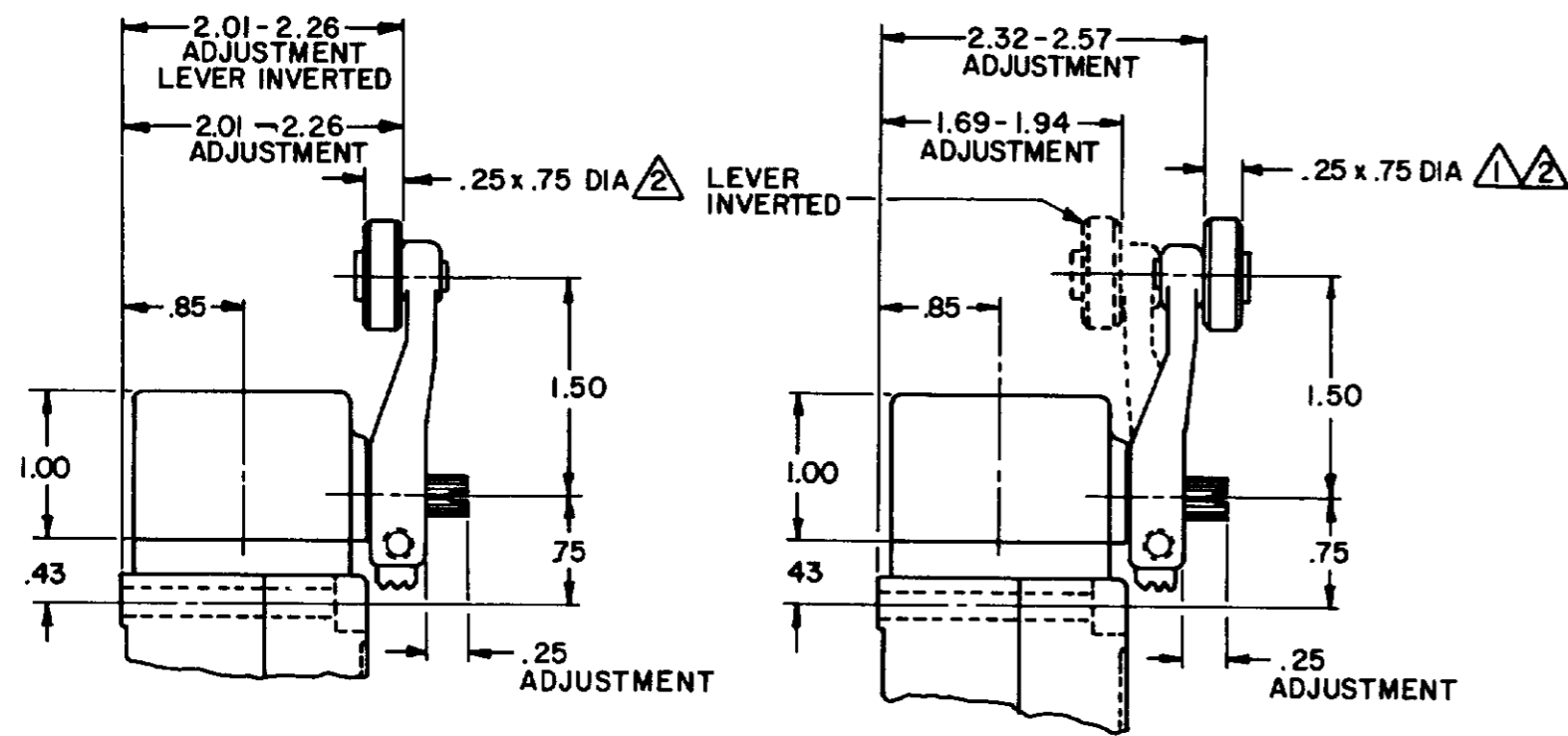
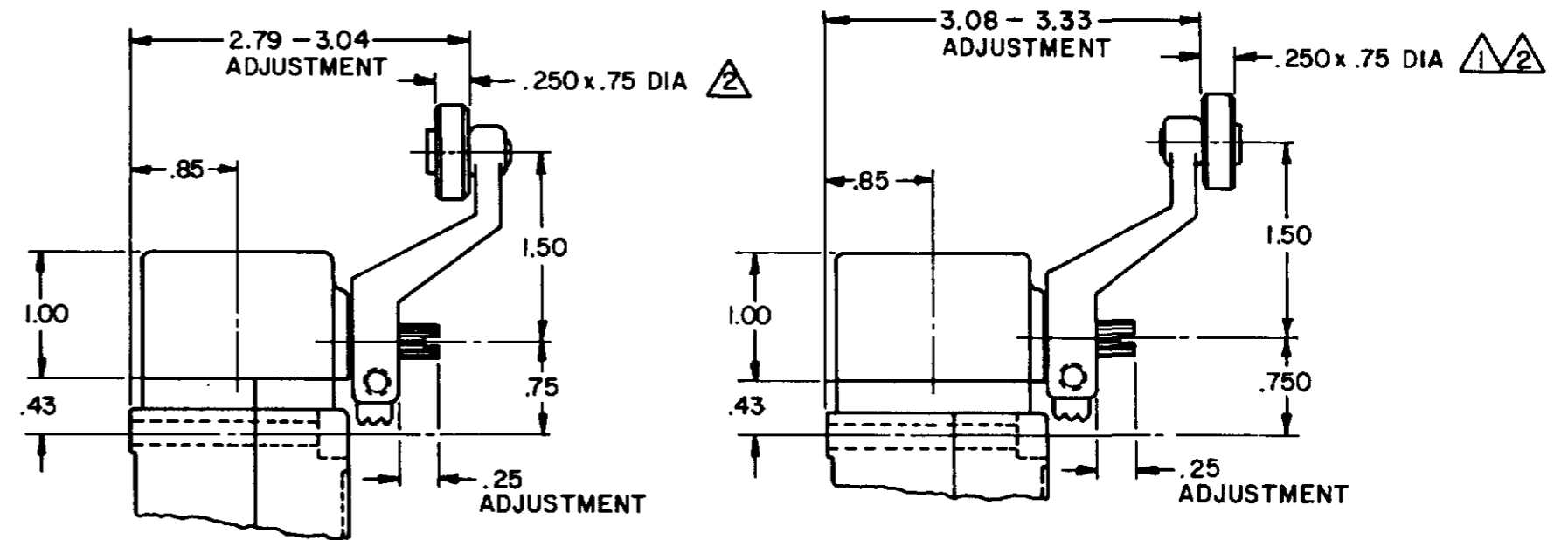




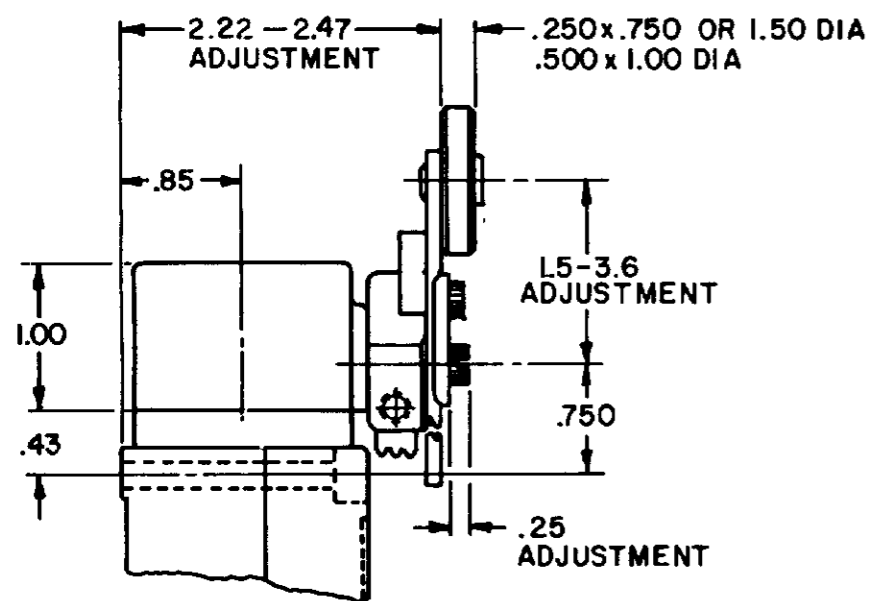
SIDE ROTARY CAM TRACKING



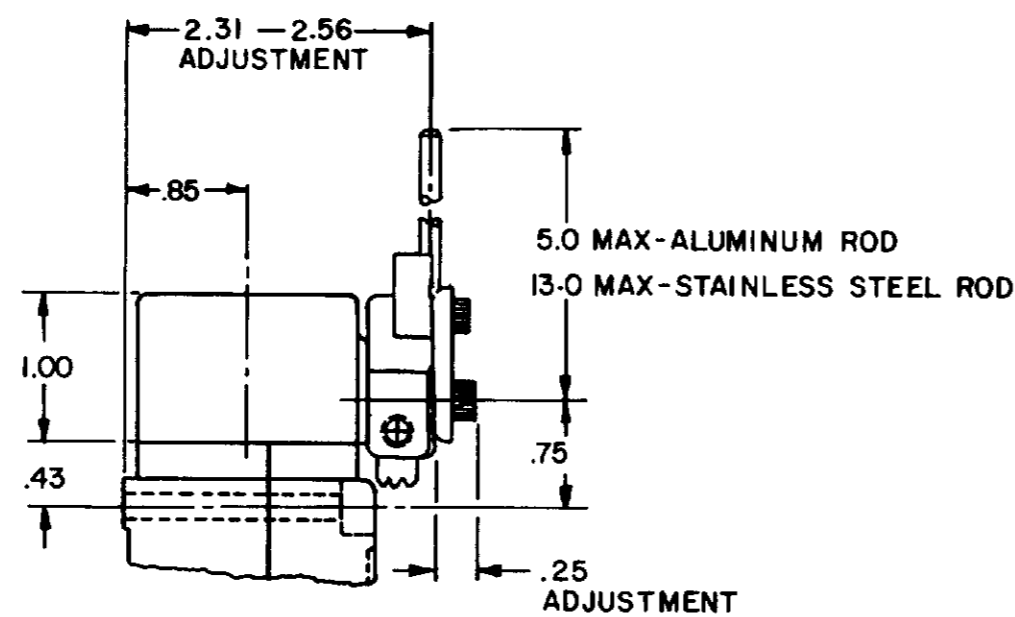
LSZ51 TYPE LEVERS



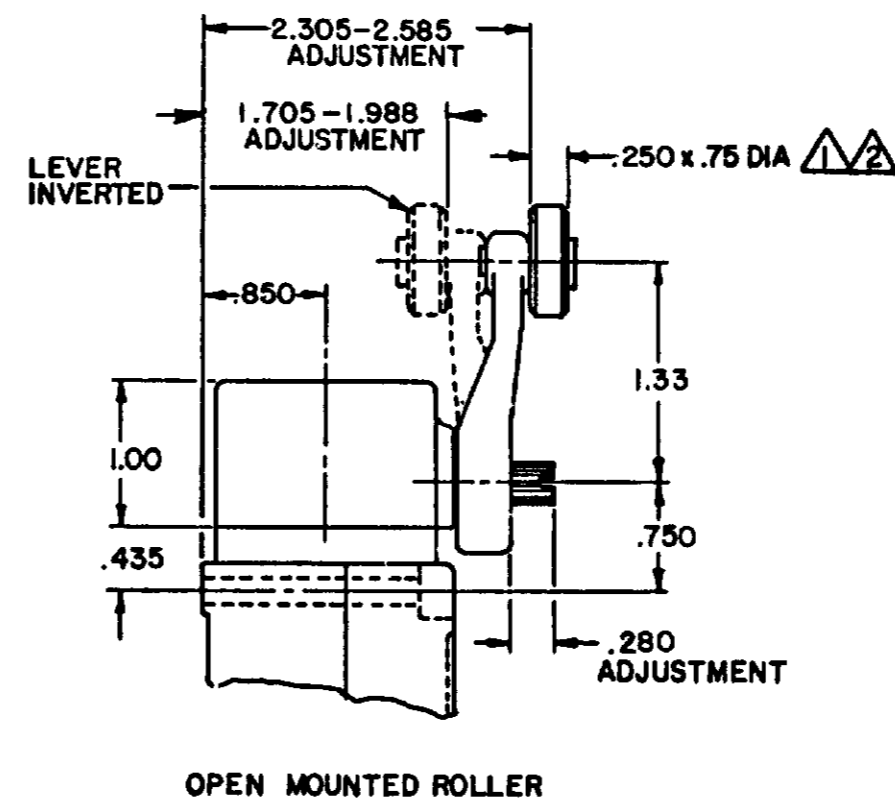
LSZ55 TYPE LEVERS



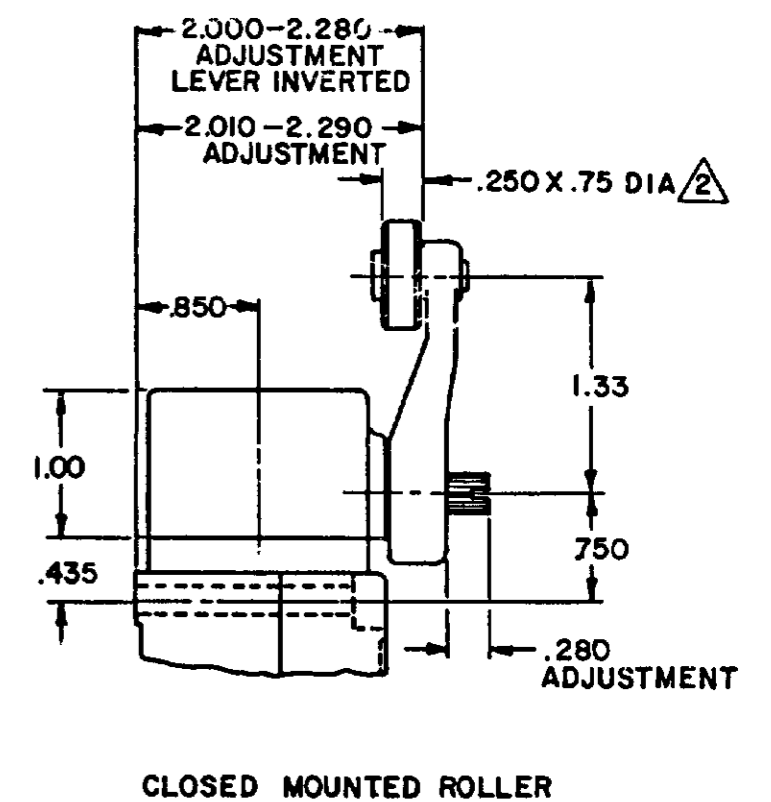
LSZ52 TYPE LEVER



LSZ54 TYPE LEVER



OPEN MOUNTED ROLLER



CLOSED MOUNTED ROLLER

LSZ59 TYPE LEVERS

NOTES

- 1 ALSO AVAILABLE IN Ø.250 X 1.500 NYLON, BUT LEVER CANNOT BE INVERTED
- 2 FOR ADDITIONAL ROLLER WIDTHS AND/OR DIAMETERS REFER TO "M" DRAWING
- 3 - FOR ADDITIONAL TYPES OF ROLLERS AND LEVERS REFER TO LSZ CHART 1 "M" DRAWING

CATALOG LISTING LSA-LSW SERIES CHART 1 PAGE 2 OF 11  
 ISSUE 11  
 REVISIONS: A CO-95472 12 NOV 99; B 201004 C.S.L. 10 AUG 00; C 201748 C.S.L. 17 NOV 00; D 202198 C.S.L. 23 JAN 01; E 204871 C.T.W. FEB 02; F 206581 G.L.H. 14 OCT 02; G 206763 C.S.L. 31 OCT 02; H 207179 G.L.H. 14 JAN 03; J 207474 S.H. 18 FEB 03; K 0006871 RR 11/06/04  
 CHECK 11 AUG 04  
 CHECK 11 JUL 94  
 CHECK JAF 11 JUN 94  
 DRAWN MAM  
 RASTER

PAGE 2 OF 11

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**MICRO SWITCH**  
a Honeywell Division

**SWITCH - ENCLOSED**

CATALOG LISTING  
**LSA-LSW SERIES CHART 1**

THIRD ANGLE PROJECTION	
SCALE NONE	
DO NOT SCALE PRINT	
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	
ONE PLACE ( )	±.030
TWO PLACES (00)	±.015
THREE PLACES (000)	±.005
ANGLES	±
WEIGHT	

REV	DESCRIPTION
A	11 AUG 04
B	201004
C	201748
D	202198
E	204871
F	206581
G	206763
H	207179
I	207474
J	207474
K	0006871

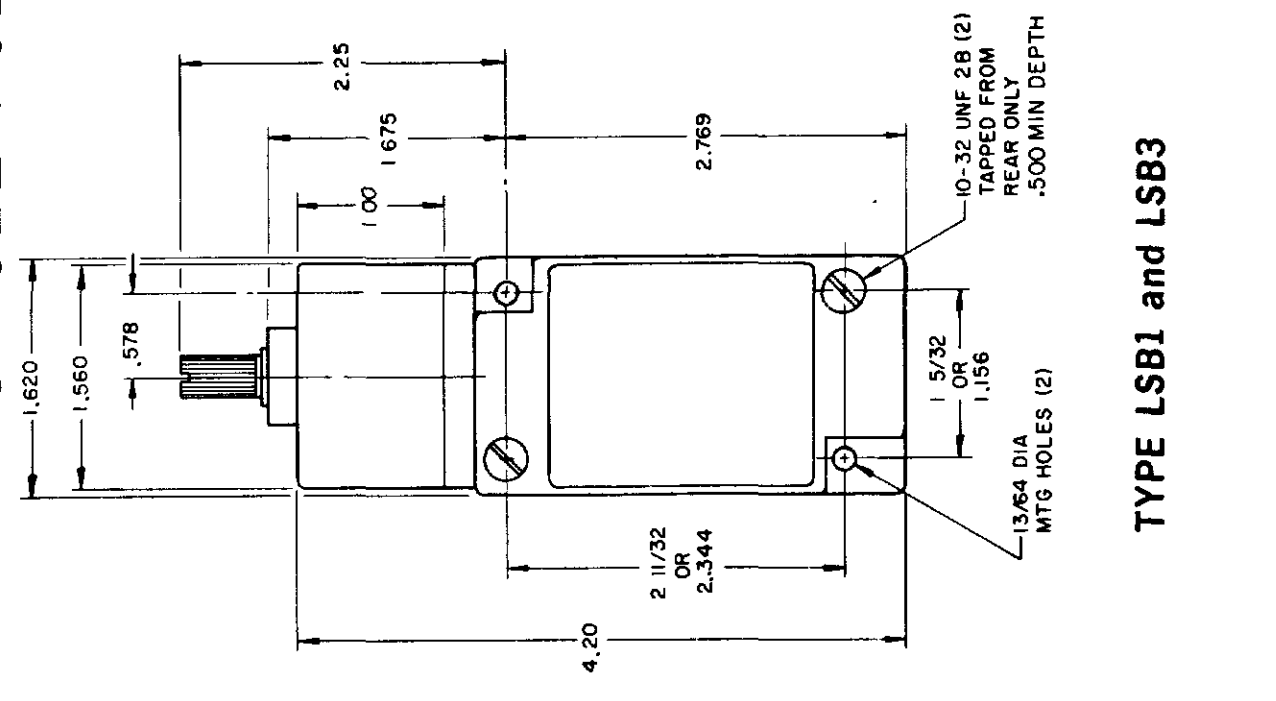
ISSUE 11  
**M** LSA-LSW SERIES CHART 1  
 PAGE 3 OF 11  
 RELEASE NO CO-78498 REPLACES LSA-LSW SERIES

CATALOG LISTING  
 LSA-LSW SERIES CHART 1  
 PAGE 3 OF 11  
 RELEASE NO CO-78498 REPLACES LSA-LSW SERIES

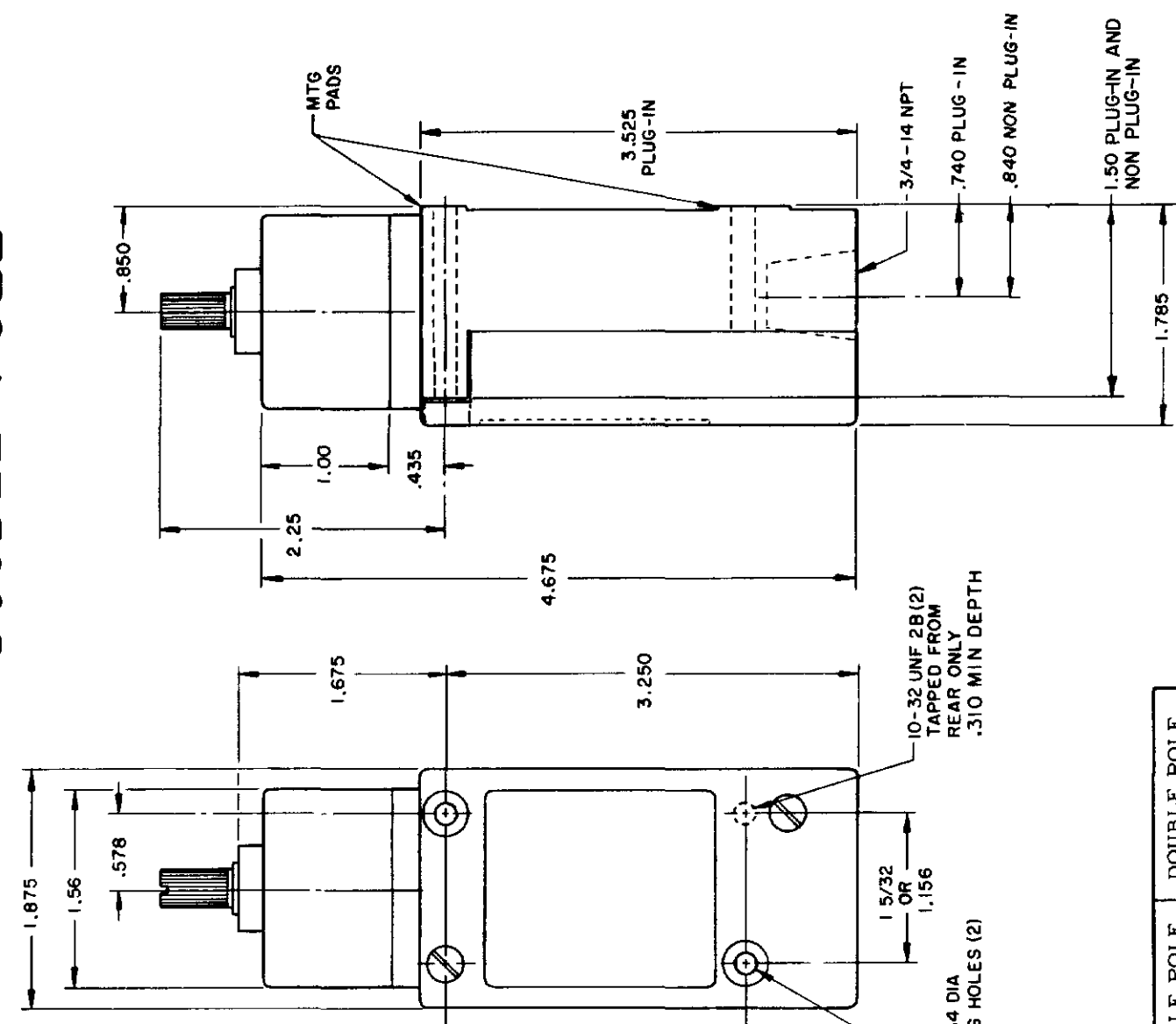
# TOP ROTARY

## SINGLE POLE

## DOUBLE POLE



TYPE LSB1 and LSB3



TYPE LSB2 and LSB4

LSB6 and LSB7 have 1/2 - 14 NPT CONDUIT HOLE

	SINGLE POLE	DOUBLE POLE
PRETRAVEL MAX	25°	25°
OVERTRAVEL MIN	110°	110°
DIFFERENTIAL TRAVEL MAX	10°	12°
OPERATING TORQUE MAX	2.5 IN. LBS	2.5 IN. LBS
TOTAL TRAVEL (REF)	135°	135°

### ELECTRICAL RATINGS

A.C. VOLTAGE	AMPS AT 35 POWER FACTOR			
	SINGL POLE		DOUBLE POLE	
	MAKE	BREAK	MAKE	BREAK
120	60	6	30	3
240	30	3	15	1.5
480	15	1.5	7.5	7.5
600	12	1.2	6	6

D.C. VOLTAGE	MAKE & BREAK		RESISTIVE
	INDUCTIVE		
120	0.25	0.80	0.80
240	0.15	0.40	0.40

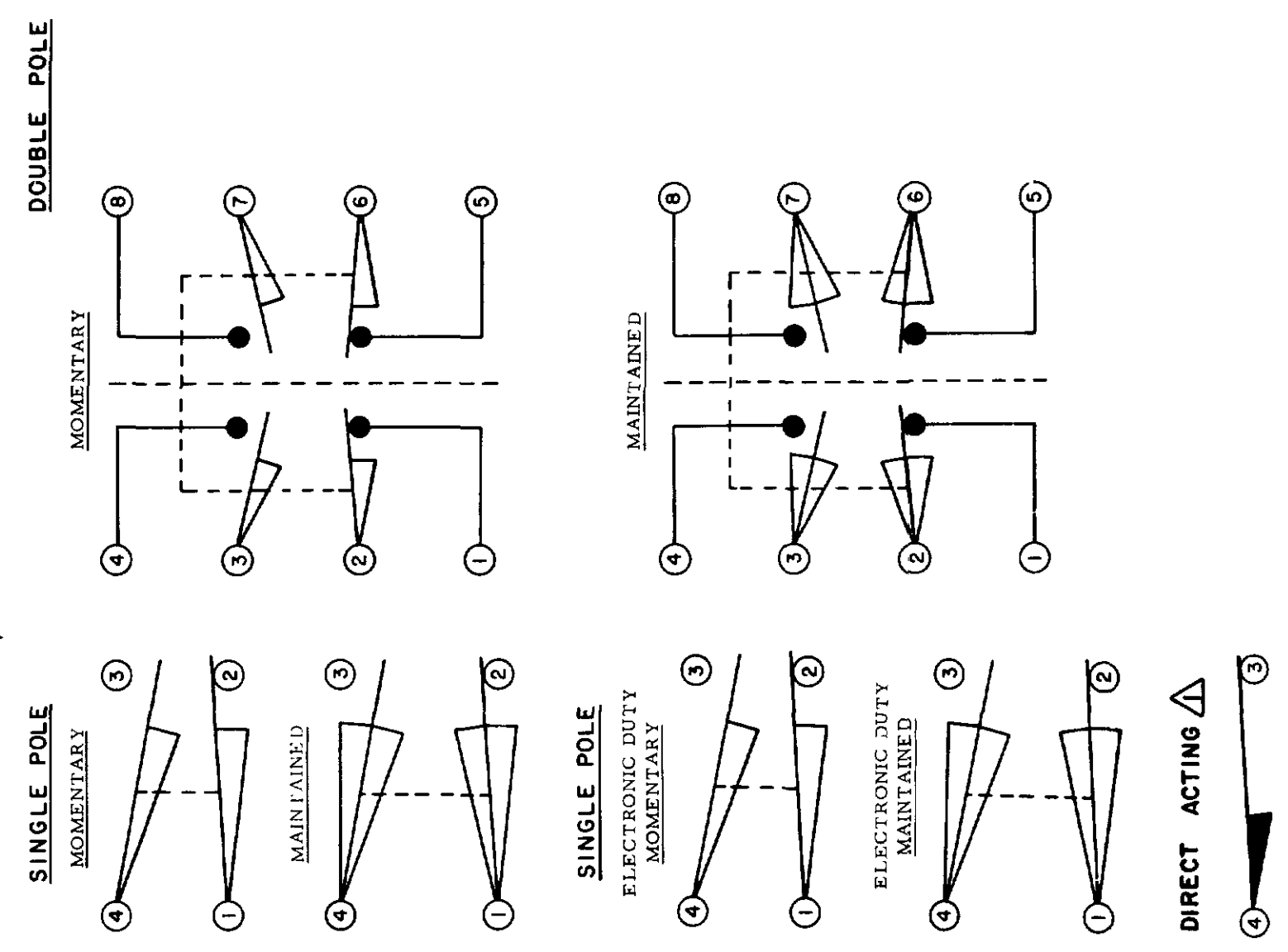
### ELECTRONIC DUTY BASIC SWITCH

VOLTAGE	MAKE AND BREAK AMPS
5 AC OR DC MIN	01 AMP MIN
600 AC	720 VA
240 DC	30 WATT

### DIRECT ACTING (ALSO RATED AT A.C. 10 AMP CONT.)

D.C. VOLTAGE	MAKE AND BREAK AMPS	
	INDUCTIVE	RESISTIVE
30	4.2	4.2
120	1.1	1.1
240	.55	.55

### WIRING BASIC SWITCH (SAME POLARITY MUST BE OBSERVED FOR EACH POLE)



NOTES  
 DIFFERENTIAL TRAVEL ON ALL OPERATING CHARACTERISTICS NOT APPLICABLE

**MICRO SWITCH**  
 a Honeywell Division  
 FED MFG CODE 91929

SWITCH - ENCLOSED

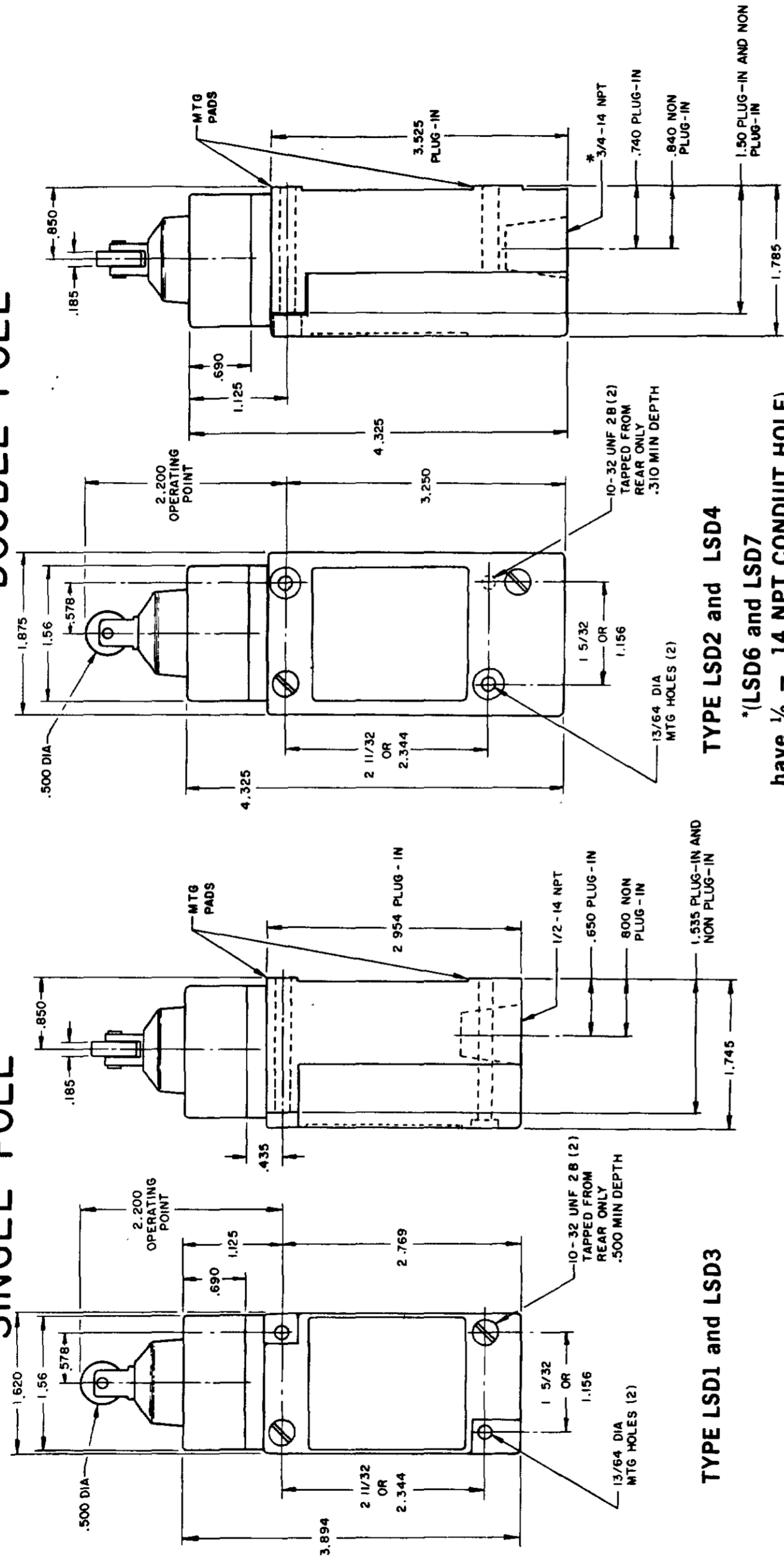
CATALOG LISTING  
**LSA-LSW SERIES**  
 CHART 1

SCALE NONE  
 DO NOT SCALE PRINT

PLUNGER TYPE TOP

SINGLE POLE

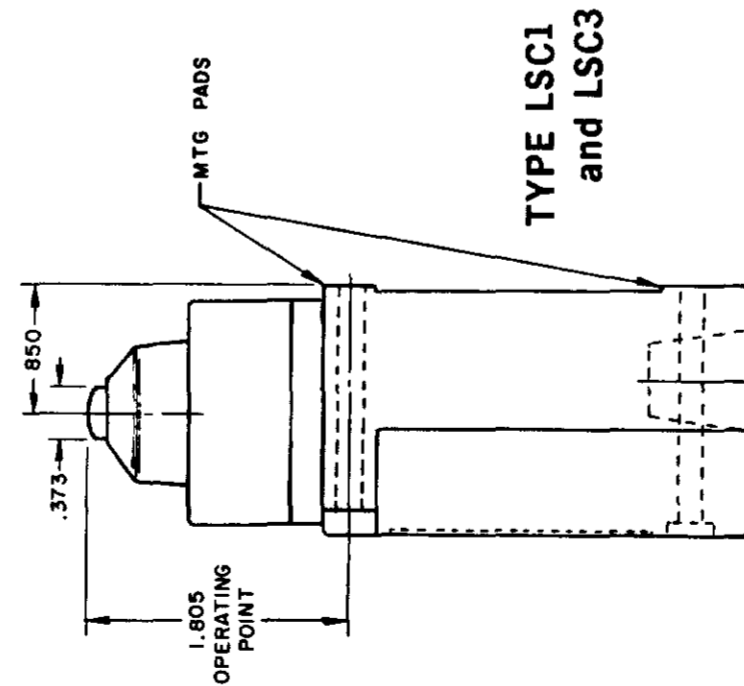
DOUBLE POLE



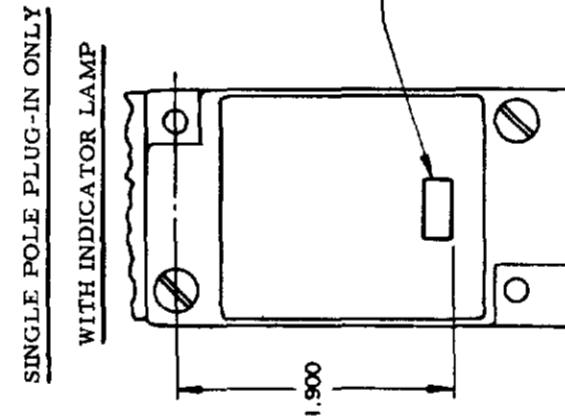
TYPE LSD1 and LSD3

TYPE LSD2 and LSD4

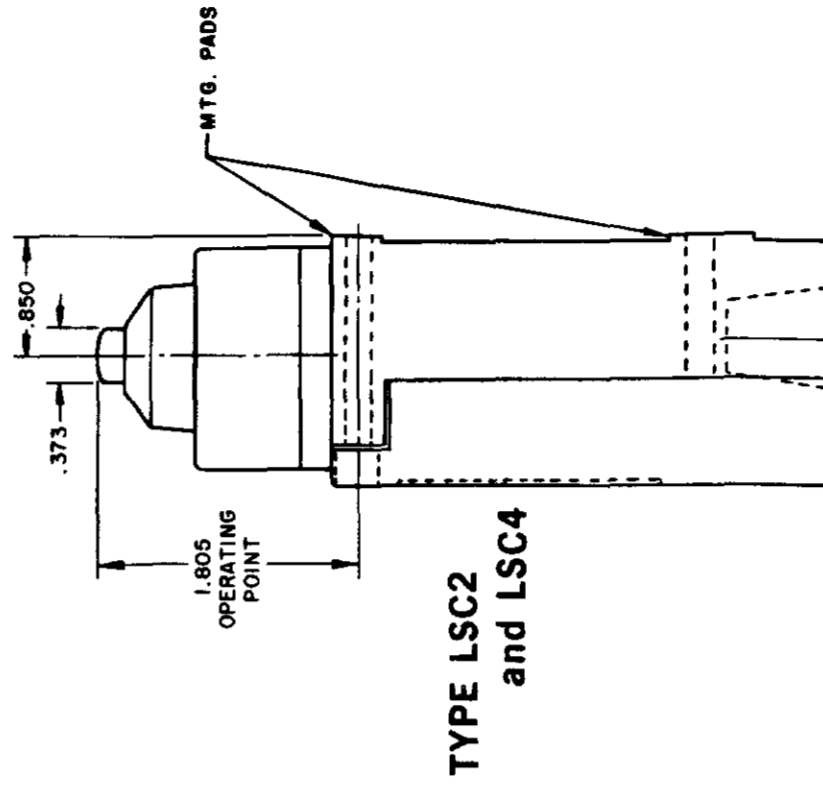
\*(LSD6 and LSD7 have 1/2 - 14 NPT CONDUIT HOLE)



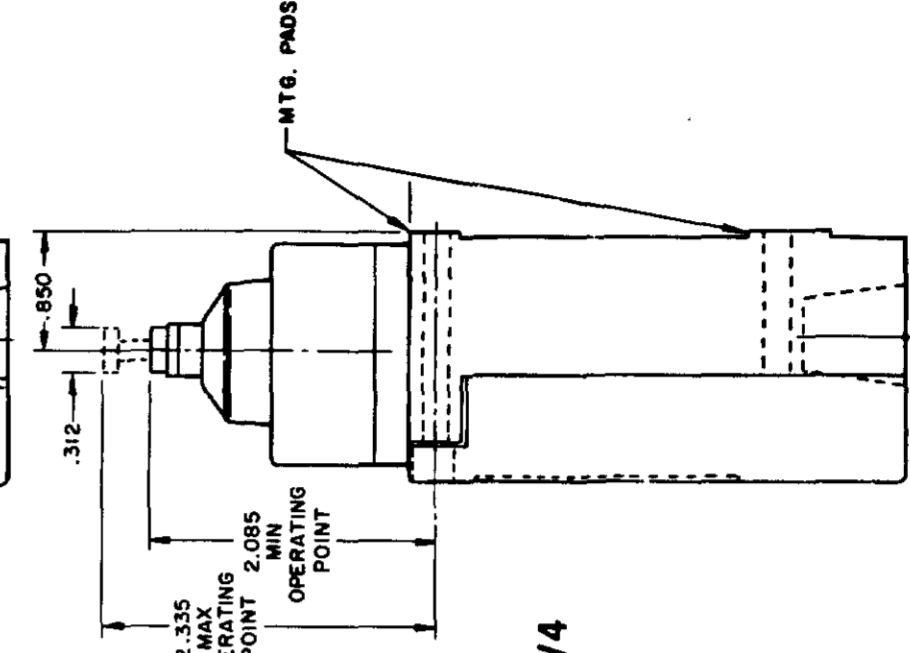
TYPE LSC1 and LSC3



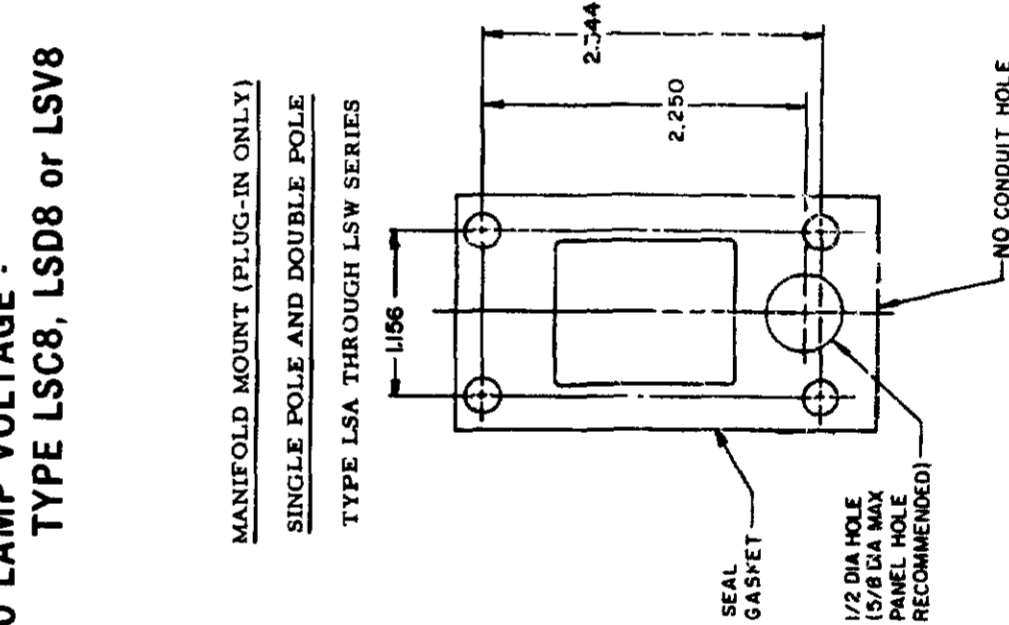
120 LAMP VOLTAGE - TYPE LSC5, LSD5 or LSV5  
240 LAMP VOLTAGE - TYPE LSC8, LSD8 or LSV8



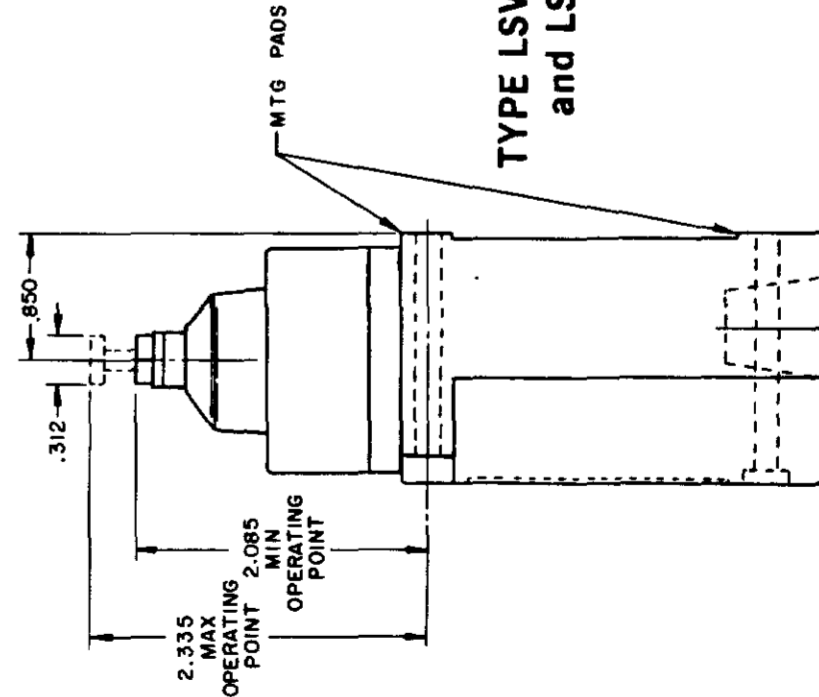
TYPE LSC2 and LSC4



TYPE LSV2 and LSV4



TYPE LSV1 and LSV3



TYPE LSV1 and LSV3

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**MICRO SWITCH**  
a Honeywell Division

SWITCH - ENCLOSED

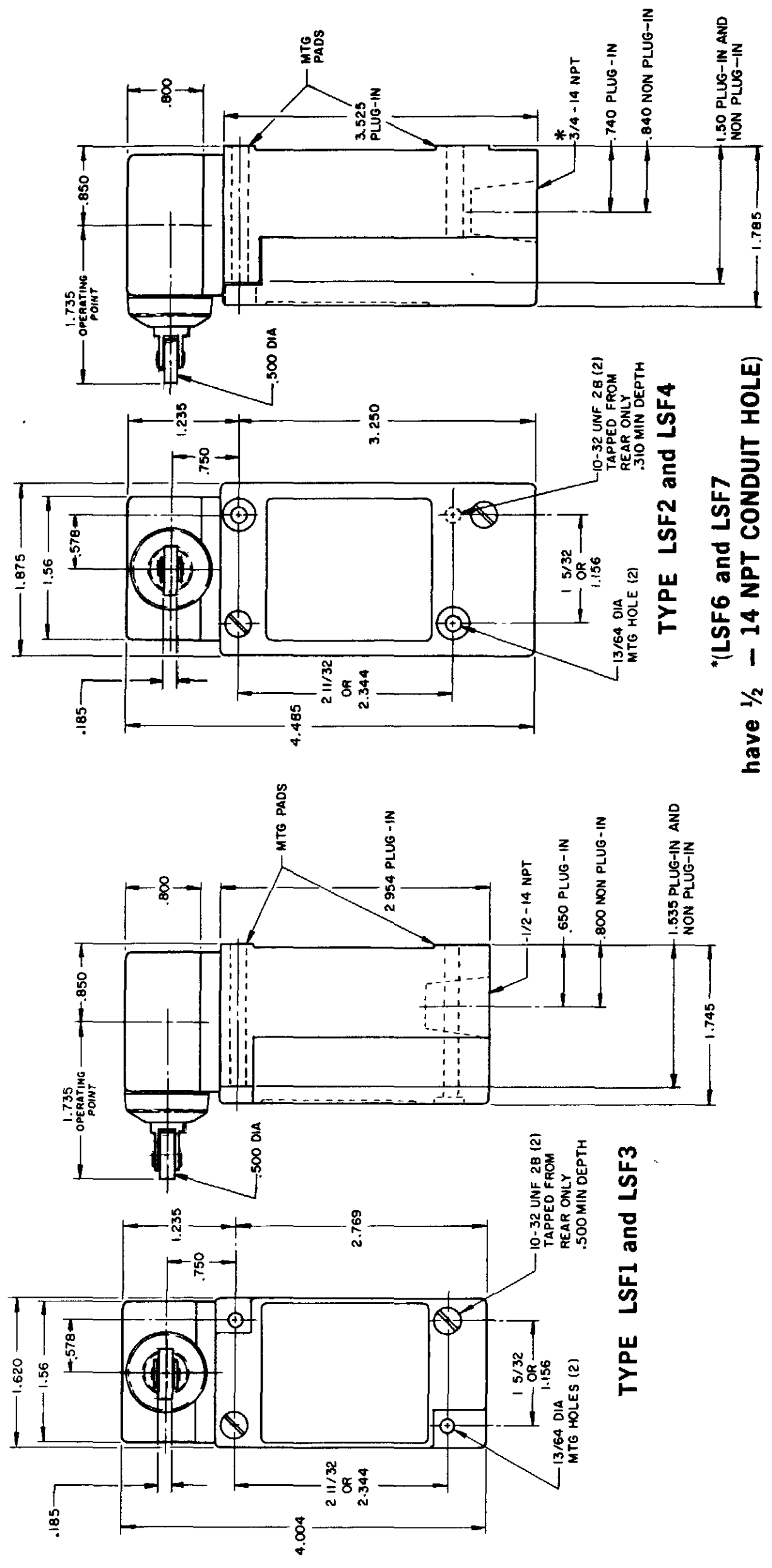
CATALOG LISTING  
**LSA-LSW SERIES**  
CHART 1

SCALE NONE  
FOR FULL SCALE PRINT

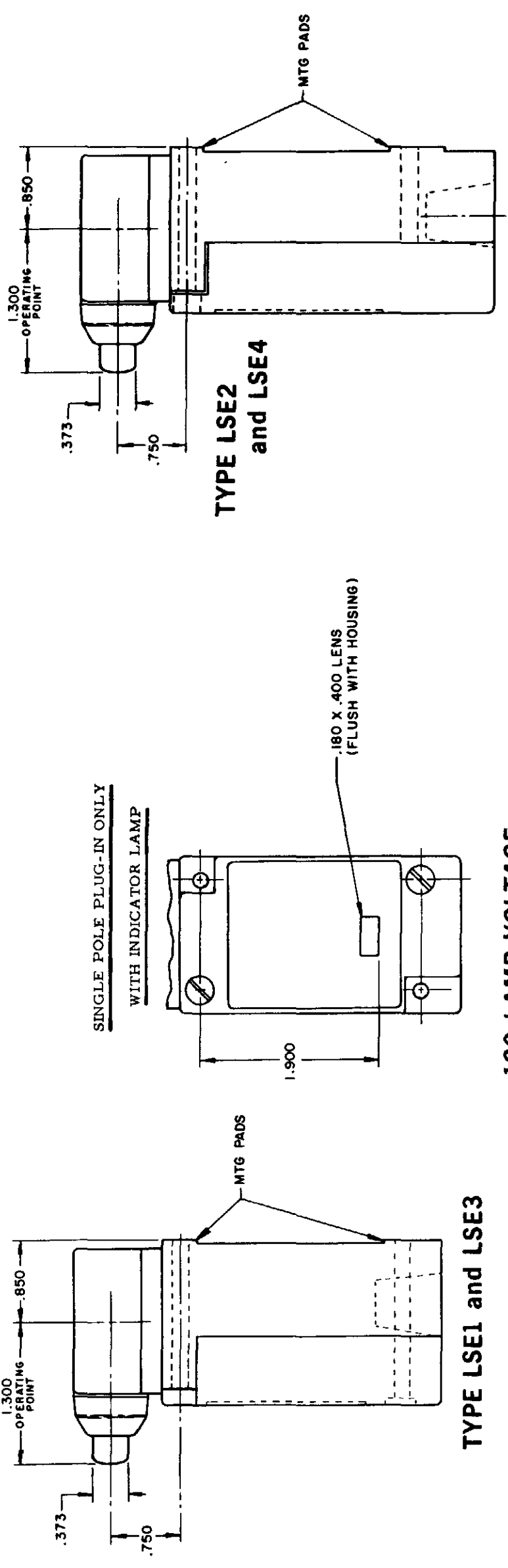
REVISIONS	DATE	BY	CHKD
A	08/24/94	AM	AK
B	10/10/94	AM	AK
C	10/10/94	AM	AK
D	11/17/94	AM	AK
E	01/23/95	AM	AK
F	02/06/95	AM	AK
G	08/14/95	AM	AK
H	01/31/96	AM	AK
I	01/14/96	AM	AK
J	01/14/96	AM	AK
K	08/09/97	AM	AK
L	08/11/97	AM	AK

ISSUE 11  
**M** LSA-LSW SERIES CHART 1  
 PAGE 5 OF 11  
 RELEASE NO CO-78498 REPLACES LSA-LSW SERIES

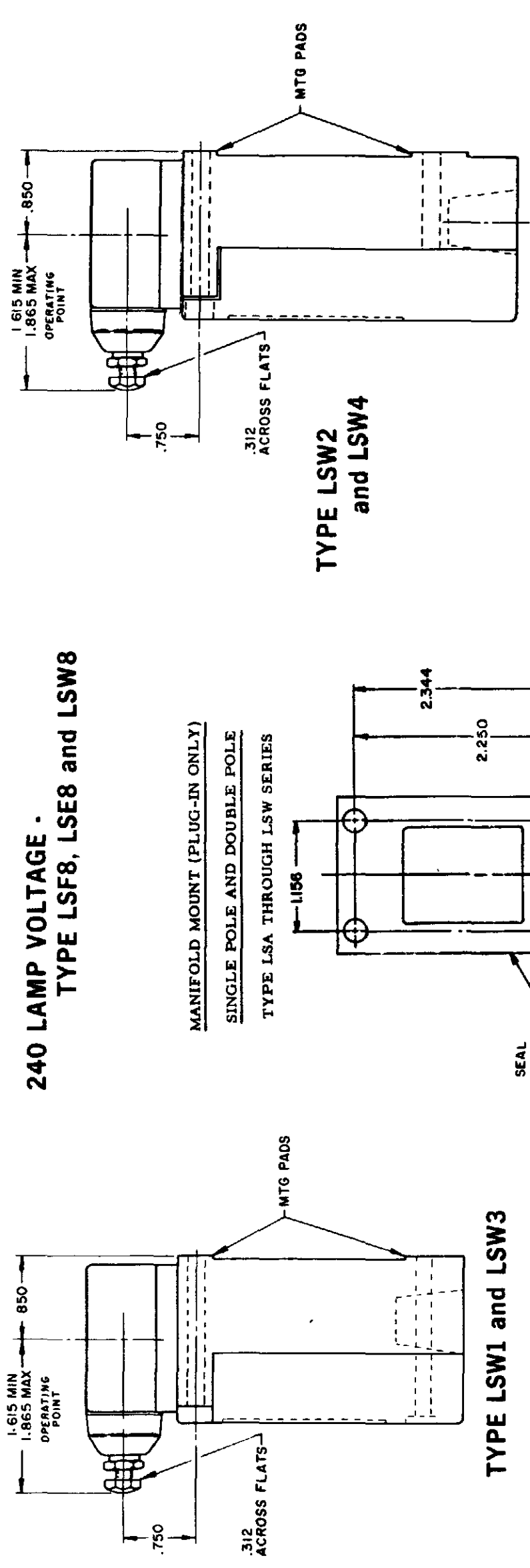
SIDE PLUNGER TYPE DOUBLE POLE



TYPE LSF1 and LSF3  
 TYPE LSF2 and LSF4  
 \*LSF6 and LSF7 have 1/2 - 14 NPT CONDUIT HOLE)



TYPE LSE1 and LSE3  
 TYPE LSE2 and LSE4  
 SINGLE POLE PLUG-IN ONLY WITH INDICATOR LAMP  
 120 LAMP VOLTAGE - TYPE LSF5, LSE5 and LSW5  
 240 LAMP VOLTAGE - TYPE LSF8, LSE8 and LSW8



TYPE LSW1 and LSW3  
 TYPE LSW2 and LSW4  
 MANIFOLD MOUNT (PLUG-IN ONLY) SINGLE POLE AND DOUBLE POLE TYPE LSA THROUGH LSW SERIES  
 SEAL GASKET  
 1/2 DIA HOLE (5/8 DIA MAX PANEL HOLE RECOMMENDED)  
 NO CONDUIT HOLE

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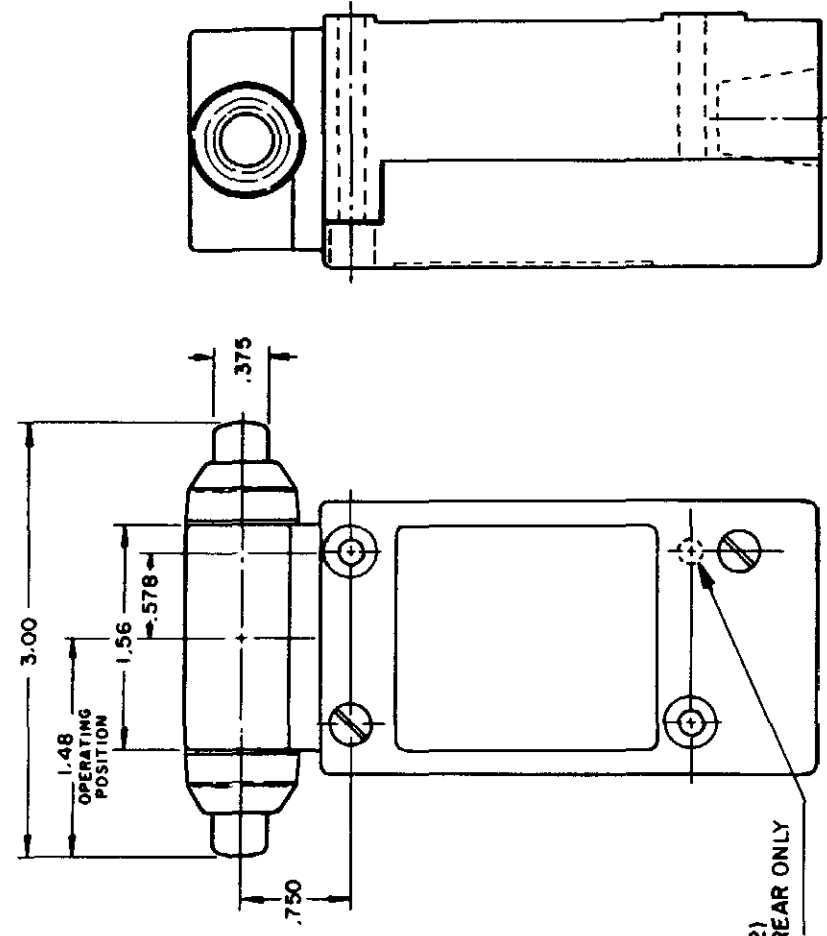
**MICRO SWITCH**  
 a Honeywell Division

SWITCH - ENCLOSED

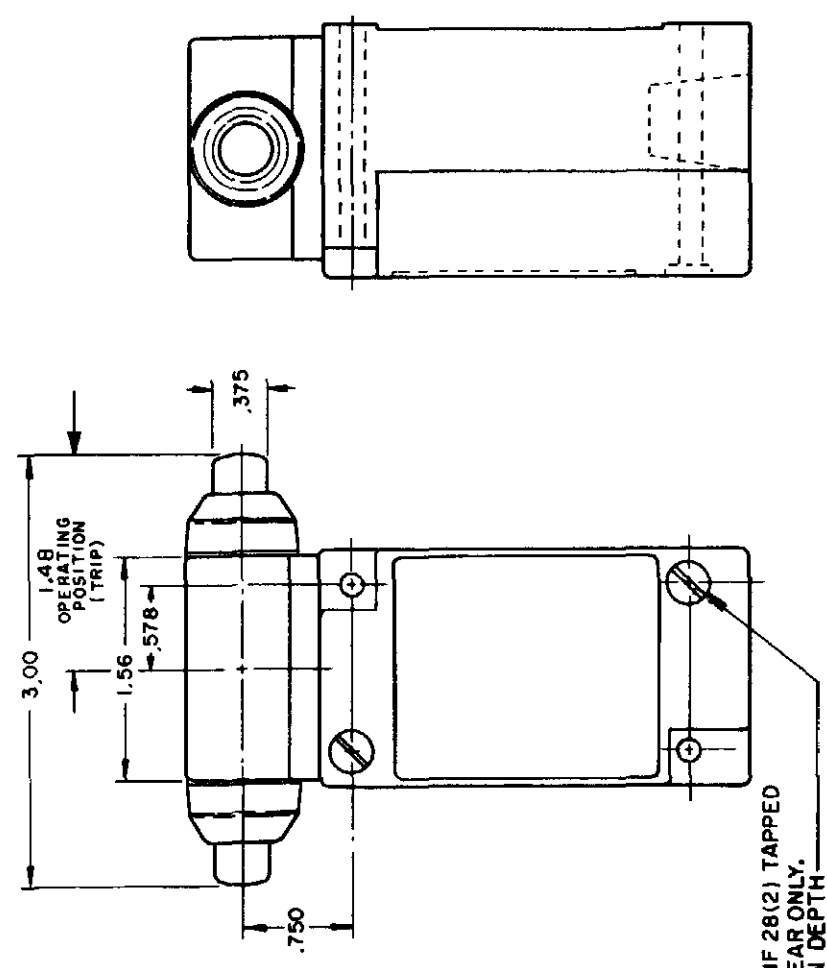
CATALOG LISTING  
**LSA-LSW SERIES**  
 CHART 1

ISSUE 11  
 CATALOG LISTING  
**M** LSA-LSW SERIES CHART 1  
 PAGE 6 OF 11  
 RELEASE NO CO-78498  
 REPLACES LSA-LSW SERIES

REV	DATE	BY	CHKD	DESCRIPTION
A	60-95472			
B	12 NOV 99			
C	10 AUG 00			
D	201748			
E	201748			
F	201748			
G	201748			
H	201748			
J	201748			
K	201748			



TYPE LSG2 and LSG4



TYPE LSG1 and LSG3

INITIAL POSITION (FREE POSITION) } PRETRAVEL  
 OPERATING POINT } DIFFERENTIAL TRAVEL  
 FULL TRAVEL } OVERTRAVEL

TOP PLUNGER TYPES

CHARACTERISTICS	LSC PLUNGER		LSD ROLLER PLUNGER		LSV ADJ PLUNGER		SEQUENCE BASIC	
	PRETRAVEL (MAX)	DIFFERENTIAL TRAVEL (MAX)	SINGLE POLE	DOUBLE POLE	SINGLE POLE	DOUBLE POLE	1ST STEP	2ND STEP
PRETRAVEL (MAX)	.070	.070	.070	.070	.070	.070	.070	.070
DIFFERENTIAL TRAVEL (MAX)	.015	.020	.015	.020	.015	.020	.015	.020
OVERTRAVEL (MIN)	.190	.190	.190	.190	.190	.190	.170	.170
OPERATING FORCE (MAX)	4 LBS	4 LBS	4 LBS	4 LBS	4 LBS	4 LBS	4 LBS	4 LBS
OPERATING POINT	1.805 ± .030	2.200 ± .040	2.085 MIN	2.335 MAX	2.085 MIN	2.335 MAX	1.815 ± .030	2.210 ± .040
FULL OVERTRAVEL FORCE (MAX)	7 LBS	7 LBS	7 LBS	7 LBS	7 LBS	7 LBS	7 LBS	7 LBS

SIDE PLUNGER TYPES

CHARACTERISTICS	LSE PLUNGER		LSF ROLLER PLUNGER		LSW ADJ PLUNGER		SEQUENCE BASIC	
	PRETRAVEL (MAX)	DIFFERENTIAL TRAVEL (MAX)	SINGLE POLE	DOUBLE POLE	SINGLE POLE	DOUBLE POLE	1ST STEP	2ND STEP
PRETRAVEL (MAX)	.100	.100	.100	.100	.170	.170	.100	.100
DIFFERENTIAL TRAVEL (MAX)	.045	.045	.045	.045	.090	.090	.020	.020
OVERTRAVEL (MIN)	.190	.190	.190	.190	.080	.080	.170	.170
OPERATING FORCE (MAX)	6 LBS	6 LBS	6 LBS	6 LBS	10 LBS	10 LBS	6 LBS	6 LBS
OPERATING POINT	1.300 ± .030	1.735 ± .040	ADJUSTABLE FROM	ADJUSTABLE FROM	1.480 ± .030	1.480 ± .030	1.310 ± .030	1.745 ± .040
FULL OVERTRAVEL FORCE (MAX)	6 LBS	6 LBS	6 LBS	6 LBS	10 LBS	10 LBS	6 LBS	6 LBS

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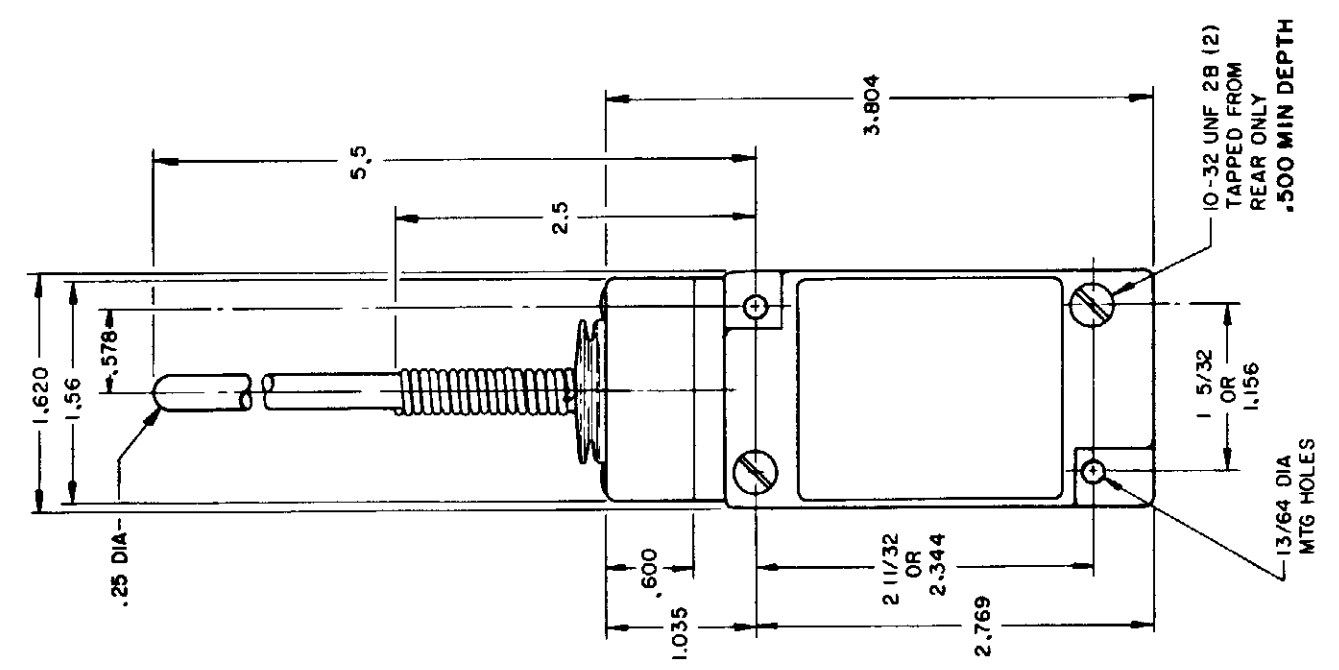
<b>MICRO SWITCH</b> a Honeywell Division FED MFG CODE 91929	SWITCH - ENCLOSED	CATALOG LISTING
		LSA-LSW SERIES CHART 1

SCALE NONE  
 DO NOT SCALE PRINT  
 DIMENSIONS ARE IN INCHES  
**TOLERANCES**  
 ONE PLACE (.0)  
 TWO PLACE (.00)  
 THREE PLACE (.000)  
 ANGLES  
 WEIGHT

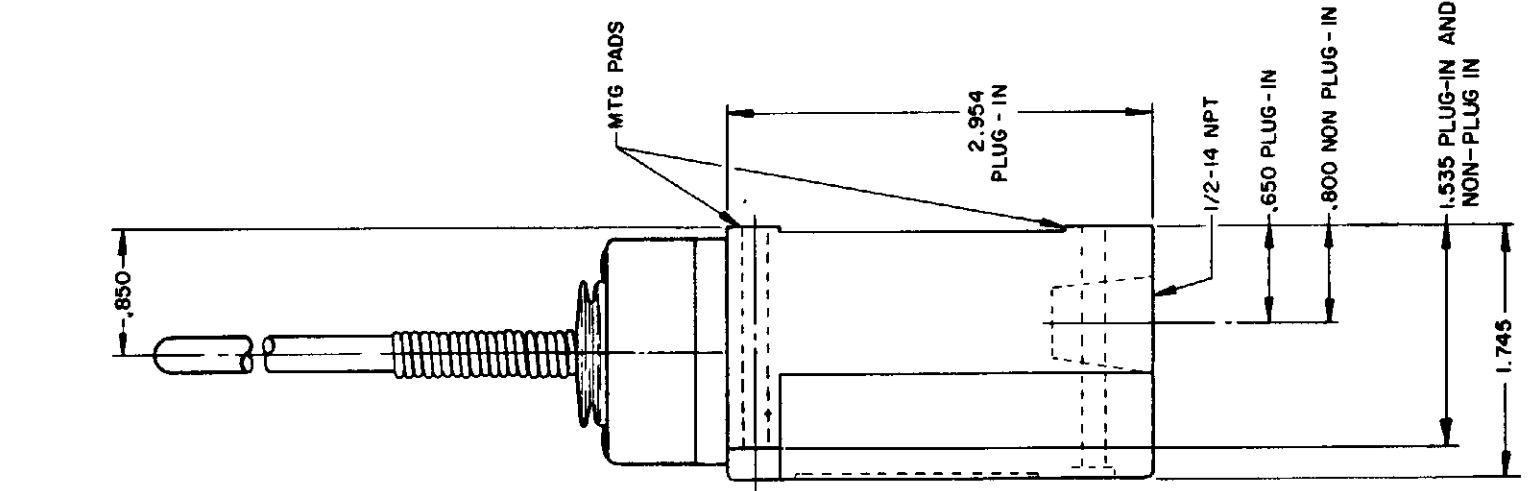
**WOBBLE STICK**

**SINGLE POLE**

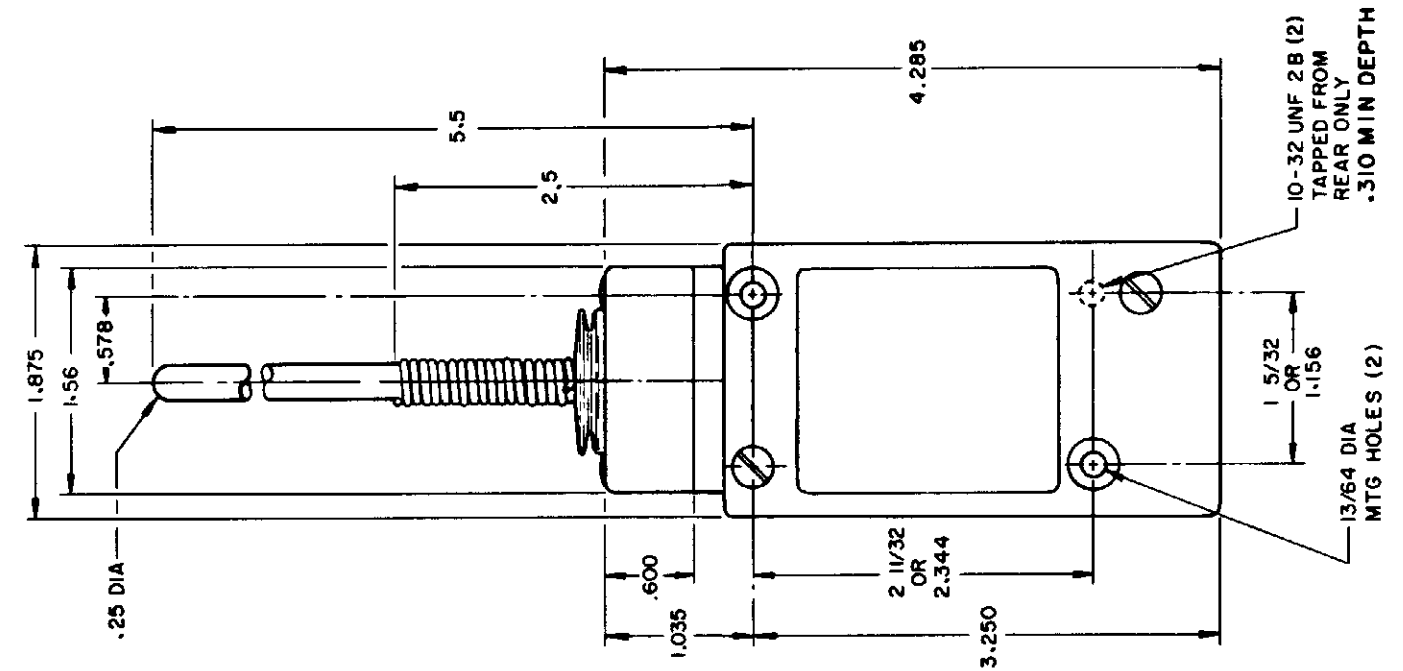
**DOUBLE POLE**



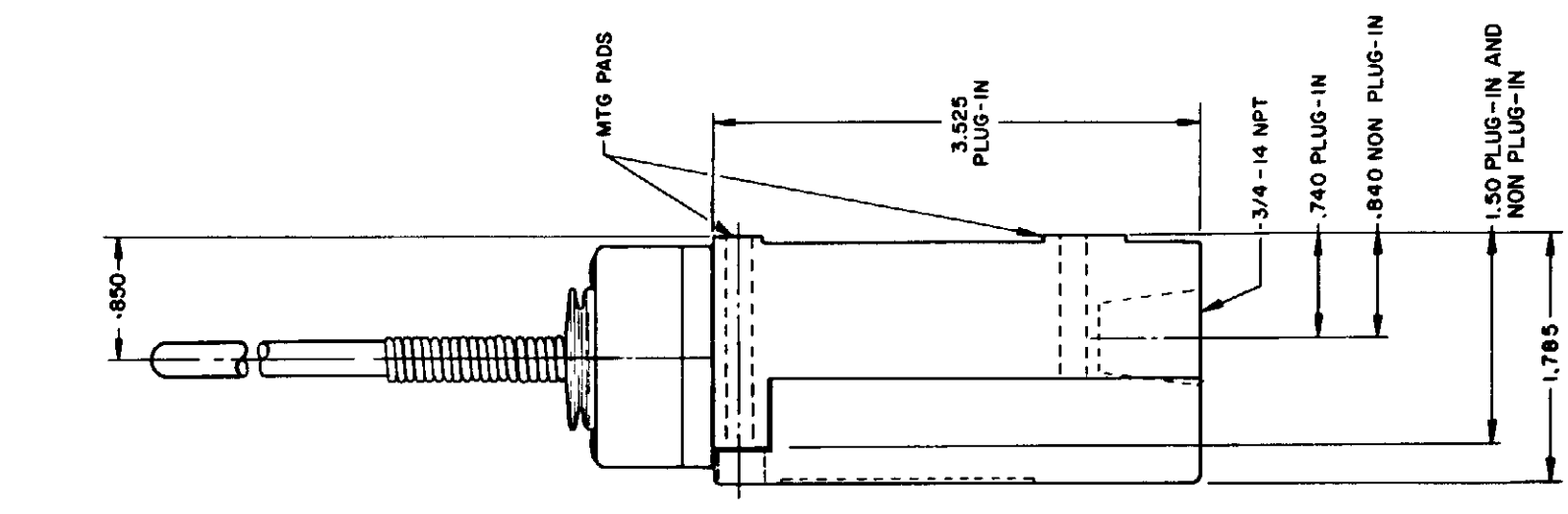
**PLASTIC EXTENSION  
TYPE 7A ACTUATOR**  
TYPE LSJ1 AND LSJ3



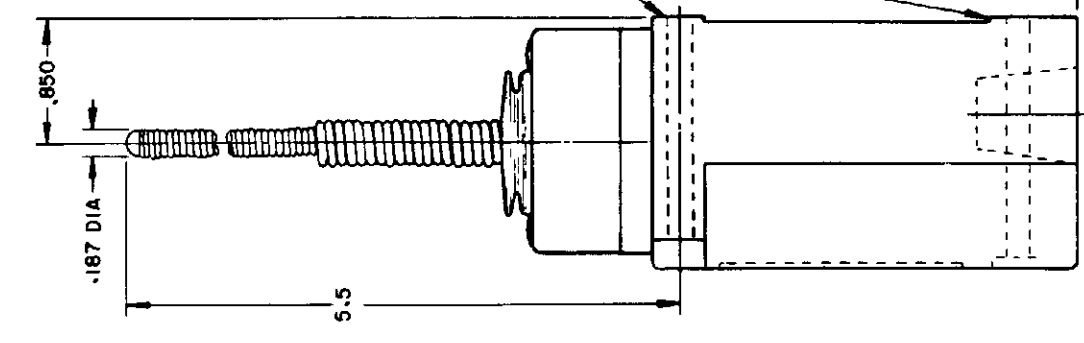
**REPLACEMENT ACTUATOR  
LSZ-4009**



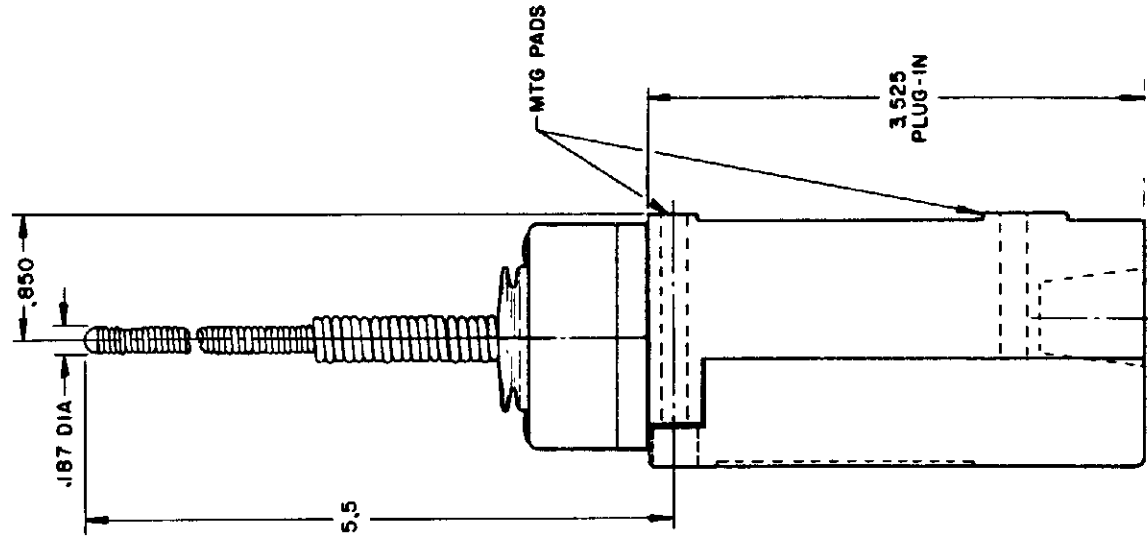
**PLASTIC EXTENSION  
TYPE 7A ACTUATOR**  
TYPE LSJ2 AND LSJ4  
LSJ6 AND LSJ7 HAVE  
1/2 - 14 NPT CONDUIT HOLE



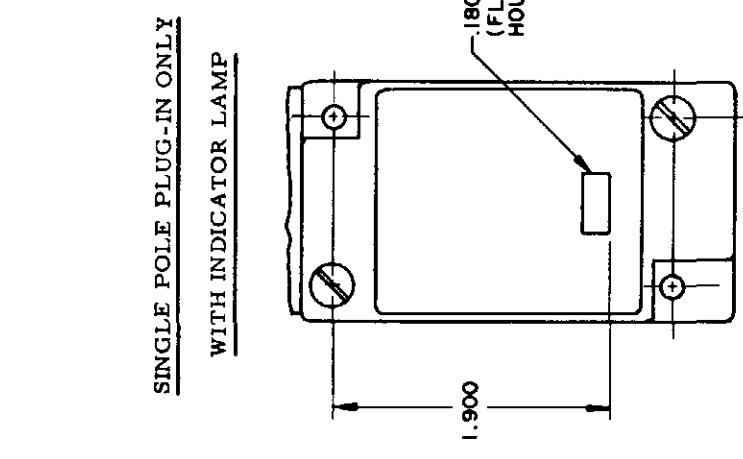
**REPLACEMENT ACTUATOR  
LSZ-4011**



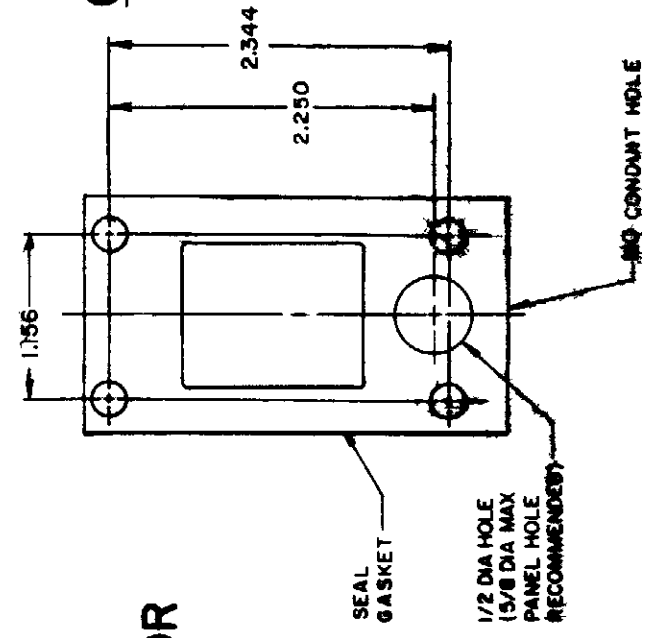
**CABLE EXTENSION  
TYPE 7N ACTUATOR**



**CABLE EXTENSION  
TYPE 7N ACTUATOR**



**REPLACEMENT ACTUATOR  
LSZ-4009**  
WITH INDICATOR LAMP  
120 LAMP VOLTAGE TYPE LSJ5  
240 LAMP VOLTAGE TYPE LSJ8  
24 LED VOLTAGE TYPE LSJ9



**MANIFOLD MOUNT (PLUG-IN ONLY)  
SINGLE POLE AND DOUBLE POLE  
TYPE LSA THROUGH LSW SERIES**





REV	DATE	BY	CHKD	DESCRIPTION
A	95472			
B	201004			
C	201748			
D	202198			
E	204871			
F	206581			
G	206763			
H	207179			
J	207474			
K	0006871			

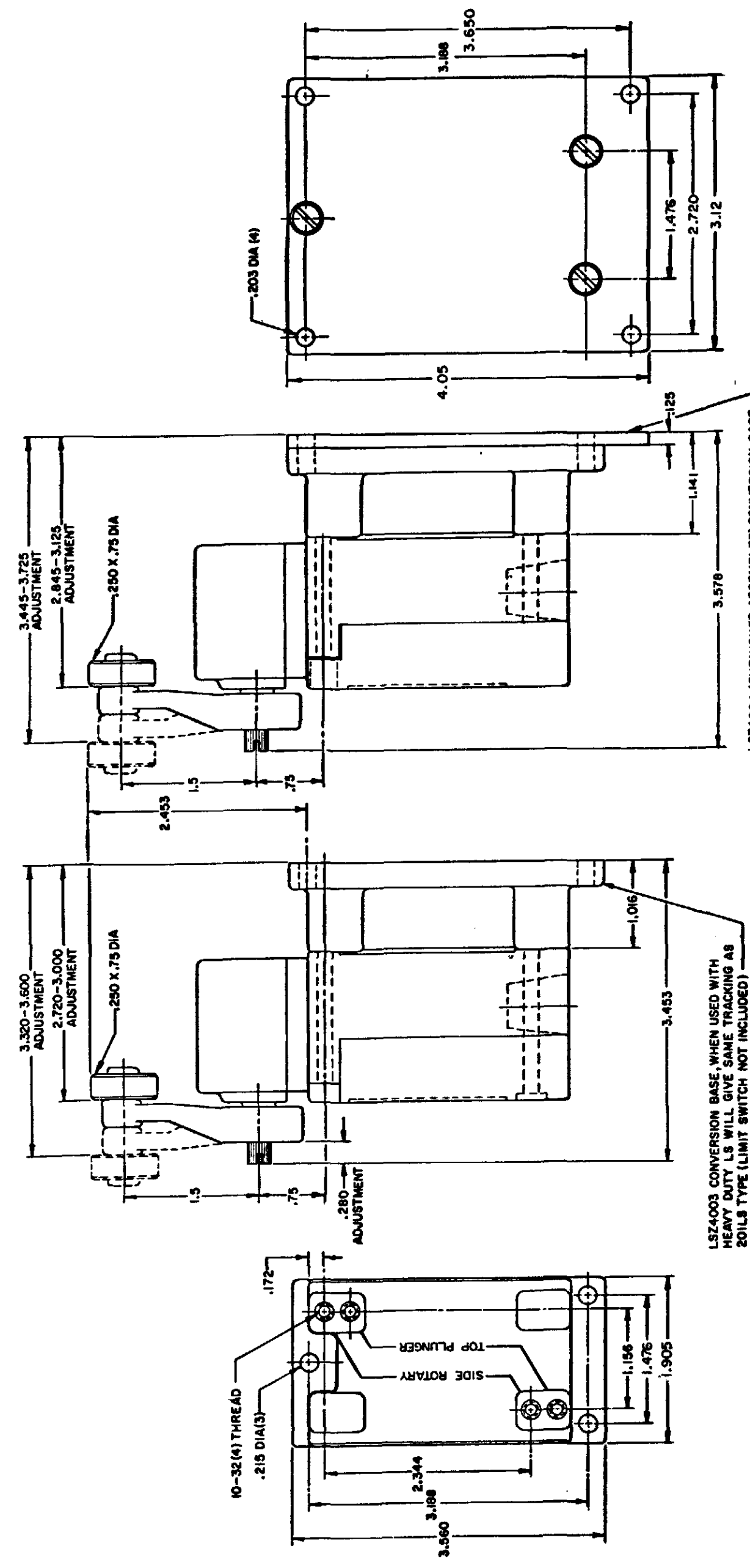
ISSUE 11  
 LSA-LSW SERIES CHART 1  
 PAGE 9 OF 11  
 RELEASE NO CO-78498 REPLACES LSA-LSW SERIES

RASTER  
 DRAWN MAM  
 15 JUN 94  
 11AUG94

CONVERSION BASES

SINGLE POLE (SIDE ROTARY) LSZ 4003

DOUBLE POLE (SIDE ROTARY) LSZ 4004

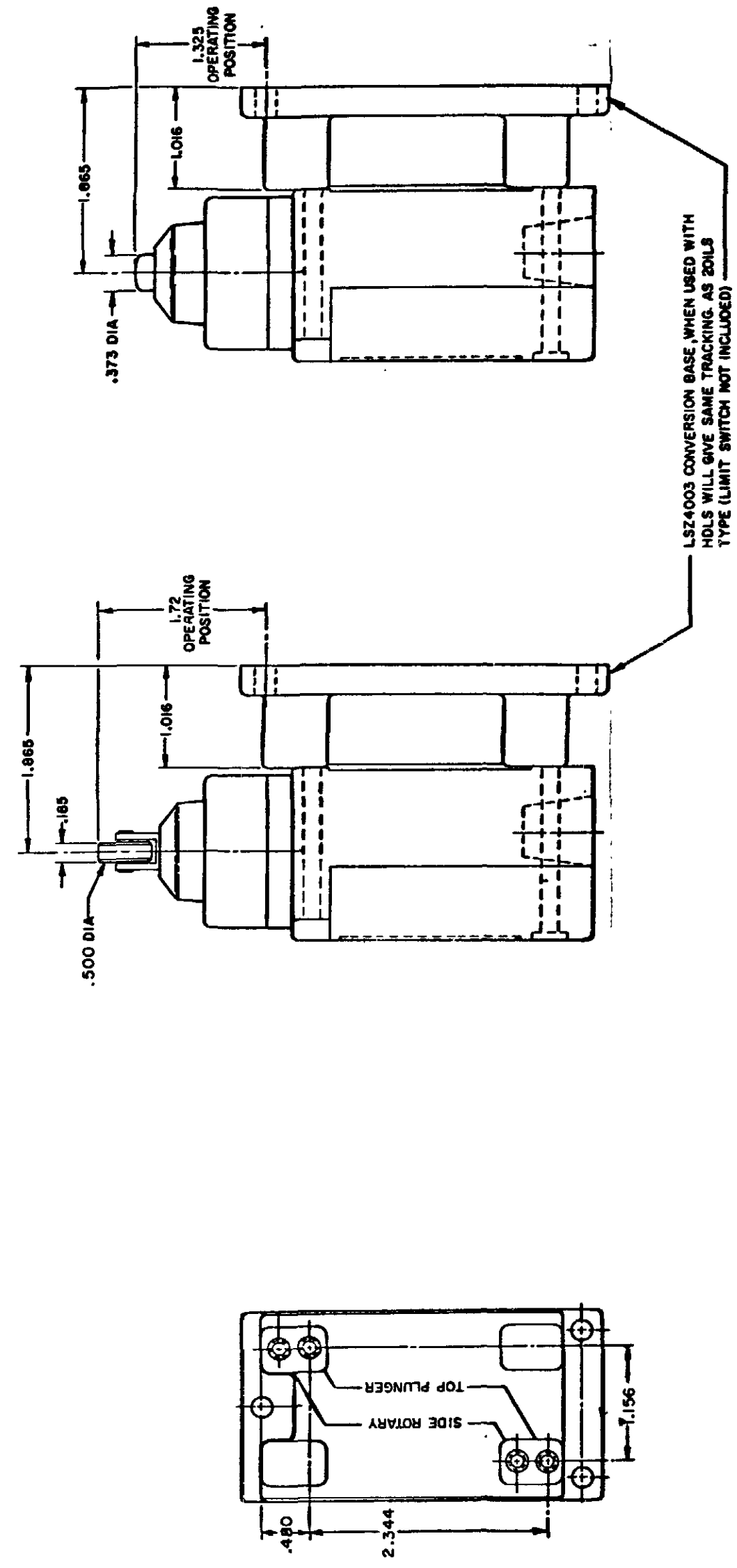


LSZ4004 (FURNISHED ASSEMBLED) CONVERSION BASE, WHEN USED WITH HOLDS WILL GIVE SAME TRACKING AS 301LS TYPE (LIMIT SWITCH NOT INCLUDED)

LSZ4003 CONVERSION BASE WHEN USED WITH HEAVY DUTY LS WILL GIVE SAME TRACKING AS 201LS TYPE (LIMIT SWITCH NOT INCLUDED)

NOTE  
 SEE OTHER PAGES OF LSA-LSW  
 (M) DRAWING FOR DIMENSION OF LIMITS

SINGLE POLE TOP PLUNGER LSZ4003



LSZ4003 CONVERSION BASE WHEN USED WITH HOLDS WILL GIVE SAME TRACKING AS 201LS TYPE (LIMIT SWITCH NOT INCLUDED)

NOTE  
 SEE OTHER PAGES OF LSA-LSW  
 (M) DRAWING FOR DIMENSION OF LIMIT SWITCH

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**MICRO SWITCH**  
 a Honeywell Division

SWITCH - ENCLOSED

CATALOG LISTING  
**LSA-LSW SERIES**  
**CHART 1**

SCALE FULL  
 DO NOT SCALE PRINT

HEAD TYPE	CELLULUBE	DETERGENT	5 STAR	ASTM #1	ASTM #2	ASTM #3	ASTM #4	HOUGHTON SAFE 271	HOUGHTON SAFE 820	HOUGHTON SAFE 1010, 1055	MINERAL OIL	PETR. OIL CRUDE	SILICON GR & OIL	SUNSAFE	BEER	STODDARD SOLV.	CHLORINATED SOLVENTS	CITRIC ACID	D-ESTER SYN. LUBRICANTS	OZONE	HYDRAUL	PROGUARD	PETRO. BASE HYDRAULIC OIL	LARD OIL	SILICATE ESTERS
LSA	4	1	1	1	1	2	1	4	1	1	1	1	1	1	4	1	2	4	4	4	4	1	1	2	
LSB	4	1	1	1	1	2	1	4	1	1	1	1	1	1	4	1	2	4	4	4	4	1	1	2	
LSC	4	2	2	1	2	4	4	2	4	2	2	1	2	1	2	4	1	4	3	4	4	2	2	2	
LSD	4	2	2	1	2	4	4	2	4	2	2	1	2	1	2	4	1	4	3	4	4	2	2	2	
LSE	4	2	2	1	2	4	4	2	4	2	2	1	2	1	2	4	1	4	3	4	4	2	2	2	
LSF	4	2	2	1	2	4	4	2	4	2	2	1	2	1	2	4	1	4	2	4	4	2	2	2	
LSG	4	2	2	1	2	4	4	2	4	2	2	1	2	1	2	4	1	4	3	4	4	2	2	2	
LSH	4	1	1	1	1	2	1	4	1	1	1	1	1	1	4	1	2	4	4	4	4	1	1	2	
LSJ	4	2	2	1	2	4	4	2	4	2	2	1	2	1	2	4	1	4	3	4	4	2	2	2	
LSK	4	2	2	1	2	4	4	2	4	2	2	1	2	1	2	4	1	4	3	4	4	2	2	2	
LSL	4	1	1	1	1	2	1	4	1	1	1	1	1	1	4	1	2	4	4	4	4	1	1	2	
LSM	4	1	1	1	1	2	1	4	1	1	1	1	1	1	4	1	2	4	4	4	4	1	1	2	
LSN	4	1	1	1	1	2	1	4	1	1	1	1	1	1	4	1	2	4	4	4	4	1	1	2	
LSP	4	1	1	1	1	2	1	4	1	1	1	1	1	1	4	1	2	4	4	4	4	1	1	2	
LSR	4	1	1	1	1	2	1	4	1	1	1	1	1	1	4	1	2	4	4	4	4	1	1	2	
LSV	4	2	2	1	2	4	4	2	4	2	2	1	2	1	2	4	1	4	3	4	4	2	2	2	
LSW	4	2	2	1	2	4	4	2	4	2	2	1	2	1	2	4	1	4	2	4	4	2	2	2	
LST	UNSEALED DEVICE, INTENDED TO MEET NEMA 1 ONLY																								
LSS	UNSEALED DEVICE, INTENDED TO MEET NEMA 1 ONLY																								

CODE: 1 SATISFACTORY 2 FAIR 3 DOUBTFUL 4 UNSATISFACTORY

TYPES	LOW LIMIT	HIGH LIMIT
LSA	+10°F	+250°F
LSB	+30°F	+250°F
LSC	+10°F	+200°F
LSD	+10°F	+200°F
LSE	+10°F	+200°F
LSF	+10°F	+200°F
LSG	+30°F	+200°F
LSH	+30°F	+250°F
LSJ	+10°F	+200°F
LSK	+10°F	+200°F
LSL	+10°F	+250°F
LSM	+30°F	+250°F
LSN	+30°F	+250°F
LSP	+10°F	+250°F
LSR	+30°F	+250°F
LSV	+10°F	+200°F
LSW	+10°F	+200°F
LST	+30 F	+170°F
LSS	+30°F	+170°F

CATALOG LISTING  
**M** LSA-LSW SERIES CHART 1  
 PAGE 10 OF 11  
 ISSUE 11  
 REVISIONS  
 A 95472  
 B 201004  
 C 201748  
 D 202198  
 E 204871  
 F 206581  
 G 206783  
 H 207179  
 J 207474  
 K 0006871  
 11AUG04  
 11 JUL 94  
 15 JUN 94  
 RASTER DRAWN  
 MAM  
 RELEASE NO. CO-78498  
 REPLACES LSA-LSW SERIES

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**MICRO SWITCH**  
a Honeywell Division

SWITCH - ENCLOSED

LSA-LSW SERIES  
CHART 1

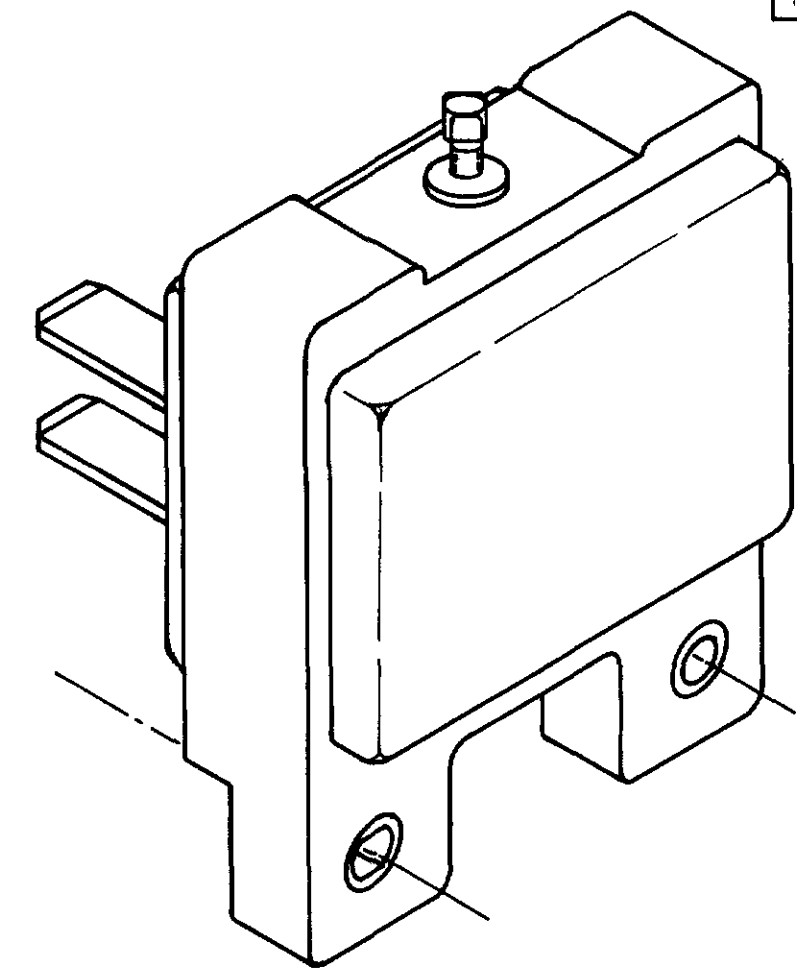
FED. MFG. CODE 91929

(LSZ8\_\_ B)

SOLID STATE LIMIT SWITCH

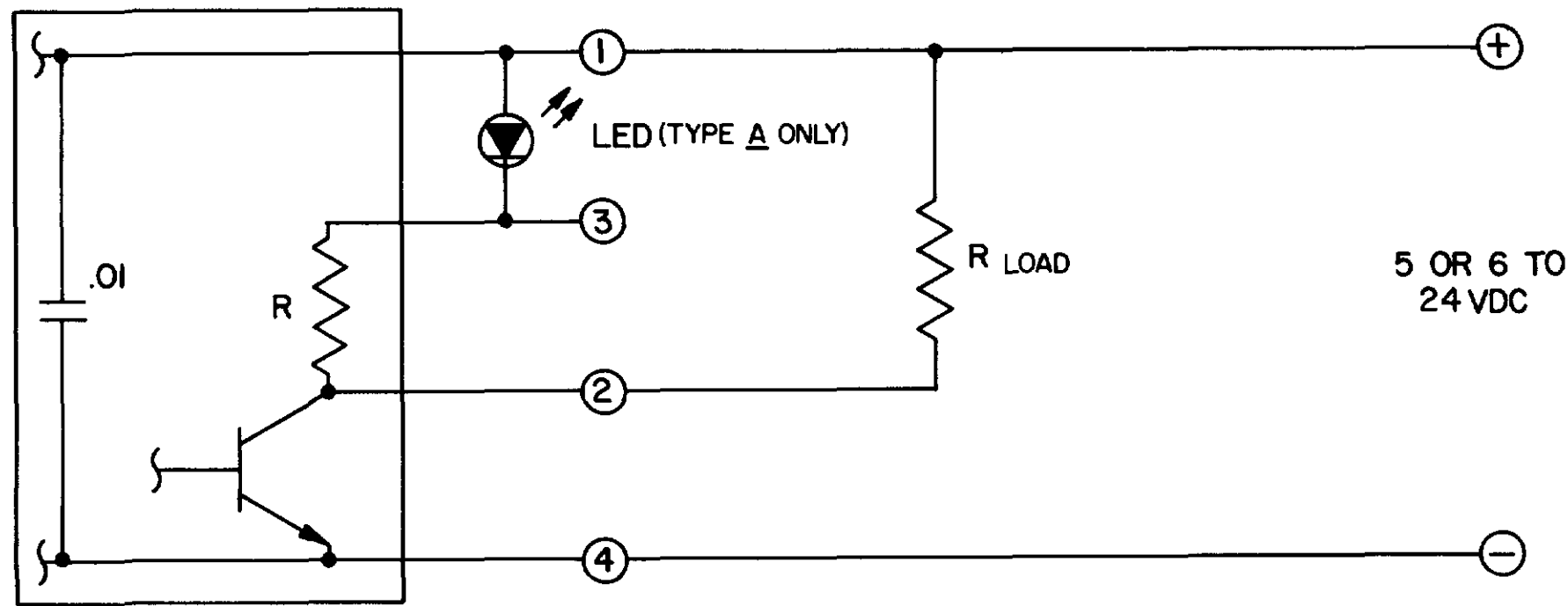
BODY CODE (3 DIGIT)	INPUT SUPPLY VOLTAGE	OUTPUT			
11A OR B <sup>7</sup>	5VDC	N. L. SINK			
12A OR B	5VDC	N. L. SOURCE			
13A OR B <sup>7</sup>	5VDC	N. H. SINK			
14A OR B	5VDC	N. H. SOURCE			
31A OR B	6 TO 24VDC	N. L. SINK			
22A OR B	6 TO 16VDC	N. L. SOURCE			
33A OR B	6 TO 24VDC	N. H. SINK			
24A OR B	6 TO 16VDC	N. H. SOURCE			

- NOTES:
- 1 - TYPE A HAS A PLUG-IN SINGLE POLE HOUSING WITH AN LED INDICATOR
  - 2 - TYPE B HAS A PLUG-IN SINGLE POLE HOUSING WITHOUT AN INDICATOR
  - 3 - N. L. MEANS NORMALLY LOW (A N. L. SINK HAS ITS OUTPUT NORMALLY ON, A N. L. SOURCE HAS ITS OUTPUT NORMALLY OFF), N. H. MEANS NORMALLY HIGH
  - 4 - REFER TO GS 052 40 FOR ELECTRICAL DATA
  - 5 - ALL HEAD CODES MAY BE USED EXCEPT L & M
  - 6 - TEMPERATURE RANGE, -40°F TO +250°F EXCEPT --A, 185°F MAX. TEMP.
  - 7 - 11A AND 13A NOT AVAILABLE

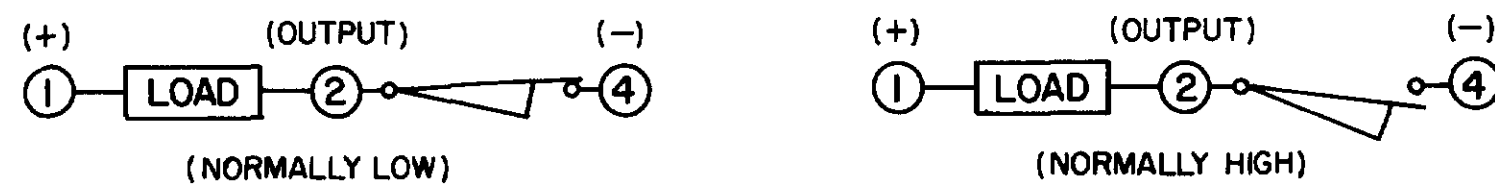


SCHEMATIC DIAGRAMS

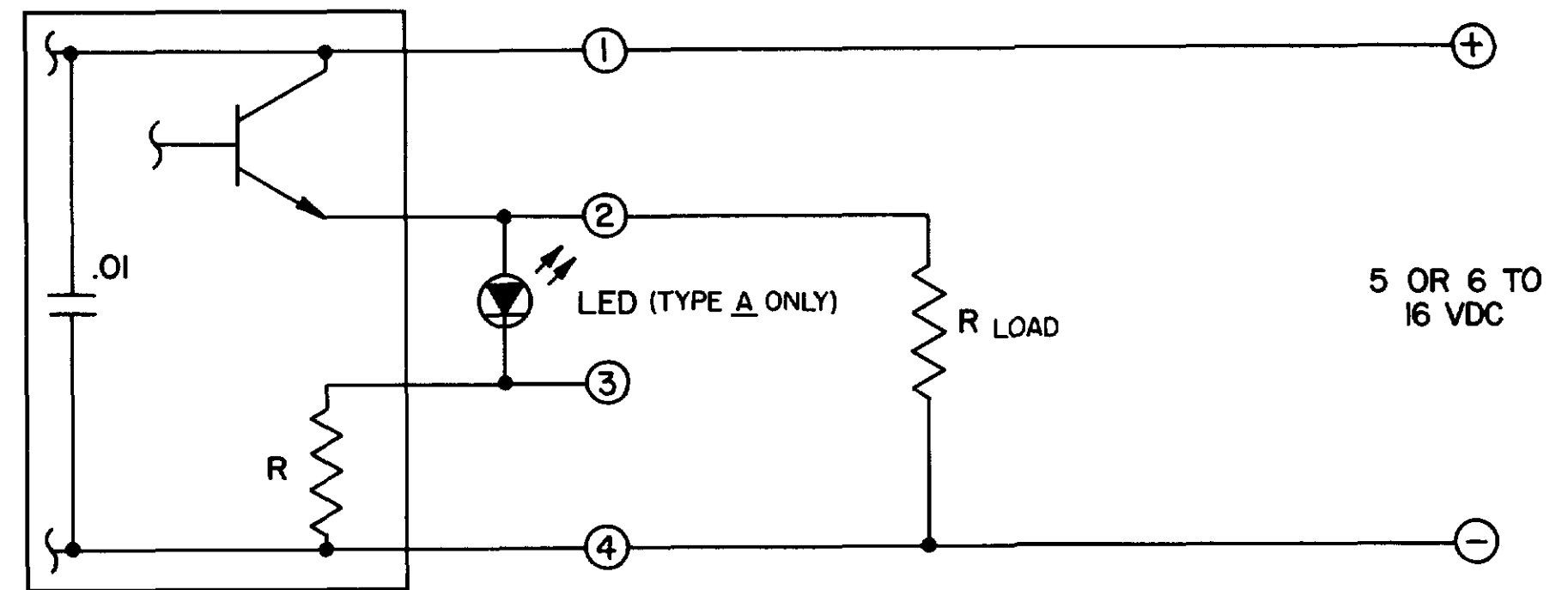
SINK TYPE OUTPUT 11\_, 13\_, 31\_, 33\_



EQUIVALENT CIRCUITS



SOURCE TYPE OUTPUT 12\_, 14\_, 22\_, 24\_



EQUIVALENT CIRCUITS



CATALOG LISTING  
**M LSA-LSW SERIES CHART 1**  
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 RELEASE NO. CO-7849B REPLACES LSA-LSW SERIES  
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 E 204871  
 F 206581  
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CATALOG LISTING

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**SWITCH - ENCLOSED**

**LSA-LSW SERIES**  
**CHART 1**

FED. MFG. CODE 91829

SCALE: DO NOT SCALE PRINT

PAGE 11 OF 11

UNLESS OTHERWISE NOTED, DIMENSIONS ARE IN INCHES.

TOLERANCES ARE:

ONE PLACE (.01)	±.030
TWO PLACE (.00)	±.015
THREE PLACE (.000)	±.005
ANGLES	±
WEIGHT	