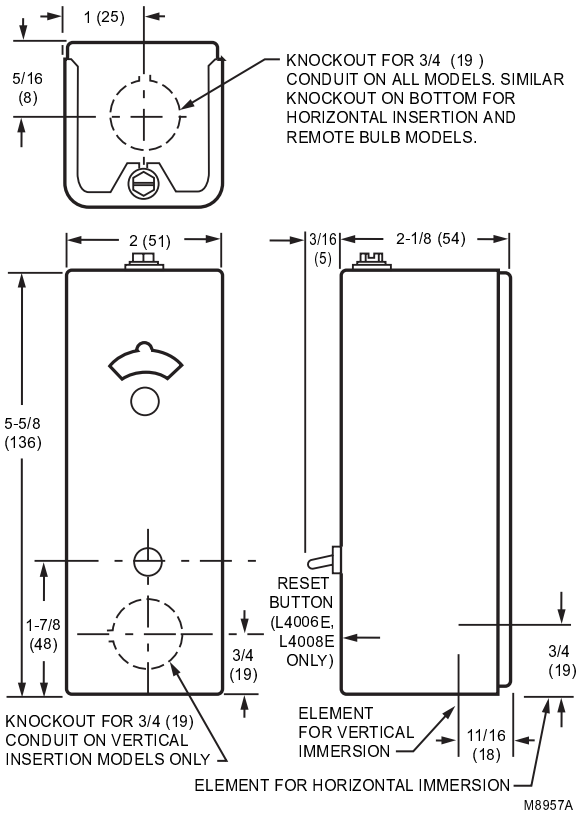


Fig. 1. Approximate case installation dimensions in inches (mm) for direct insertion models.

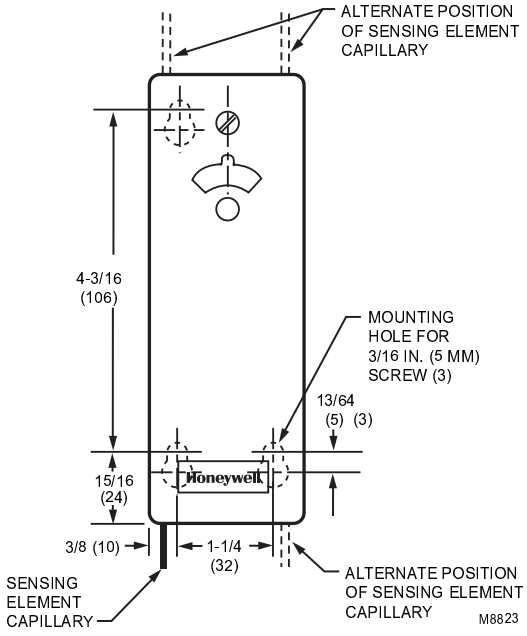


Fig. 2. Approximate installation dimensions in inches (mm) for remote bulb models. Other dimensions are the same as Fig. 1.

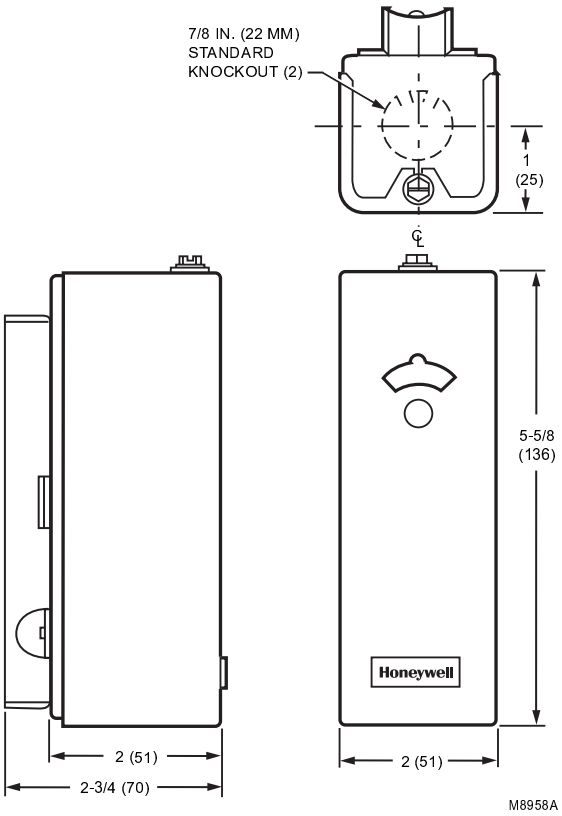


Fig. 3. Approximate installation dimensions in inches (mm) for surface mount models.

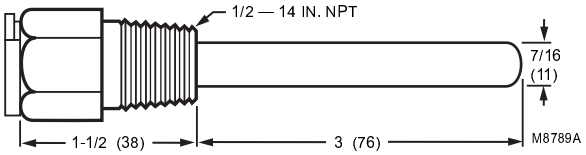


Fig. 4. Approximate immersion well dimensions in inches (mm) for all models except L4006C and L6006B.

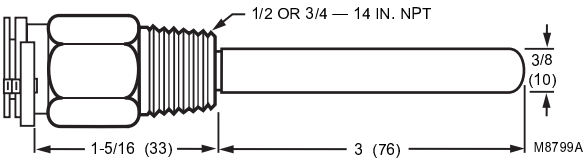


Fig. 5. Approximate boiler fitting and bulb dimensions in inches (mm) for L4006C and L6006B.

Standard Models:
L4006,A,B,C,E,G; L4007,A,B; L4008A,B.E; L6006A,B,C; L6007A, L6008,A,G,H

Table 1. L4006, L4007, L4008 Controller (SPST Switching) Specifications.

Model	Application	Range °F (°C)	Midscale Differential °F (°C)	Insertion[a]	Switching On Temperature Rise	Available Options
L4006A	High or low limit	40° F to 180° F (4° C to 82° C) or 100° F to 240° F (38° C to 116° C)	2° F or 5° F fixed (1° C or 3° C) or 5° F to 30° F adjustable (3° C to 17° C)	Horizontal	Breaks	— TRADELINE models available. — NPT brass spud 1/2 in. or 3/4 in. (13 mm to 19 mm) — Special capillary assembly. — Insertion 3-3/8 in. or 5 in. (86 or 127 mm) — Celsius scale markings. — Factory-set stops at 160°, 180°, 185°, 200°, 220°, or 230° F (71°, 82°, 85°, 93°, 104°, or 110° C). — Insulation depths of 1-1/2 in. , 3 in. or 4 in. (38 mm, 76 mm, or 102 mm). — Screw and mounting brackets. — Plastic tubing over well. — Modified dial with stop. — Special cover and knobs. — With ground screw.
L4006B	Circulator	100° F to 240° F (38° C to 116° C)	5° F (3° C) fixed or 5° F to 30° F (3° C to 17° C) adjustable	Horizontal	Makes	— TRADELINE model available. — Insulation depth 1-1/2 in. or 3 in. (38 mm or 76 mm). — NPT brass spud 3/4 in. (19 mm) — Screw in front of case on dial suitable for Powerpile® control. — Factory-set stop at 240° F (116° C).
L4006C	High or low limit	65° F to 200° F (18° C to 93° C)	3-1/2° F (2° C) fixed	Horizontal direct immersion	Breaks	— TRADELINE model available. — Less cover. — Capillary 10 in. (254 mm). — NPT brass spud 3/4 in. (19 mm).
L4006E[b]	High limit	130° F to 290° F (54° C to 141° C)	Manual reset	Horizontal or vertical	Breaks	— TRADELINE model available. — Insulation depth 1-1/2 in. or 3 in. (38 or 76 mm). — NPT brass spud 1/2 in. (13 mm) — Factory-set stop at 250° F (121° C). — Capillary 8 in. (203 mm).

[a] Some models include copper well or fitting; specify when ordering. Also specify boiler tapping size 1/2 or 3/4 in. (13 to 19 mm) NPT and insulation depth.

[b] Manual reset (trip-free) switch breaks circuit and locks out when controlled medium reaches setpoint. Controlled temperature must drop 20° F (11° C) below setpoint before contacts can be manually reset.

Table 1. L4006, L4007, L4008 Controller (SPST Switching) Specifications. (Cont.)

Model	Application	Range °F (°C)	Midscale Differential °F (°C)	Insertion[a]	Switching On Temperature Rise	Available Options
L4006G	High limit and circulator control	100° F to 200° F (38° C to 93° C)	10° F (6° C) fixed	Horizontal	Two switches break simultaneously	— External adjustment knob. — Insulation depth 4 in. (102 mm). — Factory-set stop at 160° F (71° C). — Celsius scale markings. — Without well.
L4007A	High or low limit	100° F to 240° F (38° C to 116° C)	2° F or 5° F (1° C or 3° C) fixed, 5° F to 30° F (3° C to 17° C) adjustable	Horizontal or vertical	Breaks	— Insulation depth 1-1/2 in. or 3 in. (38 mm or 76 mm).
L4007B	Circulator	100° F to 240° F (38° C to 116° C)	5° F (3° C) fixed or 5° F to 30° F (3° C to 17° C) adjustable	Vertical	Makes	— Celsius scale markings.
L4008A	High or low limit	100° F to 240° F (38° C to 116° C) or 130° F to 270° F (54° C to 132° C)	5° F (3° C) fixed, 5° F to 30° F (3° C to 17° C) adjustable	Remote bulb direct immersion	Breaks	— Remote capillary 5-1/2 ft (1.7 m), 8-1/2 ft (2.6 m) or 10 ft (3.0 m). — Factory-set scale stops at 120°, 170°, or 200° F (49°, 77°, or 93° C) — Celsius scale markings. — Front cover screw.
L4008B	Circulator	100° F to 240° F (38° C to 116° C)	5° F (3° C) fixed or 5° F to 30° F (3° C to 17° C) adjustable	Remote bulb direct immersion	Makes	— Capillary 5-1/2 ft (1.7 m).
L4008E[b]	High limit	40° F to 80° F (4° C to 27° C) or 130° F to 270° F (54° C to 132° C)	Manual reset	Remote bulb	Breaks	— Factory-set scale stops at 140°, 200°, or 250° F (60°, 93°, or 121° C). — Capillary 5-1/2 ft or 20 ft (1.7m or 6.1 m).

[a] Some models include copper well or fitting; specify when ordering. Also specify boiler tapping size 1/2 or 3/4 in. (13 to 19 mm) NPT and insulation depth.

[b] Manual reset (trip-free) switch breaks circuit and locks out when controlled medium reaches setpoint. Controlled temperature must drop 20° F (11° C) below setpoint before contacts can be manually reset.

Table 2. L6006, L6007, L6008 Controller (SPDT Switching) Specifications.

Model	Application	Range °F (°C)	Midscale Differential °F (°C)	Insertion[a]	Available Options
L6006A	Circulator and low limit or high limit	100° F to 240° F (38° C to 116° C) or 100° F to 290° F (38° C to 143° C)	5° F (3° C) fixed or 5° F to 30° F (3° C to 17° C) adjustable	Horizontal	— SUPER TRADELINE model available. — Modified dial with stop. — NPT brass spud 1/2 in. or 3/4 in. (13 mm to 19 mm) — 3-3/8 in. (86 mm) insertion. — Without well. — Adapter for horizontal or vertical mount. — Insulation depth 1-1/2 in. or 3 in. (38 mm or 76 mm).
L6006B	Circulator and low limit or high limit	100° F to 240° F (38° C to 116° C)	5° F (3° C) fixed or 5° F to 30° F (3° C to 17° C) adjustable, or 30° F (17° C) fixed.	Horizontal	— Direct immersion. — Insulation depth 1-1/2 in. (38 mm). — 3/4 in. (19 mm) brass compression fitting.
L6006C	Circulator, low limit, and high limit	65° F to 200° F (18° C to 93° C)	5° F (3° C) fixed or 5° F to 30° F (3° C to 17° C) adjustable	Horizontal or vertical surface mounted	— TRADELINE model available. — Strap-on, surface mount.
L6007A	Circulator and low limit or high limit	40° F to 180° F (4° C to 82° C)	Fixed	Horizontal or vertical	— Insulation depth 1-1/2 in. or 3 in. (38 mm or 76 mm).
L6008A	Circulator and low limit cooling	100° F to 240° F (38° C to 116° C) or -30° F to +70° F (-35° C to +21° C)	5° F (3° C) fixed or 5° F to 30° F (3° C to 17° C) adjustable	Remote bulb	— TRADELINE models available. — Modified dial with stop. — Capillary 5-1/2 ft (1.7 m).
L6008G	Two-stage Aquastat Controller to cycle two-stage gas valve.	130° F to 230° F (54° C to 110° C) or 60° F to 160° F (16° C to 71° C)	3-1/2° F (2° C) fixed	Remote bulb	— Capillary 6 ft (1.8 m). — Adjustable interstage differential; 5° F to 10° F (2° C to 6° C).
L6008H (maximum temperature of element 405° F (207° C))	Low fire Aquastat Controller	150° F to 200° F (66° C to 93° C)	15° F (8° C) fixed	Remote bulb	— Capillary 33 in. (0.8 m).

[a] Some models include copper well or fitting; specify when ordering. Also specify boiler tapping size 1/2 or 3/4 in. NPT and insulation depth.

Honeywell

ENVIRONMENTAL AND COMBUSTION CONTROL
WARRANTY POLICY

Honeywell warrants the products in this catalog (except those parts designated on Honeywell's price lists as not covered by this warranty) to be free from defects due to workmanship or materials, under normal use and service, for the following warranty periods.

Sixty (60) months from date of installation
- Prestige®, Prestige® IAQ, Lyric Thermostat, VisionPRO®, Commercial VisionPRO®, CommercialPRO®, FocusPRO®, Wireless FocusPRO®, PRO 4000, PRO 3000, LineVoltPRO™, Digital Round™, and Modern Round ™ (T87K, N) Series Thermostats with a date code of 0501 or later
- Air Cleaners, Humidifiers, Ventilators, Ultraviolet Treatment and Zoning products with a date code of 0501 or later, excluding replacement maintenance parts
- Indoor air quality products F50, F52, F300, F200, F150, UV100E, HE225, HE265, HE365, with date codes of 0452 or earlier, excluding replacement maintenance parts
- MS, MN and fast acting 2-position Direct Coupled Actuators
- JADE economizer when used with Honeywell sensors and actuators
- AquaPUMP circulating pump
- C7189R RedLINK Wireless Indoor Air Sensor
- C7061 UV Detector

Sixty (60) months from date of manufacture
- Access and Video Systems power supplies

Thirty-six (36) months from date of shipment
- Variable frequency drive devices (VFD) and accessories

Thirty-six (36) months from date of installation
- AUBE branded thermostats, timers, and switches

Twenty-four (24) months from date of installation
- PRO 2000 and PRO 1000 thermostats
- Other Honeywell indoor air quality and zoning products with a date code of 0452 or earlier, unless otherwise specified
- AQ2000 Aquatrol panels and AQ1000 thermostats
- RedLINK Entry/Exit Remote
- RedLINK Vent Boost Remote

Twenty-four (24) months from date of manufacture
- Pan-Tilt-Zoom Domes for Access and Video Systems

Eighteen (18) months from date of shipment,
- All WEBs building automation and security parts, unless specified otherwise (warranty replacement parts will be warranted for 90 days or the balance of the original warranty period, whichever is longer)

Twelve (12) months from date of installation
- Water Solutions products
- Other Honeywell thermostats and thermostats with a date code of 0452 or earlier, unless specified otherwise
- RedLINK Wireless Outdoor Air Sensor
- RedLNK Portable Comfort Control
- RedLINK Internet Gateway

Twelve (12) months from date of shipment
- Building automation security accessories

Twelve (12) months from date of manufacture
- Keyboards, Controllers and other Access and Video System accessories.

Ninety (90) days from date of manufacture
- IR Halogen bulbs for Access and Video Systems

The warranty period for all other products is twelve (12) months from date of installation.

If a product is defective due to workmanship or materials, is removed within the applicable warranty period, and is returned to Honeywell in accordance with the procedure described below, Honeywell will, at its option, either repair, replace or credit the customer for the purchase price of the product, in accordance with the procedure described below. This warranty extends only to persons or organizations who purchase products in this catalog for resale.

The expressed warranty above constitutes the entire warranty of Honeywell with respect to the products in this catalog and IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL HONEYWELL BE RESPONSIBLE FOR ANY CONSEQUENTIAL DAMAGES OF ANY NATURE WHATSOEVER.

INSTRUCTIONS—INSTALLING OR SERVICING CONTRACTOR OR DEALER

When replacing a Honeywell product under warranty, including those products furnished on original heating and/or cooling equipment, you should rely on your local Honeywell Wholesaler or Distributor for prompt and efficient product replacement service.

No warranty claim for product replacement or credit will be honored by Honeywell without a completed return authorization form or a manual return authorization form issued by Honeywell Customer Care.

INSTRUCTIONS—WHOLESALER OR DISTRIBUTOR

The following will apply to the return of any product to Honeywell under this warranty, except any products which are not variable frequency drives or WEBS and are:

(i) identified with a Honeywell Return Authorization Form (obtained from the B2B website at Customer.Honeywell.com)
(ii) display the Return Authorization Form number and return address label on the outside of the return carton. Make sure a copy of the form is enclosed in the return carton
(iii) packed separately from other returns and protected from shipping damage;
(iv) have certification by the installer or servicing dealer that the product was removed, due to failure, within the applicable warranty period;
(v) are received transportation pre-paid at the facility listed on the shipping and/or packing slip.
(vi) and are found by Honeywell's inspection to be defective in workmanship or materials under normal use and service

will be handled in accordance with one of the two following procedures, as specified by the customer making the return.

1. *CREDIT PROCEDURE*. Honeywell will issue credit, at Honeywell's lowest wholesaler net price in effect at the time of the return (as set forth on Honeywell's then current price sheet) or at the actual invoice amount if a copy of that invoice is attached to the packing list. (TRADELINE Replacement Exchange Products will be at Honeywell's lowest replacement exchange net price in effect at the time of such return, as shown on Honeywell's then current price sheet.) Honeywell reserves the right to disallow this credit option in cases of warranty abuse.
2. *REPLACEMENT PROCEDURE*. Warranty replacement procedure must be used for in-warranty emergency replacement orders. Customer will not be credited for items not meeting warranty criteria as outlined by policy. Please return the defective item to the address listed on the return authorization form.

List Water Solutions products on a separate Return Goods Order form, marked "**Water Solutions**".

All new and unused VBN control ball valves MUST be approved by your Honeywell sales representative before returned.

WEBs return products must be processed through WEBs Customer Care. Defective hardware products under warranty have to be returned to Tridium in Richmond, VA. Security Access and Video products must have prior authorization.

All VFD warranty return products must be coordinated through the Commercial Components Hotline (1-888-516-9347 option 4) staff and VFD Warranty and Repair Program Coordinator (ECC-VFD Coordinator) . All VFD warranty returns must have prior authorization and must be returned to the specified Honeywell VFD Service Center.

The warranty will not be honored if:
(i) product is damaged or missing parts or accessory items including batteries.
(ii) product exhibits evidence of field misapplications.

Final disposition of any warranty claim will be determined solely by Honeywell. If inspection by Honeywell does not disclose any defect covered by the warranty, the product will be returned or scrapped as instructed by the customer and Honeywell's regular service charges will apply. Products returned to the customer may be sent shipping charges collect.

If you have any questions relative to product returns to Honeywell, contact your Customer Care Representative:

Honeywell International Inc.
Customer Care MN10-131A
1985 Douglas Drive
Golden Valley, MN 55422
1-888-793-8193

SPECIAL MESSAGE TO INDUSTRIAL USERS AND BUILDING OWNERS

Thank you for using Honeywell products.

As a user, when you purchase a Honeywell product from this catalog you should expect performance from the product and, if it fails, replacement of the product by the installing dealer.

Typically, you will have purchased a Honeywell product under the following circumstances:

1. To modernize or refurbish your existing commercial and/or process control system.
2. You have purchased new commercial and/or process heating, cooling, air cleaning or humidification equipment that is furnished with Honeywell controls or components (refer to your owner's manual furnished with the equipment).
3. A control has failed on your existing commercial and/or process heating and/or cooling equipment and is replaced by a Honeywell TRADELINE product.

With few exceptions, you utilize the services of a competent plumbing, heating and/or cooling dealer/contractor for new or replacement work performed.

Although our warranty does not extend to you, Honeywell does extend a warranty to your supplier.

Your supplier can rely on its local Honeywell Wholesaler/Distributor or Honeywell for prompt replacement.

If you have any questions, need additional information or would like to comment on Honeywell's products or services, please write or phone:

Honeywell International Inc.
Customer Care MN10-131A
1985 Douglas Drive North
Golden Valley, MN 55422-4386
1-888-793-8193

or check your telephone directory (white pages) for one of many Honeywell field sales offices.