

## Interactive Catalog Supplements Catalog PDFs

If you need detailed product information, or help choosing the right product for your application, see our [Interactive Catalog](#). Use the [Interactive Catalog](#) to access the most complete and up-to-date information available.

The [Interactive Catalog](#) provides an extensive collection of product specifications, application data, and technical literature that can be searched based on criteria you select.

This PDF catalog information was published in November 2000.



Sensing and Control  
[Interactive Catalog...](#)

**Click this icon to try  
the Interactive Catalog.**

---

### Sensing and Control

Honeywell Inc.

11 West Spring Street

Freeport, IL 61032

## Enclosed Switches







OP enclosed switches are precision snap-action switches sealed in rugged cast aluminum housings. Cover and shaft seals keep out moisture and other contaminants on rotary operated switches. The plungers in the Q-plunger version are not sealed.

Refer to page A123 for explosion-proof Type EX switches, which are dimensionally interchangeable with OP switches.

### FEATURES

- Cast aluminum housing
  - Mounts from 4 sides
  - Cover seal, captive cover screws
  - Momentary contact
  - UL Recognized, file #E12252
  - CSA Certified, file #LR57325
  - Grounding screw
  - NEMA 1, 3\*, 4\* and 13\*
- (\* Except Q-plunger and high temperature types)

### ELECTRICAL RATING

Circuitry	Electrical Rating
 Single-pole Double-throw	A UL/CSA Rating: 15 amps, 125, 250 or 480 VAC; 1/8 Hp, 125 VAC; 1/4 Hp, 250 VAC; 1/2 amp, 125 VDC; 1/4 amp, 250 VDC.
 Double-pole Double-throw	B UL/CSA Rating: 10 amps, 125, 250 VAC; 0.3 amp, 125 VDC; 0.15 amp, 250 VDC.
 Single-pole Double-throw	D UL/CSA Rating: 20 amps, 125, 250 or 480 VAC; 1 Hp, 125 VAC; 2 Hp, 250 VAC; 1/2 amp, 125 VDC; 1/4 amp, 250 VDC. Lamp Load — 10 amps, 125 VAC.
 Single-pole Double-throw	E 5 amps, 125, 250 or 480 VAC; 1/2 amp - 125VDC; 1/4 amp - 250 VDC

## ROLLER LEVER ACTUATED SWITCHES



N = Newtons  
 \* Actuation is designated as CW (clockwise) or CCW rotation, when looking at the switch nameplate.  
 † Choice of levers available for use with OP-AR20:  
**6PA5-EX** (non-sparkling roller), **6PA6-OP** (steel roller), **6PA127-EX** (nylon roller), **6PA130-EX** (CW), **6PA142-EX** (CCW), and **6PA136-EX** (Aluminum rod).

Characteristics: O.F. — Operating Force; P.T. — Pretravel; O.T. — Overtravel; D.T. — Differential Travel

For rapid response – off the shelf service, all **bold face** listings are normally stocked items.

### ORDER GUIDE

Description		Elec. Rating	Catalog Listing	O.F.	P.T. max. mm in.	O.T. max.	D.T. max. mm in.
Roller Lever is field adjustable through 360°	CW actuation* SPDT	A	<b>OP-AR</b>	2,22-5,56 N .5-1.25 lbs.	5,56 .219 (8°)	90°	0,18 .007 (.25°)
	CW actuation* SPDT will withstand 400°F for 100 hours	E	OP-AR400	2,22-5,56 N .5-1.25 lbs.	5,56 .219 (8°)	90°	0,18 .007 (.25°)
	CW actuation* High capacity. SPDT	D	<b>OPA-AR</b>	3,34-8,90 N .75-2 lbs.	5,56 .219 (8°)	25°	0,3 .012 (.4°)
	CW actuation* DPDT	B	<b>OPD-AR</b>	2,22-6,67 N .5-1.5 lbs.	4,78 .250 (10°)	25°	2,77 .109 (4°)
	CCW actuation* SPDT	A	<b>OP-AR30</b>	1,11 N max. 2.5 lbs. max.	1,65 .065 (3.5°)	25°	0,18 .007 (.25°)
	CCW actuation* Basic switch plunger held depressed (normal position) DPDT	B	<b>OPD-AR30</b>	12,2 N max. 2.75 lbs. max.	5,56 .219 (8°)	25°	2,77 .109 (4°)
	CW or CCW actuation* No lever return spring. No mounting bracket furnished. SPDT.	A	OP-AR16	0,56 N max. 2 oz. max.	—	—	—
No lever furnished.† CW actuation.* SPDT		A	<b>OP-AR20</b>	0,08-0,23 N .75-2 in. lb.	8°	90°	.25°

## Enclosed Switches

### CROSS ROLLER LEVER ACTUATED SWITCH



#### ORDER GUIDE

Description	Elec. Rating	Catalog Listing	O.F. max. N lbs.	P.T. max. mm in.	O.T. min. mm in.	D.T. max. mm in.
CW actuation* Field adjustable through 360°. SPDT	A	OP-CR	2,22-5,56 .5-1.25	5,56 .219 (8°)	90° max.	0,18 .007 (.25°)

### MANUALLY ACTUATED SWITCH



#### ORDER GUIDE

Description	Elec. Rating	Catalog Listing	O.F. max.
Large 3x3.5 inch paddle for fast, easy operation SPDT	A	OP-AR50	11.1 Newtons 2.5 lbs. (approx.)

Limit/Enclosed

### OVERTRAVEL PLUNGER ACTUATED SWITCHES



#### ORDER GUIDE

Description		Elec. Rating	Catalog Listing	O.P. mm in.	O.F. max. N lbs.	P.T. max. mm in.	O.T. min. mm in.	D.T. max. mm in.
In-line actuation	SPDT	A	OP-Q	47,2±1,52 1.859±.060	13,3 3	1,98 .078	4,78 .188	0,10 .004
	High Capacity SPDT	D	OPA-Q	46±1,52 1.812±.060	8,90 2	1,27 .050	3,18 .125	0,23 .009
	DPDT	B	OPD-Q	46±1,52 1.812±.060	13,3 3	2,77 .109	3,58 .141	1,52 .060

### BOOT SEALED PLUNGER ACTUATED SWITCH

#### ORDER GUIDE

Description	Elec. Rating	Catalog Listing	O.F. max. N lbs.	P.T. max. mm in.	O.T. min. mm in.	D.T. max. mm in.
In-line actuation with boot seal	A	OP-N	15,5 3.5	1,98 .078	4,78 .188	0,10 .004

\* Clockwise actuation, when looking at the switch nameplate.  
N = Newtons

Characteristics: O.F. — Operating Force; P.T. — Pretravel; O.T. — Overtravel; D.T. — Differential Travel; O.P. — Operating Position

## Enclosed Switches

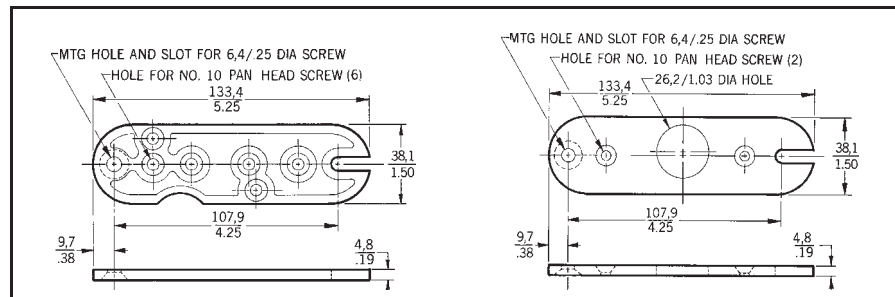
### REPLACEMENT PARTS

In addition to the items shown below, these replaceable internal levers are available:  
**33PA2-OP** for OP-AR, OP-AR20 and OP-CR; and  
**33PA3-OP** for OP-AR50.

Switch Listing	Catalog Listing Replacement Part Numbers		
	Switching Unit	Acuator	Springs
OP-AR	<b>BZ-2R-P4</b>	<b>6PA6-OP</b>	<b>33PA7-EX</b>
OPA-AR	<b>BA-2R-P4</b>	<b>6PA6-OP</b>	<b>33PA6-EX</b>
OPD-AR	<b>DT-2R4-A7</b>	<b>6PA6-OP</b>	<b>33PA6-EX</b>
OP-AR30	<b>BZ-2R-P4</b>	<b>6PA6-OP</b>	<b>33PA5-EX</b>
OPD-AR30	<b>DT-2R711-A7</b>	<b>6PA6-OP</b>	<b>33PA5-EX</b>
OP-AR16	<b>BZ-2RW88-P5</b>	<b>6PA6-OP</b>	—
OP-AR20	<b>BZ-2R-P4</b>	†	<b>33PA7-EX</b>
OP-Q	<b>BZ-2R-P4</b>	8PA7-OP	—
OPA-Q	<b>BA-2R-P4</b>	—	—
OPD-Q	<b>DT-2R-A7</b>	—	—
OP-CR	<b>BZ-2R-P4</b>	6PA131-EX	<b>33PA7-EX</b>
OP-AR50	<b>BZ-2R-P4</b>	6PA134-OP	<b>33PA7-EX</b>

† Levers for OP-AR20 are on pages A108 and A109.

### MOUNTING BRACKETS



### CONDUIT SEALING PACKETS

Catalog Listing Packet	Cable O.D. Inches
2PA6	.400" - .435"
2PA16	.435" - .470"
2PA1	.530" - .570"

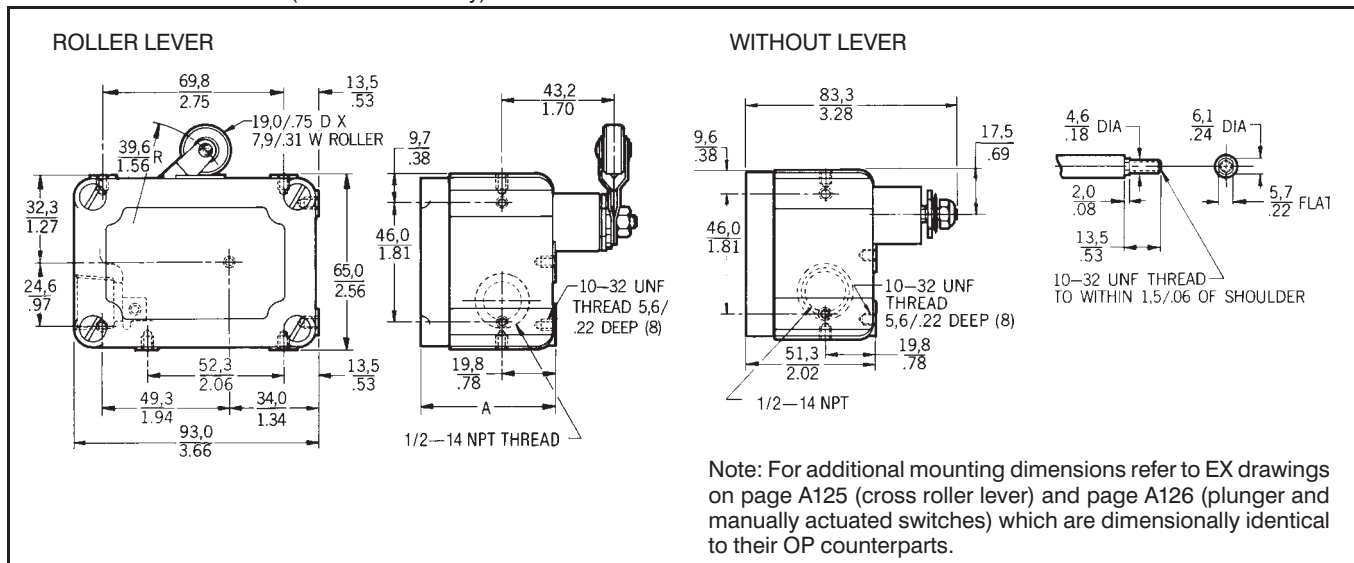
(See page A99 for description.)

**15PA85-EX** is used for top, bottom, back or end mounting. It is furnished with each switch, except OP-AR16 and OP-AR62.

**15AP86-EX** is ordered separately for top mounting of plunger switches.

(Switches may also be direct mounted using 10-32 NF screws.)

### MOUNTING DIMENSIONS (For reference only)



Note: For additional mounting dimensions refer to EX drawings on page A125 (cross roller lever) and page A126 (plunger and manually actuated switches) which are dimensionally identical to their OP counterparts.