



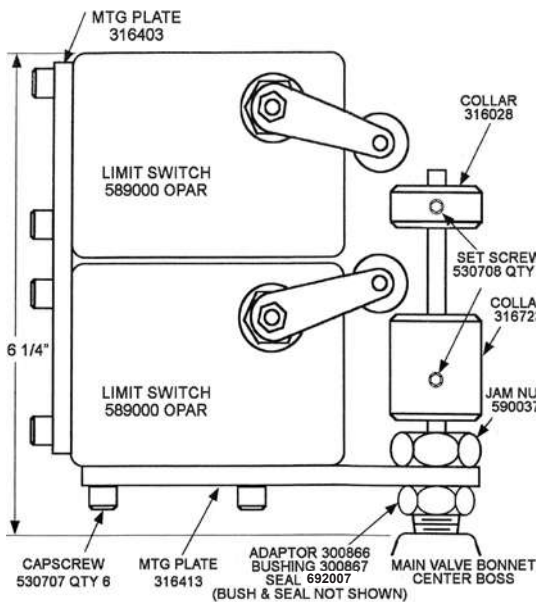
**DESCRIPTION**

**MODEL 31 LIMIT SWITCH ASSEMBLY**

- Provides electrical indication of two different valve positions.
- Adjustable to any point of valve travel.
- Heavy-duty stem seal.
- Installed without disassembly of valve.
- Available in weatherproof or explosion-proof enclosures.
- SPDT contacts (standard) DPDT (optional)

The Model 31-2 Dual Limit Switch Assembly is a device that uses movement of the valve stem to make or break electrical contacts at two designated points in the valve travel (typically full open and full closed). It consists of an adaptor threaded into the center port of the valve bonnet, a rod threaded into the main valve stem, a heavy-duty stem seal, two actuating collars, and two switch units. It may be installed on virtually any OCV control valve, and can be done so without any disassembly of the valve itself.

**MODEL 31-2 MATRIX**



These part numbers include Buna-N Stem Seal. Consult Factory for part numbers on DPDT, other seal material, and all model 31-2 switches shown in the Actuation matrix. NOTE: Factory recommended valve installation should allow for indicator rod to be in the vertical position.

**ACTUATION - LOWER SWITCH**

SWITCH TYPE	VALVE CLOSED	VALVE OPEN
OP-AR and EX-AR (SPDT)	N.C. contact(s) closed	N.C. contact(s) open
OPD-AR and EXD-AR-3 (DPDT)	N.O. contact(s) open	N.O. contact(s) closed
<i>OCV Standard Configuration</i>	Switch roller OFF collar	Switch roller ON collar
OP-AR30 and EX-AR30 (SPDT)	N.C. contact(s) open	N.C. contact(s) closed
OPD-AR30 and EXD-AR30-3 (DPDT)	N.O. contact(s) closed	N.O. contact(s) open

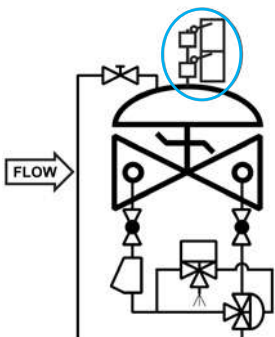
**ACTUATION - UPPER SWITCH**

SWITCH TYPE	VALVE > FULL OPEN	VALVE FULL OPEN
OP-AR and EX-AR (SPDT)	N.C. contact(s) closed	N.C. contact(s) open
OPD-AR and EXD-AR-3 (DPDT)	N.O. contact(s) open	N.O. contact(s)

VALVE SIZE	PART NUMBER OP-AR (SPDT) Weatherproof	PART NUMBER EX-AR (SPDT) Explosion proof
1 1/4" - 1 1/2"	Consult factory	Consult factory
2" - 4"	252705	Consult factory
6" - 8"	252704	Consult factory
10 - 12"	252706	Consult factory
14" - 16"	Consult factory	Consult factory

**SCHEMATIC SYMBOL**

The Model 31-2 is shown on OCV Valve Schematic as:



EXAMPLE: Shown here on a Model 115-4 Solenoid Control Valve

**ELECTRICAL RATING**

SPDT: 15 amps @ 125-480 VAC  
 1/2 amp @ 125 VDC, 1/4 amp @ 250 VDC  
 DPDT: 10 amps @ 125-250 VAC  
 0.3 amp @ 125 VDC, 0.15 amp @ 250 VDC

**ENCLOSURES**

OP Switches Weatherproof NEMA 4  
 EX Switches Explosion Proof NEMA 7, 9

**MATERIALS**

Indicator Rod: Stainless Steel  
 Adapter: Stainless Steel  
 Collars: Stainless Steel

**Dual Limit Switch Assembly 31-2**