

SEALED AGAINST IMMERSION & CORROSIVE ATMOSPHERES



P6 series switches are sealed against immersion and corrosive atmospheres. These switches are designed for rugged duty both mechanically and electrically. A one-piece nickel plated stainless steel or brass housing, sealed at the plunger with an O-ring and at the base with a glass-to-metal header option provides true environment-free sealing to comply with MIL-PRF-8805/39, MIL-PRF-8805/40, MIL-PRF-8805/43, and MIL-PRF-8805/100. Most case parts are grounded for EMI reduction.

The P6 series is available with roller plunger styles for cam or slide actuation and pin plunger for in-line actuation. Contact factory for additional designs.

P6 series features the OTTO B2, B3 or B5 series snap-action basic switch. High contact pressure and unique contact design provides low contact resistance for low level switching as well as full rated service.

Features:

- Complies with MIL-PRF-8805 sealing
- One-piece housing
- Sealed at plunger with O-rings
- Sealed at base with a glass seal
- EMI reduction construction
- Choice of pin or roller plunger
- Choice of axial or radial leads

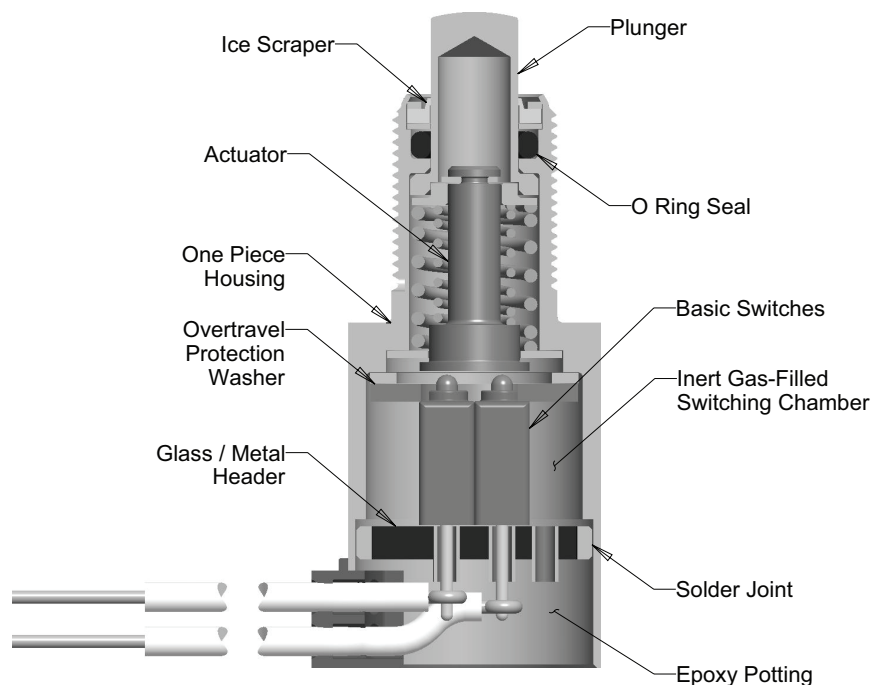
Your official representative



ALDERS®
Indicate. Control. Connect.

ALDERS electronic GmbH
Arnoldstraße 19
47906 Kempen - Germany

+49 2152 8955-0
sales@alders.de / www.alders.de



Cross section example of OTTO P6-24XXX series.

SEALED LIMIT SWITCHES

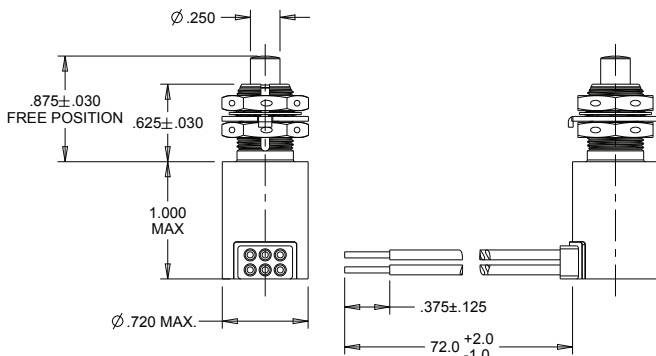
P6
LIMIT
SWITCHES

FEATURING OTTO B2 & B3 SERIES BASIC SWITCHES

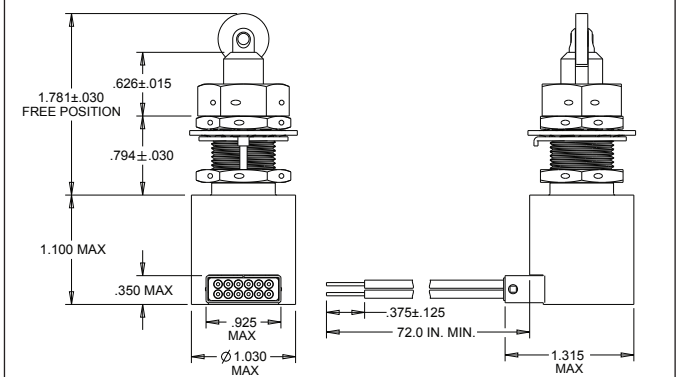


LIMIT SWITCHES

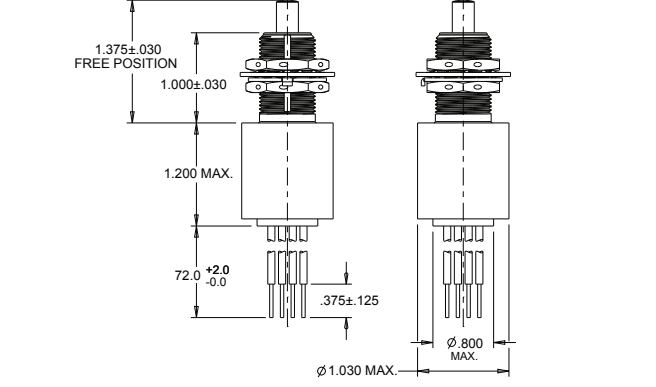
Style A
Pin Plunger
Radial Leads



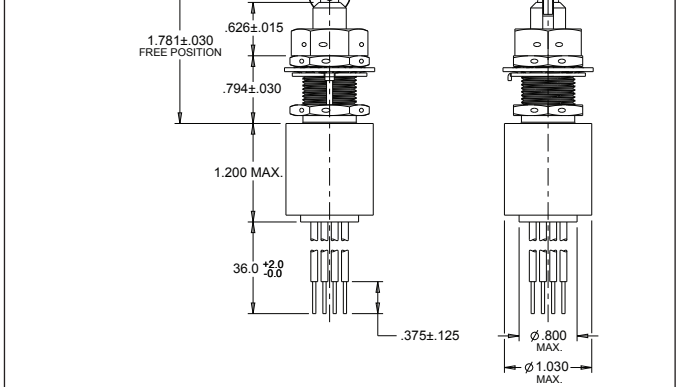
Style B
Roller Plunger
Radial Leads



Style C
Pin Plunger
Axial Leads



Style D
Roller Plunger
Axial Leads



FEATURING OTTO B2 & B3 SERIES BASIC SWITCHES

SPECIFICATIONS: Standard Models

ELECTRICAL RATINGS:

Load Sea Level @ 28VDC 50,000 feet @ 28VDC

RATING TABLE 1

Resistive	7A	7A
Inductive	4A	2.5A
Motor	4A	(4A)
DVV	1000Vrms	400Vrms

RATING TABLE 2

Resistive	7A	7A
Inductive	3A	3A
Motor	4A	4A
Lamp	2A	1A
DVV	1250Vrms	600Vrms

RATING TABLE 3

Resistive	4A	4A
Inductive	2A	2A
Motor	4A	4A
DVV	1000Vrms	400Vrms

RATING TABLE 4

Load Type	Power Circuit	Elex Logic	Low Level	Power Circuit	Elex Logic
Resistive	1A	0.01A	0.01A	1A	0.01A
Inductive	0.5A	N/A	N/A	0.5A	N/A
DVV		1000Vrms			400Vrms

Electrical Life: 25,000 cycles
Low Level Life: 25,000 cycles
Contact Resistance: Per MIL-PRF-8805
Operating Force: 6.0 lbs. to 12.0 lbs. standard. Other forces available.
Overtravel Force: 30.0 lbs. max
Release Force: 4.0 lbs. min

Pretravel:
MIL-PRF-8805/39, /40, /43: 0.040 inches
MIL-PRF-8805/100: 0.070 inches
MIL-PRF-8805/104: 0.050 inches

Movement Differential:
MIL-PRF-8805/39, /40, /43: 0.020 inches
MIL-PRF-8805/100: 0.035 inches
MIL-PRF-8805/104: 0.030 inches

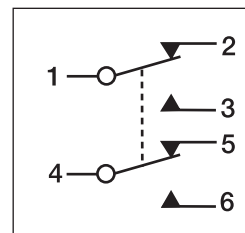
Overtravel:
MIL-PRF-8805/39, /40, /100: 0.250 inches

Wire Type:
Per MIL-W-22759/7
Marked per MIL-W-5088.
Standard length: 6 feet. Other lengths available.

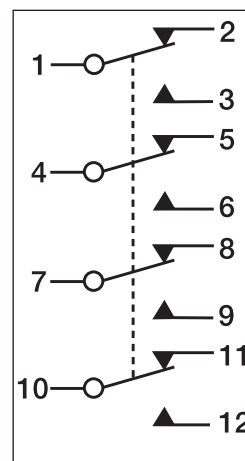
Operating Temp Range: -55°C to 85°C

Mounting/Termination:
Bushing mounting with positive, non-turn features. Wire leads potted at terminal base for strain relief and added insulation. Each wire is marked with circuit identification.

For specific details not shown above, please consult the appropriate military specification sheet or OTTO's product drawing.



2PDT Schematic



4PDT Schematic

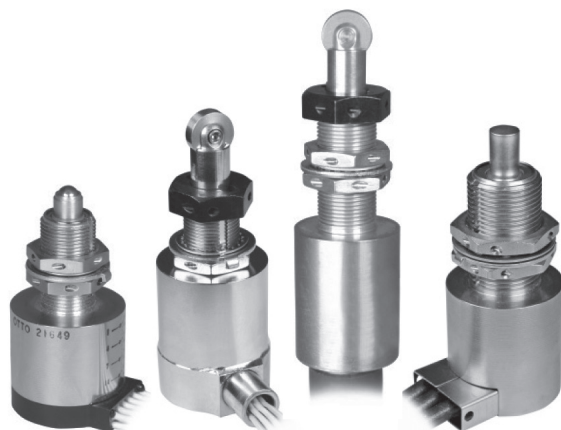
Circuitry	Plunger/Lead Exit Style	Dim. A Free Position (inches +/- 0.030)	Dim. B Bushing Length (inches +/- 0.030)	Dim. C Thread (inches)	Dim. D Body Dia. (max inches)	Dim. E Body Length (max inches)	Electrical Rating Table	Military Number	Catalog Number
MIL-PRF-8805/39									
2PDT	A-Pin/Radial	1.375	1.000	0.625-24	0.720	0.980	1	MS21321-1	P6-24000
4PDT	A-Pin/Radial	1.375	1.000	0.625-24	1.031	1.200	1	MS21321-2	P6-24001
MIL-PRF-8805/40									
2PDT	A-Pin/Radial	1.375	1.000	0.625-24	1.015	0.980	3	MS24331-1	P6-24002
MIL-PRF-8805/43									
2PDT	A-Pin/Radial	0.875	0.625	0.469-32	0.720	1.000	1	MS27240-1	P6-24003
4PDT	A-Pin/Radial	0.875	0.625	0.469-32	1.031	1.200	1	MS27240-2	P6-24004
2PDT	B-Roller/Radial *	1.295	N/A	0.469-32	0.720	1.000	1	MS27240-3	P6-14000
4PDT	B-Roller/Radial *	1.295	N/A	0.469-32	1.031	1.200	1	MS27240-4	P6-14001
2PDT	A-Pin/Radial	0.875	0.625	0.469-32	0.720	1.000	4	MS27240-5	P6-24005
4PDT	A-Pin/Radial	0.875	0.625	0.469-32	1.031	1.200	4	MS27240-6	P6-24006
2PDT	B-Roller/Radial *	1.295	N/A	0.469-32	0.720	1.000	4	MS27240-7	P6-14002
4PDT	B-Roller/Radial *	1.295	N/A	0.469-32	1.031	1.200	4	MS27240-8	P6-14003
MIL-PRF-8805/100									
4PDT	A-Pin/Radial	1.375	1.000	0.625-24	1.030	1.100	2	MIL-PRF-8805/100-007	P6-24043
4PDT	C-Pin/Axial	1.375	1.000	0.625-24	1.030	1.200	2	MIL-PRF-8805/100-008	P6-24044
4PDT	B-Roller/Radial **	1.781	0.794	0.625-24	0.925	1.100	2	MIL-PRF-8805/100-009	P6-14035
4PDT	D-Roller/Axial **	1.781	0.794	0.625-24	1.030	1.200	2	MIL-PRF-8805/100-010	P6-14036
4PDT	A-Pin/Radial	1.375	1.000	0.625-24	1.030	1.100	2	MIL-PRF-8805/100-015	P6-24007
4PDT	C-Pin/Axial	1.375	1.000	0.625-24	1.030	1.200	2	MIL-PRF-8805/100-016	P6-24008
4PDT	B-Roller/Radial **	1.781	0.794	0.625-24	1.030	1.100	2	MIL-PRF-8805/100-017	P6-14005
4PDT	D-Roller/Axial **	1.781	0.794	0.625-24	1.030	1.200	2	MIL-PRF-8805/100-018	P6-14006

* Roller diameter is 0.375 inches. ** Roller diameter is 0.500 inches.

NOTE: SEE MILITARY QPL CROSS REFERENCE LISTING IN APPENDIX.

APPLICATION-SPECIFIC MODIFIED PRODUCTS

Modified Military Styles



Circuitry	Free Position (inches)	Bushing Length (inches)	Overall Length (inches)	Catalog Number
Pin Plunger, Radial Lead Exit				
2PDT	1.375	1.000	2.375	P6-20077
2PDT	1.575	1.200	2.575	P6-20084
2PDT	0.875	0.625	1.875	P6-20076
4PDT	1.375	1.000	2.475	P6-20115
Pin Plunger, Axial Lead Exit				
2PDT	0.875	0.625	2.250	P6-20003
2PDT	1.575	1.200	2.950	P6-20005
Roller Plunger, Radial Lead Exit				
4PDT	1.781	0.794	2.781	P6-14010
2PDT	1.295	0.630	2.295	P6-14020
2PDT	1.980	1.095	2.980	P6-10060
Roller Plunger, Axial Lead Exit				
2PDT	1.700	0.860	3.200	P6-10057
4PDT	2.150	0.794	3.800	P6-14084

Custom Paint

Design 4 (Resilient) sealed single pole switch features polyurethane paint on the switch body and has a military style connector. Bushing is 15/32-32.

P6-24026

Actuating Force: 9.0 +/- 3.0 lbs.
Release Force: 4.0 lbs. min
Overtravel: 0.125" min
Circuit: SPDT
Rating: 7 amps Resistive
 4 amps Inductive
Contacts: Gold



Flange Mount

Low profile four pole switch features flange mounted stainless steel housing with an 8 pin connector.

P6-20121

Actuating Force: 6.0 +3.0/-2.0 lbs.
Release Force: 2.0 lbs. min
Circuit: 4PST N.C.
Rating: 0.5 amps Resistive for 100,000 cycles
Contacts: Silver/Gold



Longer Bushing

This two pole switch features an extra long mounting bushing. Bushing is 15/32-32.

P6-20005

Overtravel: 0.250" min
Operating Force: 9.0 +/- 3.0 lbs.
Release Force: 4.0 lbs. min
Circuit: 2PDT
Rating: 7 amps Resistive
 3 amps Inductive
Contacts: Gold



Rubber Bonded Leads

Aircraft switch features special 48" leads with a Fluorosilicone rubber bonded to wire leads.

P6-20050

Total Travel: 0.300" min
Operating Force: 11.0 +/- 5.0 lbs.
Release Force: 4.0 lbs. min
Circuit: 4PDT
Rating: 0.04 amps to 0.5 amps Inductive
Contacts: Gold



Sleaved Wires

This two pole switch features a lower spring force and sleeved wires.

P6-24111

Overtravel: 0.500" min
Operating Force: 3.0 to 6.0 lbs.
Release Force: 2.0 lbs. min
Circuit: 2PDT
Rating: 7 amps Resistive
 4 amps Inductive
Contacts: Gold



Adjustable Roller Plunger

Design 4 (Resilient) sealed 2PDT limit switch with adjustable orientation of roller plunger at 45° increments. 72" wire leads included.

P6-14000

Overtravel: 0.125" min
Operating Force: 9.0 +/- 3.0 lbs.
Release Force: 4.0 lbs. min
Circuit: 2PDT
Rating: 7 amps Resistive
 4 amps Inductive
Contacts: Gold

