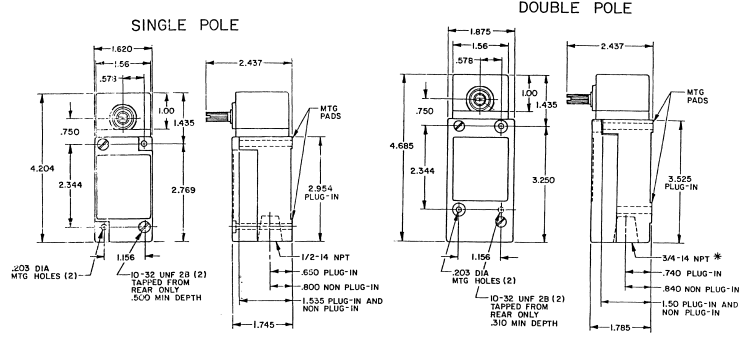


MSA-LSW SERIES CHART
 DRAWING NO. CO-78208
 REV. 11/68
 MICRO SWITCH
 HONEYWELL DIVISION
 MILWAUKEE, WIS. 53211

OPERATING CHARACTERISTICS	LSA		LSR		LSN		LSP		LSH	
	MOMENTARY		MOMENTARY LOW TORQUE		MAINTAINED		MOMENTARY LOW PRETRAVEL AND DIFF. TRAVEL		MOMENTARY LOW PRETRAVEL AND LOW TORQUE	
PRETRAVEL(MAX)	1°		1°		1°		1°		1°	
DIFFERENTIAL TRAVEL(MAX)	5°		5°		5°		5°		5°	
TOTAL TRAVEL (EEP)	75°		75°		90°		75°		75°	
OPERATING TORQUE(MAX)	4 IN. LBS		1.7 IN. LBS		4 IN. LBS		4 IN. LBS		1.7 IN. LBS	
FULL TRAVEL TORQUE(MAX)	4 IN. LBS		1.7 IN. LBS		4 IN. LBS		4 IN. LBS		1.7 IN. LBS	
OPERATING CHARACTERISTICS	LSU		LSL		LSM		LSF		LSS	
PRETRAVEL(MAX)	5°		18° STEP 1°		18°		18°		NOT APPLICABLE	
OVERTRAVEL(MIN)	75°		200 STEP 10° ADD'L		90°		90°		NOT APPLICABLE	
DIFFERENTIAL TRAVEL(MAX)	5°		5°		5°		5°		12°	
TOTAL TRAVEL (EEP)	75°		75°		75°		75°		100°	
OPERATING TORQUE(MAX)	4 IN. LBS		4 IN. LBS		4 IN. LBS		12 IN.-OZ		5 IN.-OZ	
FULL TRAVEL TORQUE(MAX)	4 IN. LBS		4 IN. LBS		4 IN. LBS		12 IN.-OZ		5 IN.-OZ	

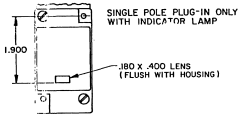
SIDE ROTARY



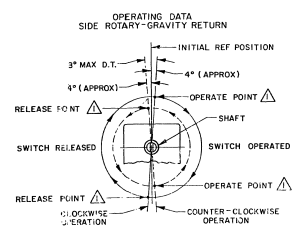
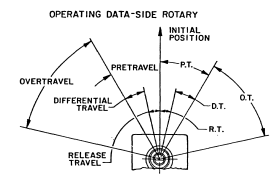
TYPE: LSA1, LSH1, LSN1, LSP1, LSR1, LSA3, LSH3, LSN3, LSP3, LSR3, LSS1, LST1

TYPE: LSA2, LSH2, LSM2, LSN2, LSP2, LSR2, LSA4, LSH4, LSM4, LSN4, LSP4, LSR4

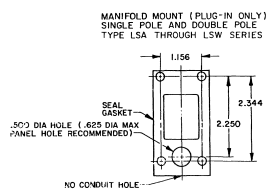
*LSA6, LSH6, LSM6, LSN6, LSP6, LSR6, LSA7, LSH7, LSM7, LSN7, LSP7, LSR7 HAVE 1/2-14 NPT CONDUIT HOLES



120 LAMP VOLTAGE - TYPE LSA5, LSH5, LSN5, LSP5, LSR5
240 LAMP VOLTAGE - TYPE LSA8, LSH8, LSN8, LSP8, LSR8



NOTE: OPERATE AND RELEASE POINTS WILL EXCHANGE LOCATIONS IF SHAFT IS ROTATED 180°



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MICRO SWITCH
a Honeywell Division

SWITCH - ENCLOSED LSA-LSW SERIES CHART 1

PAGE 1 OF 10
SCALE: 1/2" = 1"

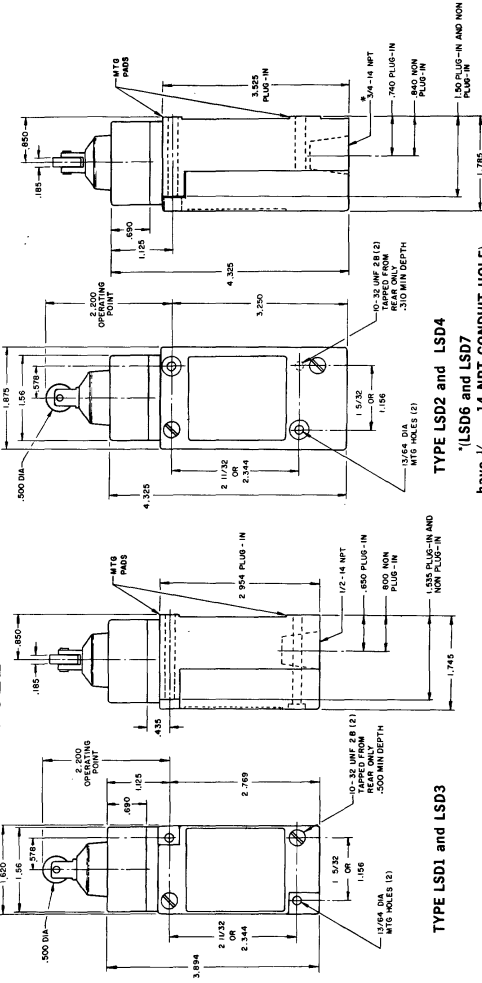
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:
ONE PLACE .003
TWO PLACES .0008
THREE PLACES .0001
ANGLES .5

RASTER	DATE	BY	CHKD	APP'D
MAM	15 JUN 84	JAE	AK	11AUG84
REV	DATE	BY	CHKD	APP'D
1	15 JUN 84	JAE	AK	11AUG84
2	20 FEB 84	JAE	AK	11AUG84
3	20 FEB 84	JAE	AK	11AUG84
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10	20 FEB 84	JAE	AK	11AUG84
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12	20 FEB 84	JAE	AK	11AUG84

PLUNGER TYPE TOP

SINGLE POLE

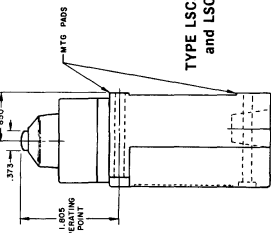
DOUBLE POLE



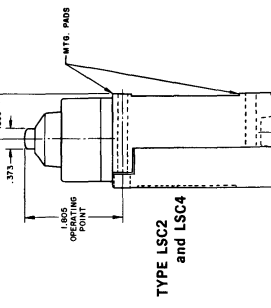
TYPE LSD1 and LSD3

TYPE LSD2 and LSD4

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



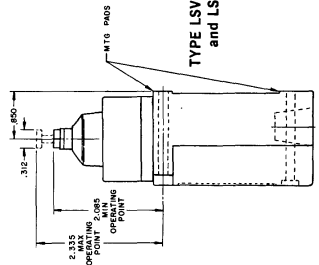
TYPE LSC1 and LSC3



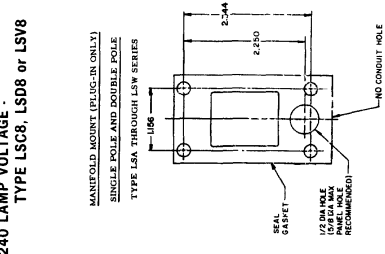
TYPE LSC2 and LSC4

120 LAMP VOLTAGE - TYPE LSC5, LSD5 or LSV5

240 LAMP VOLTAGE - TYPE LSC8, LSD8 or LSV8



TYPE LSV1 and LSV3



TYPE LSV2 and LSV4

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MICRO SWITCH
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SWITCH - ENCLOSED

LSA-LSW SERIES
 CHART 1

PAGE 4 OF 10

SCALE NONE

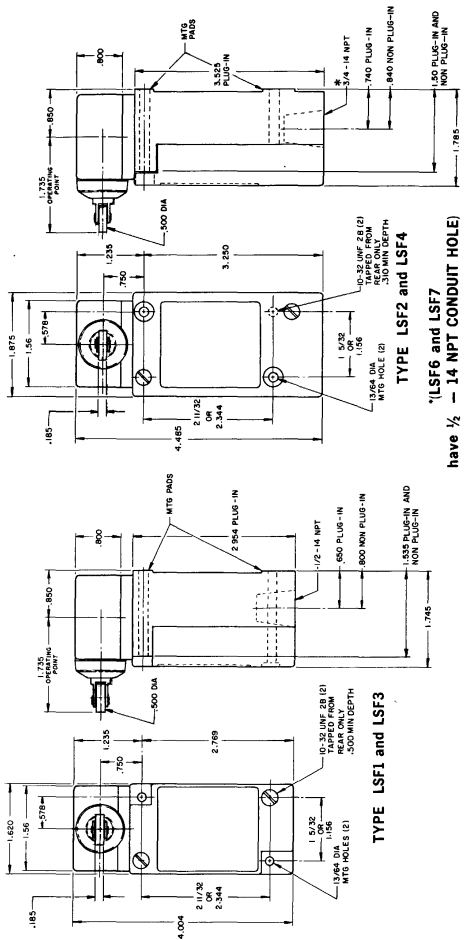
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8	6/10/55	AK	AK	AK
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10	8/10/55	AK	AK	AK
11	9/10/55	AK	AK	AK
12	10/10/55	AK	AK	AK

MASTER
DRAWN
MAM
15 JUN 54
CHECK
JAF
11 JUN 54
DESIGN
AK
11 AUG 54
APPROVE
AK
78438
REVISION
CO-78438
PART NAME
LSA-LSW SERIES

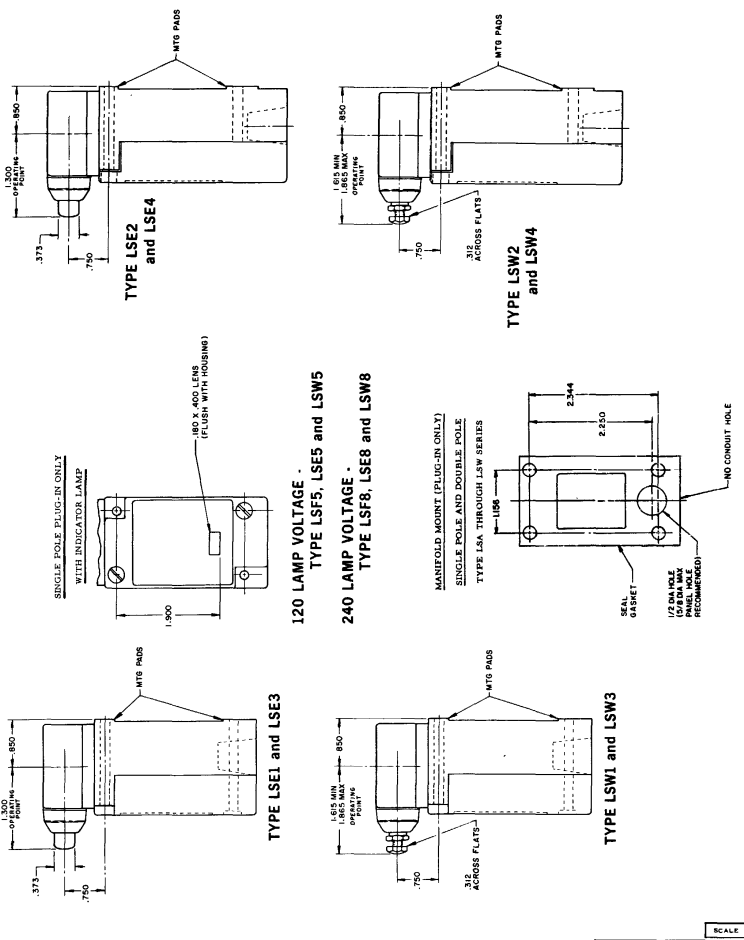
SIDE PLUNGER TYPE

SINGLE POLE

DOUBLE POLE



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



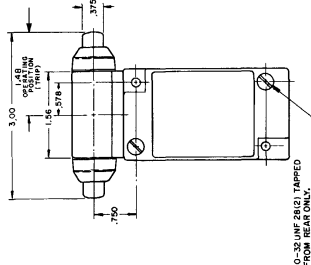
120 LAMP VOLTAGE - TYPE LSF5, LSE5 and LSW5
240 LAMP VOLTAGE - TYPE LSF8, LSE8 and LSW8

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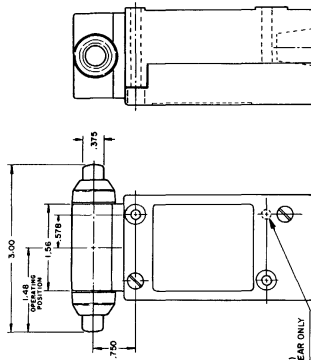
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SWITCH - ENCLOSED

CATALOG LISTING
LSA-LSW SERIES
CHART 1



TYPE LSG1 and LSG3



TYPE LSG2 and LSG4

INITIAL POSITION —
 FREE POSITION —
 OPERATING POINT —
 FULL TRAVEL —
 PRETRAVEL —
 DIFFERENTIAL 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
OPERATING POINT	.070	.015	.070	.015	.070	.015	.070	.015
OPERATING FORCE (MAX)	4 LBS	4 LBS	4 LBS	4 LBS	4 LBS	4 LBS	4 LBS	4 LBS
FULL OVERTRAVEL FORCE (MAX)	1.805 ± .030	1.805 ± .030	2.200 ± .040	2.200 ± .040	2.095 MIN	2.095 MAX	1.815 ± .030	2.210 ± .040
OPERATING POINT GIVEN IN RELATION TO CENTER OF HEAD	7 LBS	7 LBS	7 LBS	7 LBS	7 LBS	7 LBS	7 LBS	7 LBS

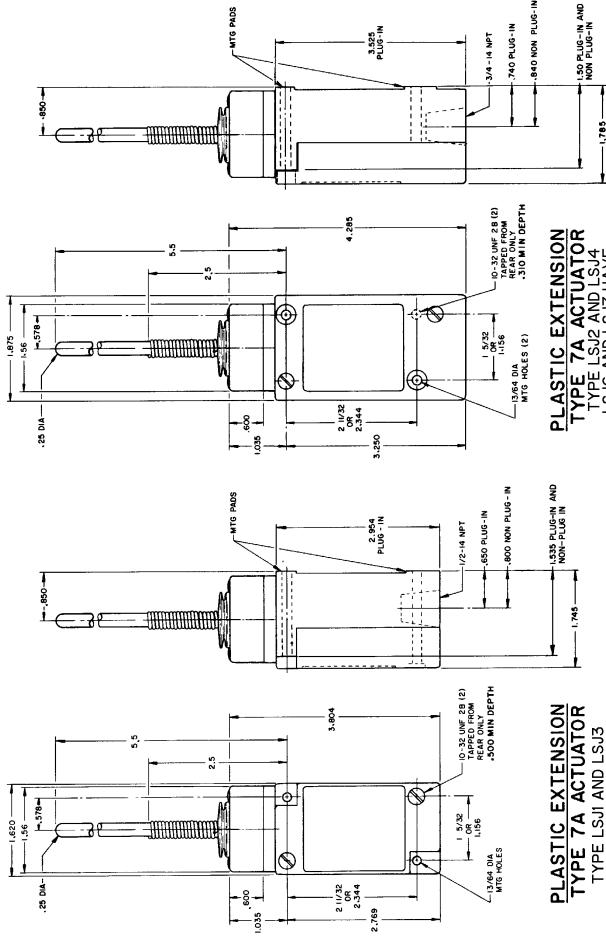
SIDE PLUNGER TYPES

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
OPERATING POINT	.100	.045	.100	.045	.100	.045	.100	.045
OPERATING FORCE (MAX)	6 LBS	6 LBS	6 LBS	6 LBS	6 LBS	6 LBS	6 LBS	6 LBS
FULL OVERTRAVEL FORCE (MAX)	1.300 ± .030	1.300 ± .030	1.735 ± .040	1.735 ± .040	1.480 ± .030	1.480 ± .030	1.310 ± .030	1.755 ± .040
OPERATING POINT GIVEN IN RELATION TO CENTER OF HEAD	6 LBS	6 LBS	6 LBS	6 LBS	6 LBS	6 LBS	6 LBS	6 LBS

MICRO SWITCH SWITCH - ENCLOSED LSA-LSW SERIES CHART 1
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 TOLERANCES: DIMS (UNLESS OTHERWISE SPECIFIED) .001 INCH ANGLES .01 INCH PER INCH WEIGHT .001 OUNCE PER INCH CUBIC
 SCALE NONE DO NOT SCALE PRINT

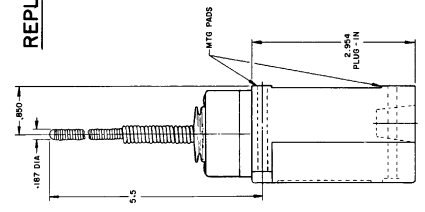
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REV	DATE	BY	CHKD	APPD	REASON		
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7	03 SEP 95	AK	11AUG04	PSR	10JUL07	RELEASE NO. CO-78-99	REF. PART. LSA-LSW SERIES
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9	03 SEP 95	AK	11AUG04	PSR	10JUL07	RELEASE NO. CO-78-99	REF. PART. LSA-LSW SERIES
10	03 SEP 95	AK	11AUG04	PSR	10JUL07	RELEASE NO. CO-78-99	REF. PART. LSA-LSW SERIES
11	03 SEP 95	AK	11AUG04	PSR	10JUL07	RELEASE NO. CO-78-99	REF. PART. LSA-LSW SERIES
12	03 SEP 95	AK	11AUG04	PSR	10JUL07	RELEASE NO. CO-78-99	REF. PART. LSA-LSW SERIES

WOBBLE STICK DOUBLE POLE

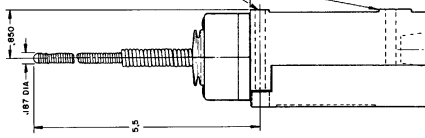


PLASTIC EXTENSION
TYPE 7A ACTUATOR
TYPE LSJ1 AND LSJ3

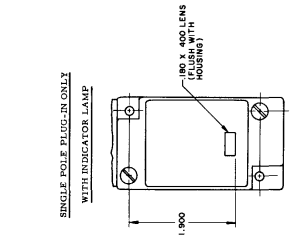
PLASTIC EXTENSION
TYPE 7A ACTUATOR
TYPE LSJ2 AND LSJ4
LSJ6 AND LSJ7 HAVE
1/2 - 14 NPT CONDUIT HOLE



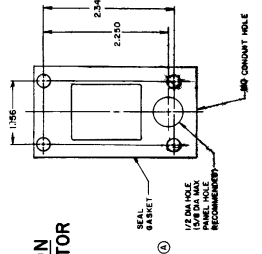
REPLACEMENT ACTUATOR
LSZ-4009



REPLACEMENT ACTUATOR
LSZ-4011



120 LAMP VOLTAGE TYPE LSJ5
240 LAMP VOLTAGE TYPE LSJ8
24 LED VOLTAGE TYPE LSJ9



CABLE EXTENSION
TYPE 7N ACTUATOR

CABLE EXTENSION
TYPE 7N ACTUATOR

REPLACEMENT ACTUATOR
LSZ-4011

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SWITCH - ENCLOSED

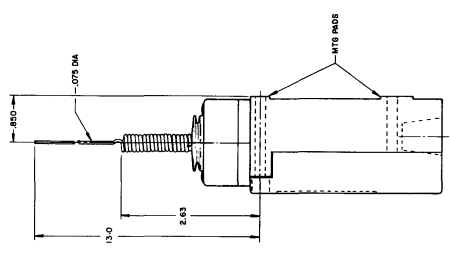
LSA-LSW SERIES
CHART 1

CATALOG LISTING

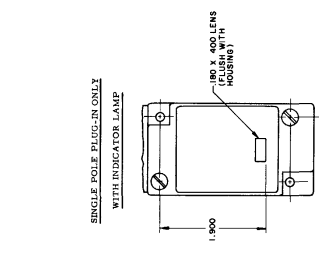
PAGE 7 OF 10

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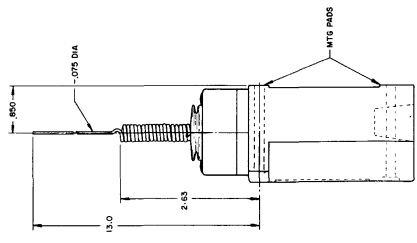
REVISIONS
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 R 0001962
 S 0001963
 T 0001964
 U 0001965
 V 0001966
 W 0001967
 X 0001968
 Y 0001969
 Z 0001970



WIRE EXTENSION TYPE 7M ACTUATOR
 TYPE LSJ2 and LSJ4
 LSJ6 and LSJ7 have 1/2 - 14 NPT CONDUIT HOLE



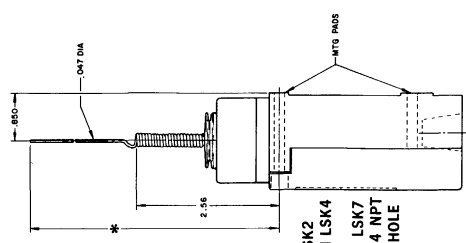
120 LAMP VOLTAGE TYPE LSJ5
240 LAMP VOLTAGE TYPE LSJ8



WIRE EXTENSION TYPE 7M ACTUATOR
 TYPE LSJ1 and LSJ3
REPLACEMENT ACTUATOR - LSZ 4010

CAT WHISKER

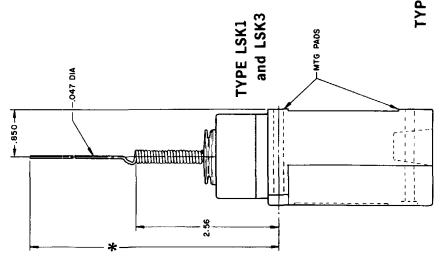
DOUBLE POLE



TYPE LSK2 and LSK4
 LSK6 and LSK7 have 1/2 - 14 NPT CONDUIT HOLE

WIRE EXTENSION
 *TYPE 8A ACTUATOR 5.5 IN.
 TYPE 8B ACTUATOR 7.5 IN.
 TYPE 8C ACTUATOR 5.5 IN.
 TYPE 8D ROD ACTUATOR 5.5 IN.

SINGLE POLE



TYPE LSK1 and LSK3
 SINGLE POLE PLUG-IN ONLY WITH INDICATOR LAMP

120 LAMP VOLTAGE
 240 LAMP VOLTAGE
 TYPE LSK5 - CAT WHISKER TYPE LSB5 - TOP ROTARY
 TYPE LSK8 - CAT WHISKER TYPE LSB8 - TOP ROTARY

***WIRE EXTENSION REPLACEMENT ACTUATOR**
 TYPE 8A ACTUATOR 5.5 IN.-LSZ 4012
 TYPE 8B ACTUATOR 7.5 IN.-LSZ 4013
 TYPE 8C COIL ACTUATOR 5.5 IN. - LSZ 4014
 ACTUATOR 9.5 IN. - LSZ 4036

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MICRO SWITCH
 a Honeywell Division

SWITCH - ENCLOSED

LSA-LSW SERIES
CHART 1

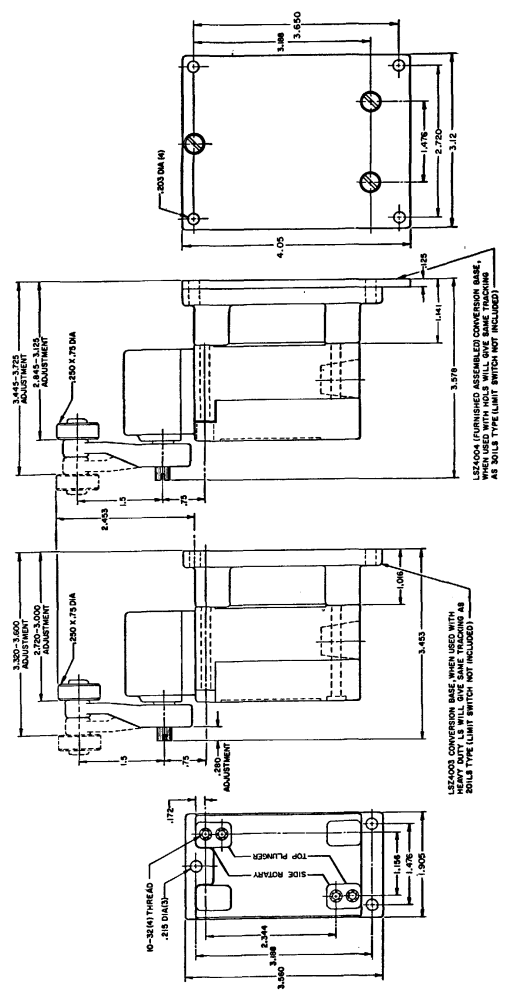
PAGE 8 OF 10
 SCALE: NONE
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CAT WHISKER SOLE WIRE	WIRE	ROD	WOBBLE STICK
2	2	4.5	1.0
5	5	5.0	1.5
7.0	7.0	3.0	10.0
7.0	5.0	3.0	7.0
7.0	5.0	3.0	5.0

PRETRAVEL (APPROX) IN. RADIUS
 OPERATING FORCE - OZ (MAX)

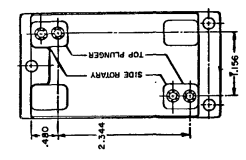
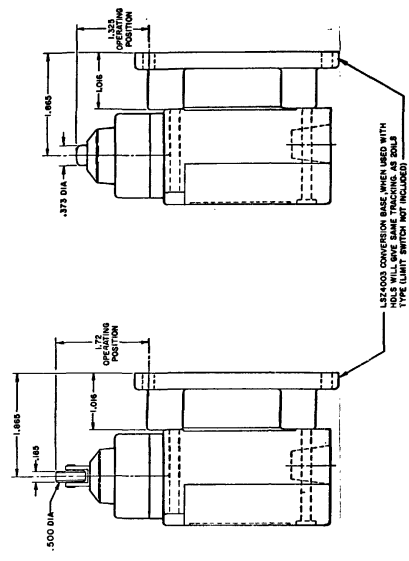
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11	10/11/07	PSR	AK	RELEASED TO CO-78498
12	10/11/07	PSR	AK	RELEASED TO CO-78498

CONVERSION BASES
DOUBLE POLE (SIDE ROTARY) LSZ4004
SINGLE POLE (SIDE ROTARY) LSZ4003



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

SINGLE POLE TOP PLUNGER LSZ4003



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

Table with columns for Head Type (LSA to LST) and various material types (CELLULOSE, DETERGENT, etc.).

CODE: 1 SATISFACTORY 2 FAIR 3 DOUBTFUL 4 UNSATISFACTORY

TEMPERATURE LIMITATIONS FOR STANDARD DEVICES table with columns: TYPES, LOW LIMIT, HIGH LIMIT.

RASTER DRAWN MAM 15 JUN 64 J.A.F. 11 JUL 64

REVISIONS table with columns: REV, DATE, BY, DESCR

Micro Switch a Honeywell Division SWITCH - ENCLOSED LSA-LSW SERIES CHART 1