



# AVID LP Series

With SPDT V3 Micro Switches,  
V3 Inductive Proximity Sensors  
Or T-Switches

## INSTALLATION AND OPERATION MANUAL

<b>IOM: TECHUK-74</b>		<b>Revision: 4</b>	
<b>Prepared By: C.Irwin</b>	<b>Date: 4/6/09</b>	<b>Drafting Work Order:23127</b>	<b>ECN: 13247</b>
<b>Reviewed By: T. Lee</b>	<b>Date:10/30/17</b>	<b>Approved By: R.Frey</b>	<b>Date: 11/1/17</b>
This IOM contains confidential information and is issued in confidence on the condition that it be returned on demand and not be copied, reproduced, disclosed to others or used in manufacture of the subject matter thereof without the written consent of Crane Co.			

CRANE CO.

280 N. MIDLAND AVE., STE 258, SADDLE BROOK, NJ 07663 WWW.AVIDCONTROLS.COM

## **Revision History**

15 December 2009 Initial release

19 May, 2014 Rev. 1

13 October, 2015 Rev. 2

6 April, 2016 Rev. 3

## **Crane Co. Locations**

**USA:** +1 201 794 7650

**Europe, Middle East & Africa:** +44 (0) 1892 516277

**Asia Pacific:** +65 6869 8909

---

CRANE CO.

280 N. MIDLAND AVE., STE 258, SADDLE BROOK, NJ 07663 WWW.AVIDCONTROLS.COM

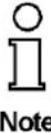
The following document details the installation, operation and maintenance instructions for the AVID LP (Low Profile) giving 360° visual and electrical valve position.



This symbol warns the user of possible danger. Failure to observe this warning may lead to personal injury or death and/or severe damage to equipment.



This symbol identifies information about operating the equipment in a particular manner that may damage it or result in a system failure. Failure to observe this warning can lead to total failure of the equipment or any other connected equipment.



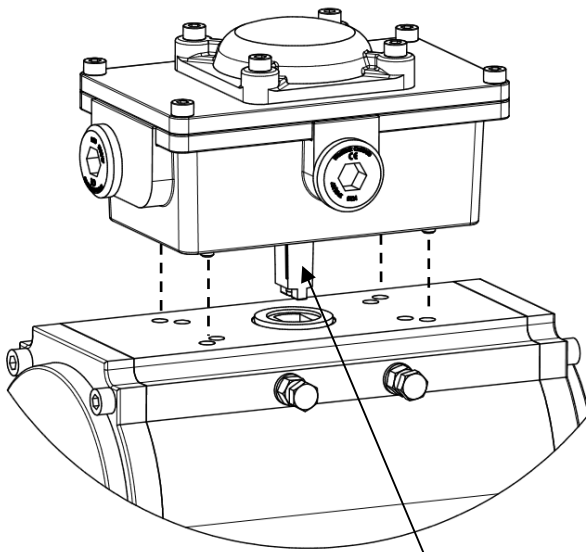
This symbol draws attention to information that is essential for understanding the operation and/or features of the equipment.

### 1.0 **Mounting Instructions.**



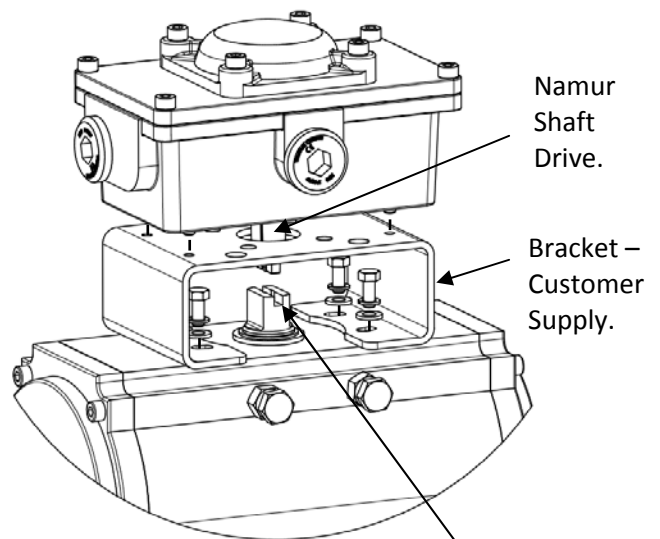
All AVID LP switchboxes are factory equipped with direct and NAMUR mounting.

- 1.1 Please refer to the figures 1 and 2 below to determine the type of mounting that is required. Figure 1 indicates the conventional direct mount and figure 2 details the NAMUR option.



AVID Coupler  
11 x 16mm

Fig 1.



Namur  
Shaft  
Drive.

Bracket –  
Customer  
Supply.

Actuator  
Namur  
Slot.

Fig 2.

- 1.2 Operate the actuator to the fully closed position.

### 1.3 **Direct Mount.**

- 1.3a Before mounting the AVID LP it will be necessary to remove the cover.

- 1.3b To do this, loosen the 4 off M5 captive screws with either a 8mm A/F spanner / socket drive or an appropriately sized flat blade screwdriver.
- 1.3c Remove the cover assembly by lifting the cover vertically. Keep the cover safe taking care not to damage the cover seal detail.
- 1.3d Mount the AVID LP switchbox to the actuator by aligning the 11 x 16mm shaft adaptor to the actuator pinion coupler.
- 1.3e Ensure that the base of the AVID LP housing sits flush with the top of the actuator.
- 1.3f Locate and tighten the 4 off M5 captive screws in the base of the housing with either a 8mm A/F socket drive or an appropriately sized flat blade screwdriver.
- 1.3g Tighten the screws to a torque value of 18 to 22 Lb/Ins.

#### 1.4 **NAMUR Mount.**

Note : Due to the mounting hole pattern of the AVID LP housing being 93.5 x 41.3mm equal about the center of the shaft, a modified Namur bracket is required.  
The modification can either be 4 off M5 tapped holes or 4 off M5 clearance holes.

- 1.4a Secure the appropriately sized modified Namur bracket to the actuator using the screws / washers supplied with the Namur kit finger tight only.

- 1.4b(1) For mounting brackets with (4) M5 tapped holes, mount the LP switchbox to the mounting bracket by engaging the Namur shaft drive into the actuator Namur pinion slot.

- 1.4b(2) Locate and tighten the (4) M5 captive screws in the base of the housing with either a 8mm A/F spanner / socket drive or an appropriately sized flat blade screwdriver.

- 1.4b(3) Tighten the screws to a torque value of 18 to 22 Lb/Ins.

- 1.4c(1) For mounting brackets that have 4 off M5 clearance holes it will be necessary to replace the (4) M5 captive LP housing mounting screws with M5 x 16mm screws to be sealed with new sealing caps.

- 1.4c(2) Tighten the screws to a torque value of 18 to 22 Lb/Ins.

#### 3.0 **Field Wiring.**



Before installing the conduit entry gland, please ensure that it is the correct size and thread form. The incorrect gland may affect the enclosure ingress protection rating.

- 3.1 The terminal strip base has been designed to offer easy access for wire termination.

- 3.1a It is not necessary to remove the terminal strip to connect the field wiring, but if required, first remove the terminal strip retaining screw and keep safe as this will be required to secure the terminal strip when complete.

3.1b Lift the terminal strip evenly off of the two base pins and terminate the wiring in accordance with the wiring diagram which is located on the of the cover.

Note : For special builds of the AVID LP product it may be necessary to have an additional A4 wiring diagram placed in the packing box.

3.1c Position the terminal strip over the two base pins and press evenly in the direction of the pins.

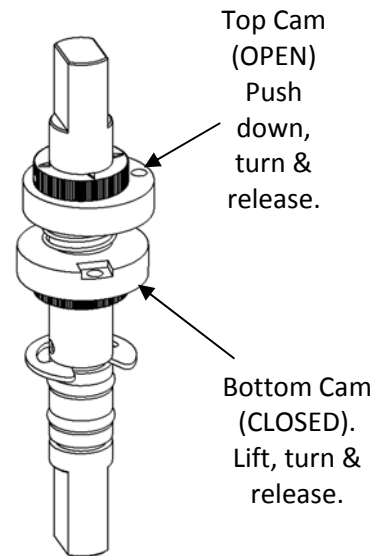
3.1d Secure with the retaining screw removed in step 3.1a.

#### 4.0 **EasiFix Cam Setting.**

4.1 To set the switch or sensor cam, lift the bottom cam and turn until switch / sensor is activated and then release. The spring will push the cam back onto the splined shaft.

4.2 Operate the actuator to the opposite extreme, push down on the top cam and turn until the upper switch / sensor is activated.

4.3 Operate the actuator from one extreme to the other several times to ensure that the switches / sensors activate correctly.



#### 5.0 **Cover assembly.**

5.1 Before assembling the cover assembly to the AVID LP housing, check the cover seal detail to ensure that it is not damaged and free of debris.

5.1 Engage the shaft into the beacon bore and rotate the cover assembly so that the shaft drive flats fully engage.

5.2 Approximately align the cover with the housing flange and secure using either a 8mm A/F spanner / socket drive or an appropriately sized flat blade screwdriver.

5.3 Tighten the screws to a torque value of 18 to 22 Lb/Ins.

#### 6.0 **Ready For Use.**

6.1 The AVID LP switchbox is now ready for use.

6.2 If there are any un-used conduit entries, please ensure that they are plugged using correctly rated IP blanking plugs.

7.0 **Technical Data.**

Area Classification - Non Hazardous.

Ingress Protection - IP66 / 67

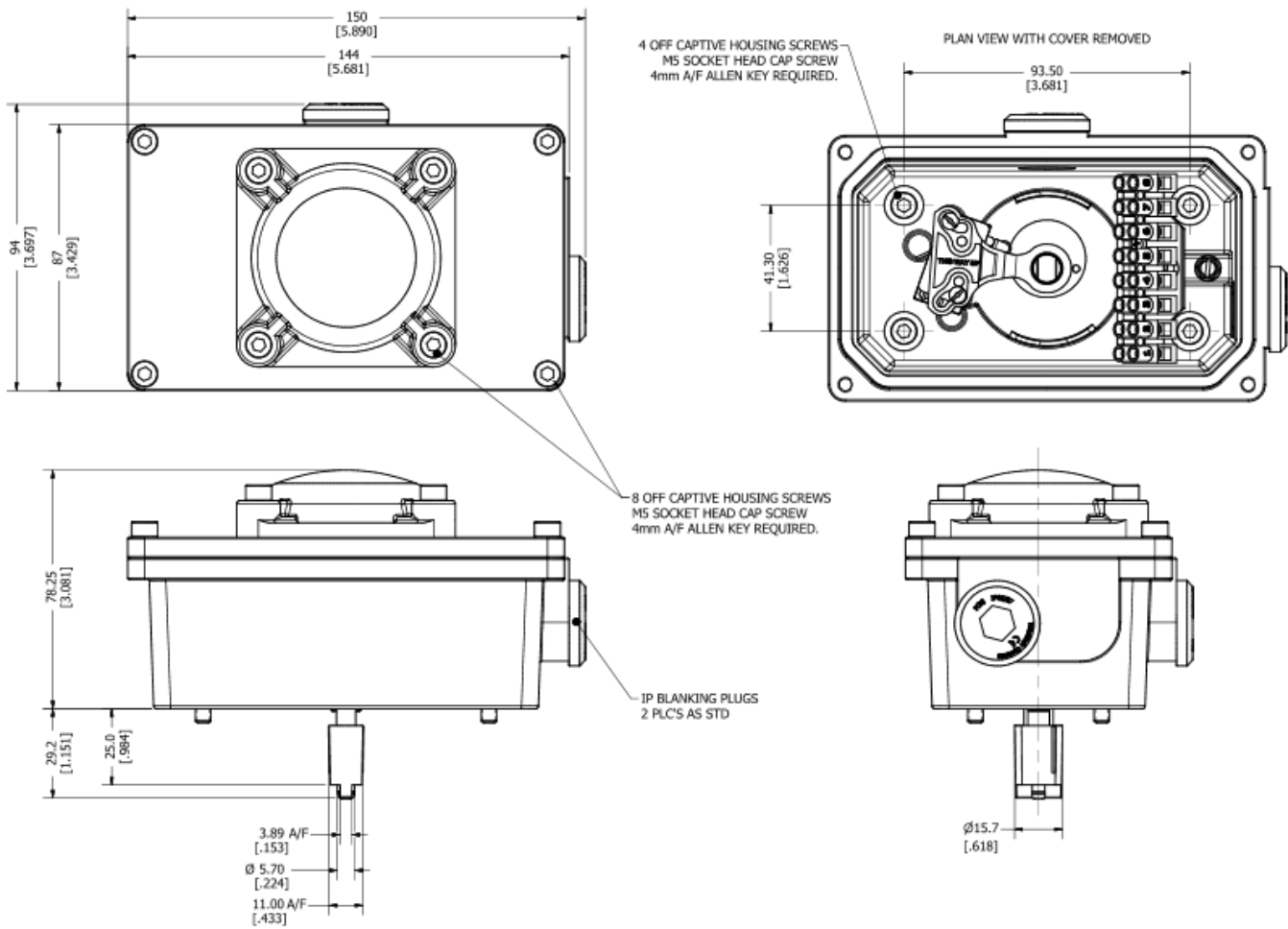
**Switch / sensor options**

Mechanical Switch – SPDT Form C,  
 Electrical rating - 15A – 125/250 VAC; 6A – 24 VDC

Alternative Inductive Proximity Sensors;

- P&F - NJ2-V3-N, NBB3-V3-Z4, NBB2-V3-E2
- IFM - IS5026, IS5001, IS0003, IS5003, NS5002
- Turck - Bi2-Q10S-AP6X, Bi2-Q10S-YOX
- Telemecanique - XS7-H10PA340

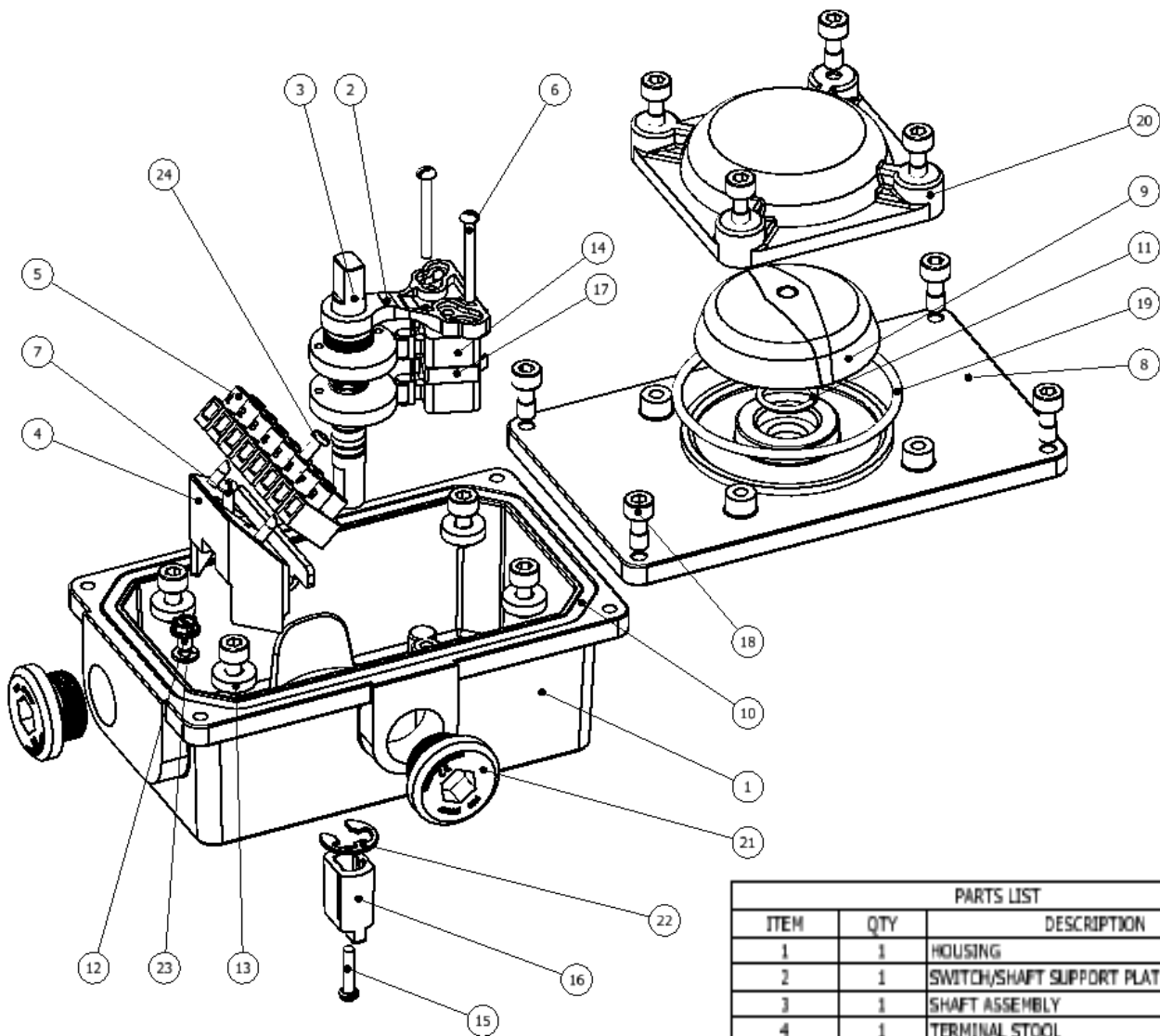
Terminal Strip: 6 or 8 points  
 Conduit Options: Up to 2 x M20 x 1.5p or ½"-14 NPT  
 Ambient Temperature Range: -20°C to +80°C



**Overall Dimensions mm (in)**

CRANE CO.

280 N. MIDLAND AVE., STE 258, SADDLE BROOK, NJ 07663 WWW.AVIDCONTROLS.COM



PARTS LIST		
ITEM	QTY	DESCRIPTION
1	1	HOUSING
2	1	SWITCH/SHAFT SUPPORT PLATE
3	1	SHAFT ASSEMBLY
4	1	TERMINAL STOOL
5	1	TERMINAL STRIP
6	2	SWITCH SCREWS
7	1	TERMINAL STOOL MOUNTING SCREW
8	1	COVER
9	1	INNER BEACON
10	1	HOUSING / COVER SEAL
11	1	BEACON O'RING
12	1	EARTH SCREW
13	4	HOUSING SEALING WASHER
14	2	SWITCH
15	1	SHAFT COUPLER MOUNTING SCREW
16	1	SHAFT COUPLER
17	1	SWITCH SPACER
18	12	HOUSING / COVER / BEACON SCREW
19	1	OUTER BEACON O'RING
20	1	OUTER BEACON
21	2	HOUSING PLUG AND O'RING
22	1	SHAFT E' CLIP
23	1	EARTH WASHER
24	1	TERMINAL STRIP MOUNTING SCREW

CRANE CO.

280 N. MIDLAND AVE., STE 258, SADDLE BROOK, NJ 07663 WWW.AVIDCONTROLS.COM