

User's Guide



Shop online at

omega.com[®]

Ω OMEGA[®]

omega.com

e-mail: info@omega.com

For latest product manuals:

omegamanual.info

ISO 9001
CERTIFIED
CORPORATE QUALITY

STAMFORD, CT

ISO 9002
CERTIFIED
CORPORATE QUALITY

MANCHESTER, UK

BVLS Series

Limit Switch for BVP70, BVPS70, BVP80 & BVPS80 Series Actuated Ball Valves



OMEGAnet® Online Service omega.com	Internet e-mail info@omega.com
--	--

Servicing North America:

U.S.A.: One Omega Drive, P.O. Box 4047
ISO 9001 Certified Stamford, CT 06907-0047
 TEL: (203) 359-1660 FAX: (203) 359-7700
 e-mail: info@omega.com

Canada: 976 Bergar
 Laval (Quebec) H7L 5A1, Canada
 TEL: (514) 856-6928 FAX: (514) 856-6886
 e-mail: info@omega.ca

For immediate technical or application assistance:

U.S.A. and Canada: Sales Service: 1-800-826-6342 / 1-800-TC-OMEGA®
 Customer Service: 1-800-622-2378 / 1-800-622-BEST®
 Engineering Service: 1-800-872-9436 / 1-800-USA-WHEN®
 TELEX: 996404 EASYLINK: 62968934 CABLE: OMEGA

Mexico: En Español: (001) 203-359-7803 e-mail: espanol@omega.com
 FAX: (001) 203-359-7807 info@omega.com.mx

Servicing Europe:

Benelux: Postbus 8034, 1180 LA Amstelveen, The Netherlands
 TEL: +31 (0)20 3472121 FAX: +31 (0)20 6434643
 Toll Free in Benelux: 0800 0993344
 e-mail: sales@omegaeng.nl

Czech Republic: Frystatska 184, 733 01 Karviná, Czech Republic
 TEL: +420 (0)59 6311899 FAX: +420 (0)59 6311114
 Toll Free: 0800-1-66342 e-mail: info@omegashop.cz

France: 11, rue Jacques Cartier, 78280 Guyancourt, France
 TEL: +33 (0)1 61 37 2900 FAX: +33 (0)1 30 57 5427
 Toll Free in France: 0800 466 342
 e-mail: sales@omega.fr

Germany/Austria: Daimlerstrasse 26, D-75392 Deckenpfronn, Germany
 TEL: +49 (0)7056 9398-0 FAX: +49 (0)7056 9398-29
 Toll Free in Germany: 0800 639 7678
 e-mail: info@omega.de

United Kingdom: One Omega Drive, River Bend Technology Centre
ISO 9002 Certified Northbank, Irlam, Manchester
 M44 5BD United Kingdom
 TEL: +44 (0)161 777 6611 FAX: +44 (0)161 777 6622
 Toll Free in United Kingdom: 0800-488-488
 e-mail: sales@omega.co.uk

It is the policy of OMEGA Engineering, Inc. to comply with all worldwide safety and EMC/EMI regulations that apply. OMEGA is constantly pursuing certification of its products to the European New Approach Directives. OMEGA will add the CE mark to every appropriate device upon certification. The information contained in this document is believed to be correct, but OMEGA accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.
WARNING: These products are not designed for use in, and should not be used for, human applications.

MATERIALS OF CONSTRUCTION

BODY / COVER: Aluminium with Teflon® Impregnated Hard Anodized (PolyLube®) Surfaces

PROBES: 316 Stainless Steel

SEALS - COVER, PROBES: Buna N

RATINGS / SPECIFICATIONS

TEMPERATURE: 10°F to 180°F

CONDUIT CONNECTION: 1/2" NPT

ELECTRICAL RATING: 10 amp. 250VAC maximum; 1/2 amp. 125VDC; 1/4 amp. 250VDC; 5 amp. 125VAC lamp load. Note: each pole must be the same polarity to utilize these ratings.

MICROSWITCHES: Mechanical S.P.D.T. (Single Pole Double Throw)

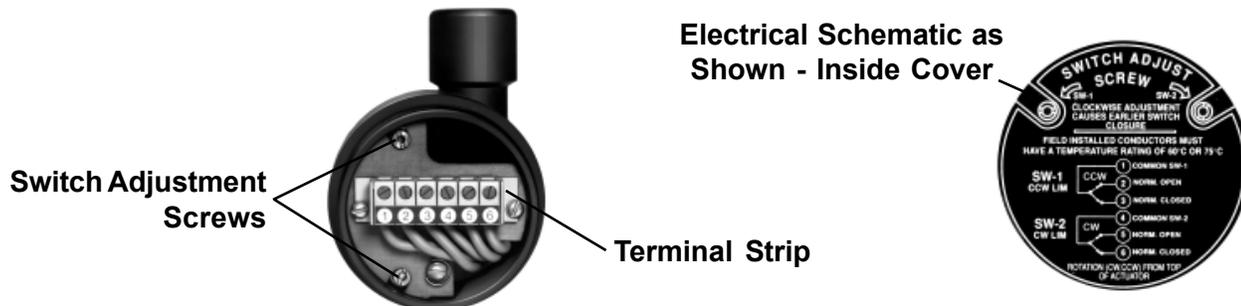
INTERNAL WIRING CONNECTIONS: Screw Clamp

NEMA STANDARDS: NEMA 1 (General Purpose); NEMA 4 (Watertight & Dusttight); NEMA 7 (Hazardous Locations, Class I Groups B, C, & D); NEMA 9 (Hazardous Locations, Class II, Groups E, F, & G); NEMA 12 (Oiltight and Driptight); and NEMA 13 (Oiltight and Dusttight).

UL LISTINGS: Industrial Control Equipment for use in Hazardous Locations, Class I, Groups B,C, & D and Class II, Groups E, F, & G

MAINTENANCE

The BVLS normally requires no maintenance. However, in certain situations the switch adjustment screws may require some attention to either advance or retard the cam actuated switch point. This enables precise adjustment of the switch timing throughout the life of the unit.



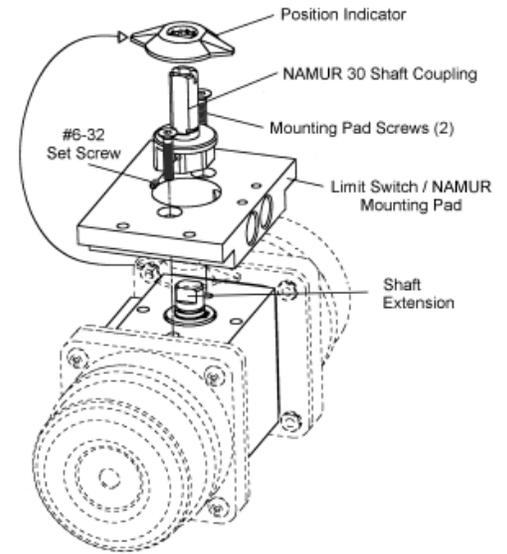
Attachment of Limit Switch / NAMUR Mounting Pad

1. Remove the position indicator from atop the actuator and secure the NAMUR 30 Shaft Coupling to the actuator Shaft Extension with the #6-32 Set Screw using a medium strength (nonpermanent) thread locker (not included in mounting kit).

2. Place the Limit Switch / NAMUR Mounting Pad on top of the actuator. Be sure that the lower flats of the NAMUR 30 Shaft Coupling are oriented such that they align with the Limit Switch Mounting holes on the Limit Switch / NAMUR Mounting Pad.

3. Fasten the Limit Switch / NAMUR Mounting Pad to the actuator using the (2) Mounting Bracket Screws.

4. Slide the position indicator over the NAMUR 30 Shaft Coupling until it 'snaps' into place just above the bracket.



Attachment of Limit Switch

1. Fit the bushings, which extend from the Limit Switch housing, into the matching holes in the mounting pad. Push switch housing against pad and verify that switch body touches pad. Secure switch body to pad with two #10-24 setscrews using a medium strength (nonpermanent) thread locker (not included in mounting kit). Note: Hex wrench supplied with Mounting Kit.

Wiring Instructions

1. Route the wire to be terminated through the conduit hub and up through the access space to the terminal block.

2. Strip insulation back 1/4", insert the stripped ends directly into the proper terminal clamps and tighten screws.

3. Internal interconnections between terminal-block and switches are diagrammed inside the Limit Switch Cover.

Note: If the Switch is installed in a hazardous location i.e. where flammable vapors or dust are present in the atmosphere, replace the cover and tighten securely before connecting the electrical supply circuit. If necessary, a screwdriver shank or similar tool may be engaged in the cover wrenching lugs to assist removal and replacement.

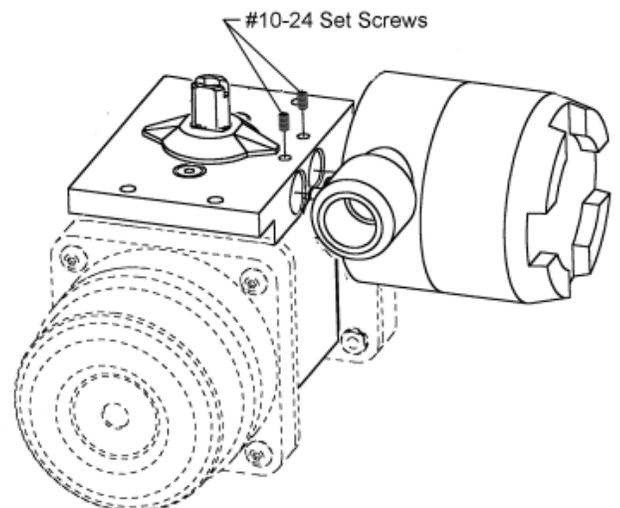
Wiring Specifications

Switch Ratings

AC 250 volts; 10 amps
DC 250 volts; 0.25 amps
125 volts; 0.50 amps
Lamp Load 125 volts; 5 amps

Wire Size

#12 AWG Max.
#24 AWG Min.





WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS/INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

OMEGA is a registered trademark of OMEGA ENGINEERING, INC.

© Copyright 2005 OMEGA ENGINEERING, INC. All rights reserved. This document may not be copied, photocopied, reproduced, translated, or reduced to any electronic medium or machine-readable form, in whole or in part, without the prior written consent of OMEGA ENGINEERING, INC.

Where Do I Find Everything I Need for Process Measurement and Control? **OMEGA...Of Course!** *Shop online at omega.com*

TEMPERATURE

- Thermocouple, RTD & Thermistor Probes, Connectors, Panels & Assemblies
- Wire: Thermocouple, RTD & Thermistor
- Calibrators & Ice Point References
- Recorders, Controllers & Process Monitors
- Infrared Pyrometers

PRESSURE, STRAIN AND FORCE

- Transducers & Strain Gages
- Load Cells & Pressure Gages
- Displacement Transducers
- Instrumentation & Accessories

FLOW/LEVEL

- Rotameters, Gas Mass Flowmeters & Flow Computers
- Air Velocity Indicators
- Turbine/Paddlewheel Systems
- Totalizers & Batch Controllers

pH/CONDUCTIVITY

- pH Electrodes, Testers & Accessories
- Benchtop/Laboratory Meters
- Controllers, Calibrators, Simulators & Pumps
- Industrial pH & Conductivity Equipment

DATA ACQUISITION

- Data Acquisition & Engineering Software
- Communications-Based Acquisition Systems
- Plug-in Cards for Apple, IBM & Compatibles
- Datalogging Systems
- Recorders, Printers & Plotters

HEATERS

- Heating Cable
- Cartridge & Strip Heaters
- Immersion & Band Heaters
- Flexible Heaters
- Laboratory Heaters

ENVIRONMENTAL MONITORING AND CONTROL

- Metering & Control Instrumentation
- Refractometers
- Pumps & Tubing
- Air, Soil & Water Monitors
- Industrial Water & Wastewater Treatment
- pH, Conductivity & Dissolved Oxygen Instruments