

SIDE ROTARY

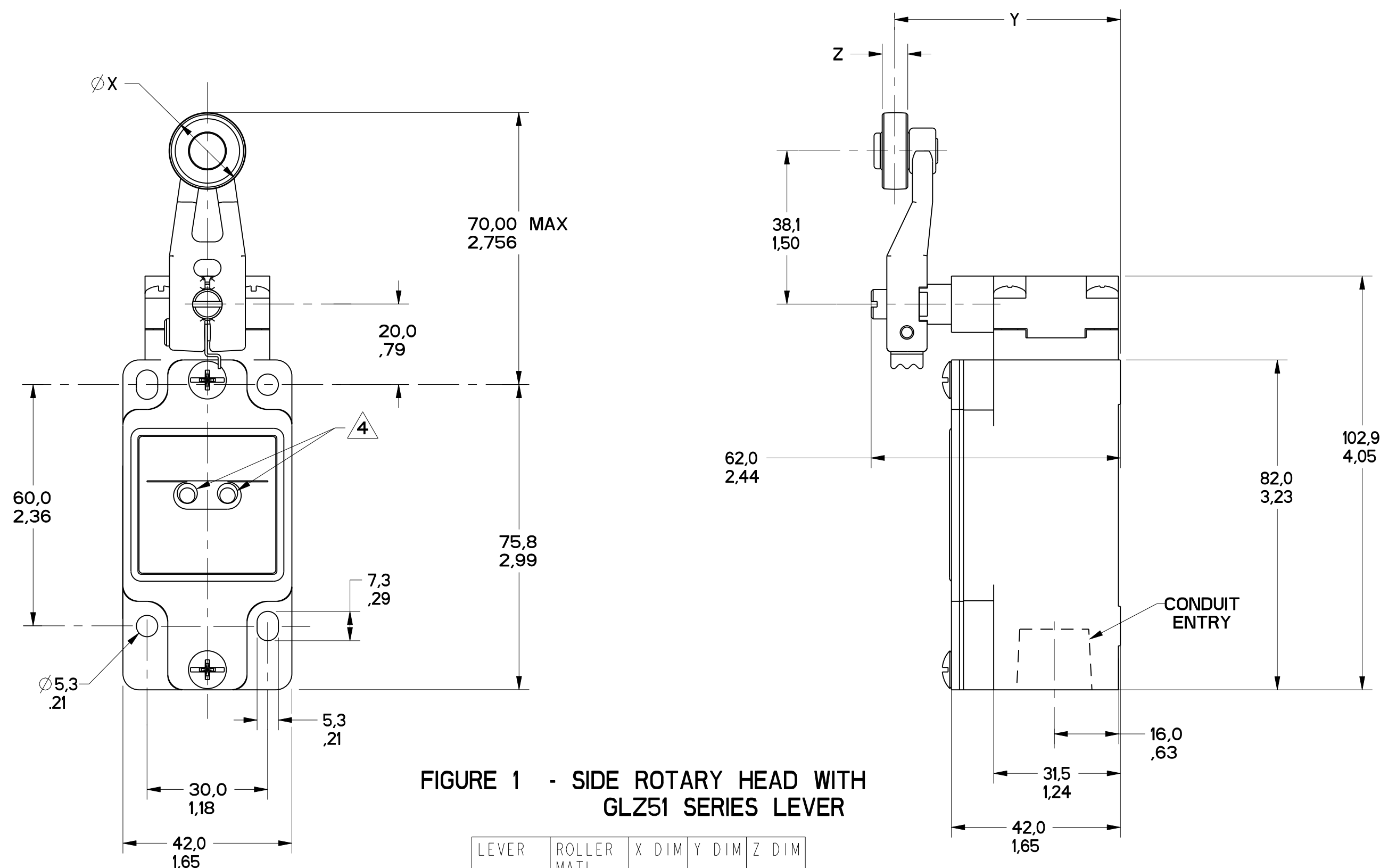


FIGURE 1 - SIDE ROTARY HEAD WITH GLZ51 SERIES LEVER

LEVER	ROLLER MATL	X DIM	Y DIM	Z DIM
GLZ51A	NYLON	19.1 .75	55.9 2.20	6.4 .25
GLZ51B	STEEL	19.1 .75	55.9 2.20	6.4 .25
GLZ51Y	RUBBER	50.0 1.97	66.1 2.60	10.0 .39
GLZ51T	STAINLESS STEEL	19.1 .75	56.8 2.24	8.8 .345

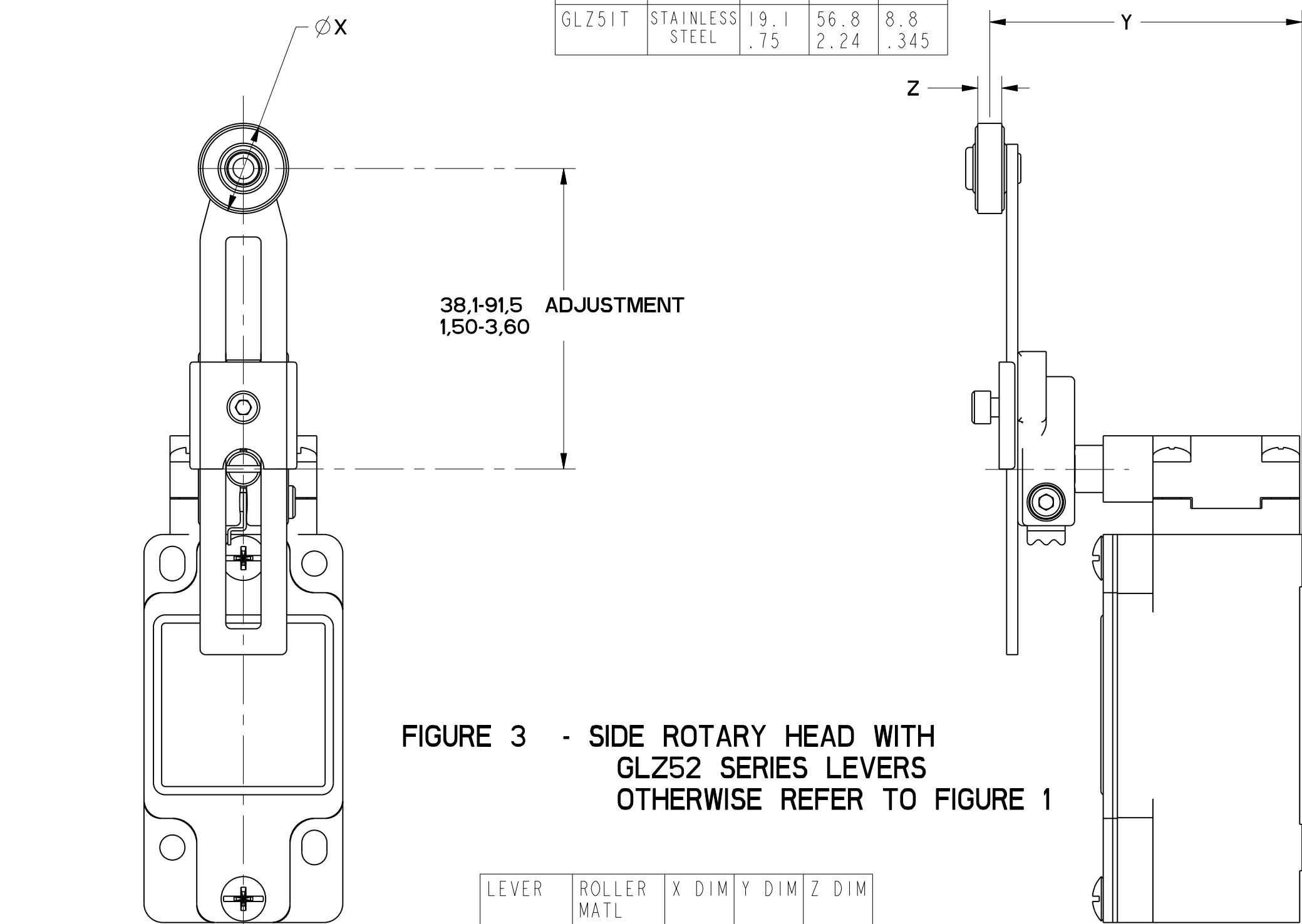


FIGURE 3 - SIDE ROTARY HEAD WITH GLZ52 SERIES LEVERS OTHERWISE REFER TO FIGURE 1

LEVER	ROLLER MATL	X DIM	Y DIM	Z DIM
GLZ52A	NYLON	19.1 .75	65.9 2.59	6.4 .25
GLZ52B	STEEL	19.1 .75	65.9 2.59	6.4 .25
GLZ52D	NYLON	38.1 1.5	65.9 2.59	6.4 .25
GLZ52E	NYLON	19.1 .75	79.37 3.125	33.07 1.300
GLZ52W	RUBBER	40.0 1.6	71.5 2.81	12.7 .5
GLZ52Y	RUBBER	50.0 1.97	68.8 2.71	10.0 .39

GLZ54J: 200.00 / 7.870 MAX  
GLZ54K: 140.00 / 5.510 MAX  
ALUMINUM ROD

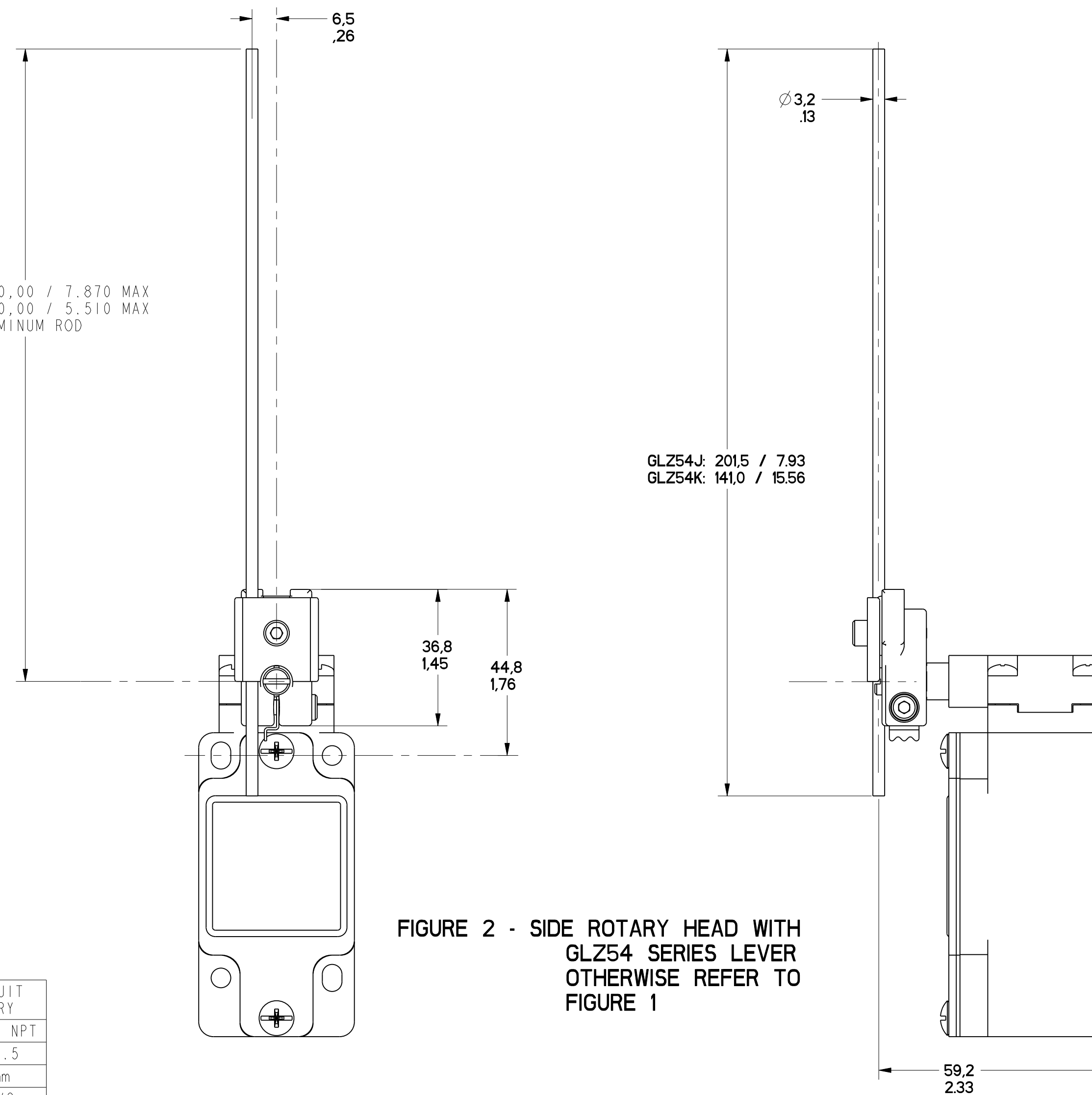


FIGURE 2 - SIDE ROTARY HEAD WITH GLZ54 SERIES LEVER OTHERWISE REFER TO FIGURE 1

FIGURE	CATALOG LISTING	CONDUIT ENTRY
1A	GL*A SERIES	1/2-14 NPT
1B	GL*B SERIES	PG13.5
1C	GL*C SERIES	20mm
1D	GL*D SERIES	PF1/2

ELECTRICAL RATING			
AC		DC	
A600 Ue (VOLTS)	AC15 Ie (AMPS)	0300 Ue (VOLTS)	DC13 Ie (AMPS)
120	6	24	2.8
240	3	125	.55
380	1.9	250	.27
480	1.5		
500	1.4		
600	1.2		

ENVIRONMENTAL RATING	
IP67	
NEMA/UL TYPES 1, 4, 12, 13	

- NOTES
- HEADS MAY BE INDEXED IN 90° INCREMENTS
  - LEVERS MAY BE KEYED TO THE SHAFT AT 90° INCREMENTS. THEY MAY ALSO BE ATTACHED, BUT NOT KEYED ANYWHERE ON THE SHAFT.
  - FOR ADDITIONAL LEVERS SEE "M" DRAWING CHART GLZ5
  - THE LEFT INDICATOR IS GREEN AND INDICATES "POWER ON" IT IS ON GLH SERIES PRODUCTS ONLY. THE RIGHT INDICATOR IS YELLOW AND INDICATES "OUTPUT STATUS" IT IS ON GLF AND GLH SERIES PRODUCTS ONLY.
  - THE MAXIMUM VOLTAGE,  $V_e$  OF GLF AND GLH SERIES PRODUCTS IS THE MAXIMUM RATED VOLTAGE OF INDICATION LIGHTS
  - FREE POSITION, OPERATE POINT, OVERTRAVEL AND PRETRAVEL ALL TO EN50041
  - CAM TRAVEL FOR FIG 9 ONLY APPLIES WHEN LEVER IS ADJUSTED TO 38.1 / 1.50
  - THE MAXIMUM VOLTAGE,  $V_e$  OF "06" AND "36" BASIC SWITCH CODE IS 500V (A500) TEMPERATURE RANGE
- (ALL PRODUCTS EXCEPT W/SIDE ROTARY OPERATING HEAD)  
OPERATING: -25°C TO +85°C / -13°F TO +185°F  
STORAGE: -40°C TO +85°C / -40°F TO +185°F  
(PRODUCTS W/SIDE ROTARY OPERATING HEAD)  
OPERATING: -40°C TO +85°C / -40°F TO +185°F  
STORAGE: -40°C TO +85°C / -40°F TO +185°F

CATALOG LISTING	BODY DIMENSIONS, FIGURE	HEAD DIMENSIONS, FIGURE	HEAD ACTUATION, FIGURE
GLA****	I	N/A	N/A
GLF****	I	N/A	N/A
GLH****	I	N/A	N/A
GLA****	1A	N/A	N/A
GLB****	1B	N/A	N/A
GLC****	1C	N/A	N/A
GLD****	1D	N/A	N/A
GL****A1*	I	1	8
GL****A2*	I	3	9
GL****A4*	I	2	10
GL****A5*	I		8
GL****B	I	4	11
GL****C	I	5	13A, 13B
GL****D	I	6	14A, 14B
GL****E7A	I	7A	12
GL****E7B	I	7	12
GL****E7C	I	7E	15
GL****E7D	I	7B	12
GL****K8A	I	7C	15
GL****K8B	I	7D	15
GL****K8C	I	7	15

MGL SERIES CHART 1  
 DRAWING NUMBER: 14  
 PAGE 1 OF 13  
 RELEASE NO. PR-201782  
 CHECK: CMH  
 DIM: DTAUG06  
 DATE: 02/27/09  
 PTC/CAD  
 S. A. V. 2/MAR/06  
 DVM

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FED. MFG. CODE 91929

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a Honeywell Division

SWITCH, ENCLOSED

CATALOG LISTING  
**GL SERIES CHART 1**

THIRD ANGLE PROJECTION

SCALE: 1:1

DO NOT SCALE PRINT

TOLERANCES  
APPLY TO DESIGN UNITS. CONVERSIONS ARE ONLY FOR REFERENCE, UNLESS NOTED. TOLERANCES ARE:

	DIM	TOL.	DIM	TOL.
NO PLACES	X, Y, Z	±0.004	X, Y, Z	±0.0005
ONE PLACE	X, Y, Z	±0.010	X, Y, Z	±0.0010
TWO PLACES	X, Y, Z	±0.020	X, Y, Z	±0.0020
THREE PLACES	X, Y, Z	±0.030	X, Y, Z	±0.0030
ANGLES		±0.1°		

DESIGN UNITS: SI METRIC  US CUSTOMARY

WEIGHT

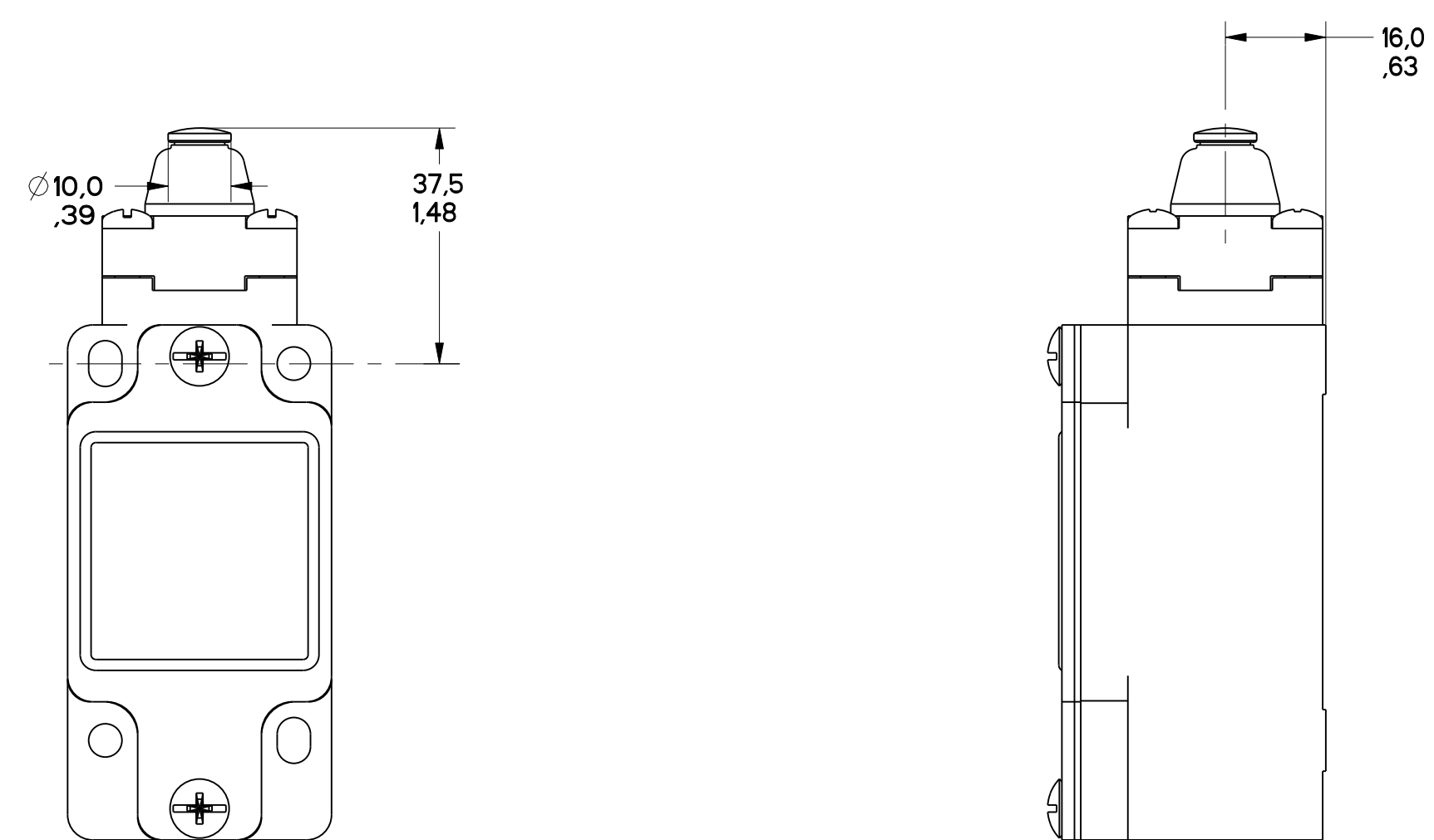


FIGURE 4 - TOP PIN PLUNGER HEAD  
OTHERWISE REFER TO  
FIGURE 1

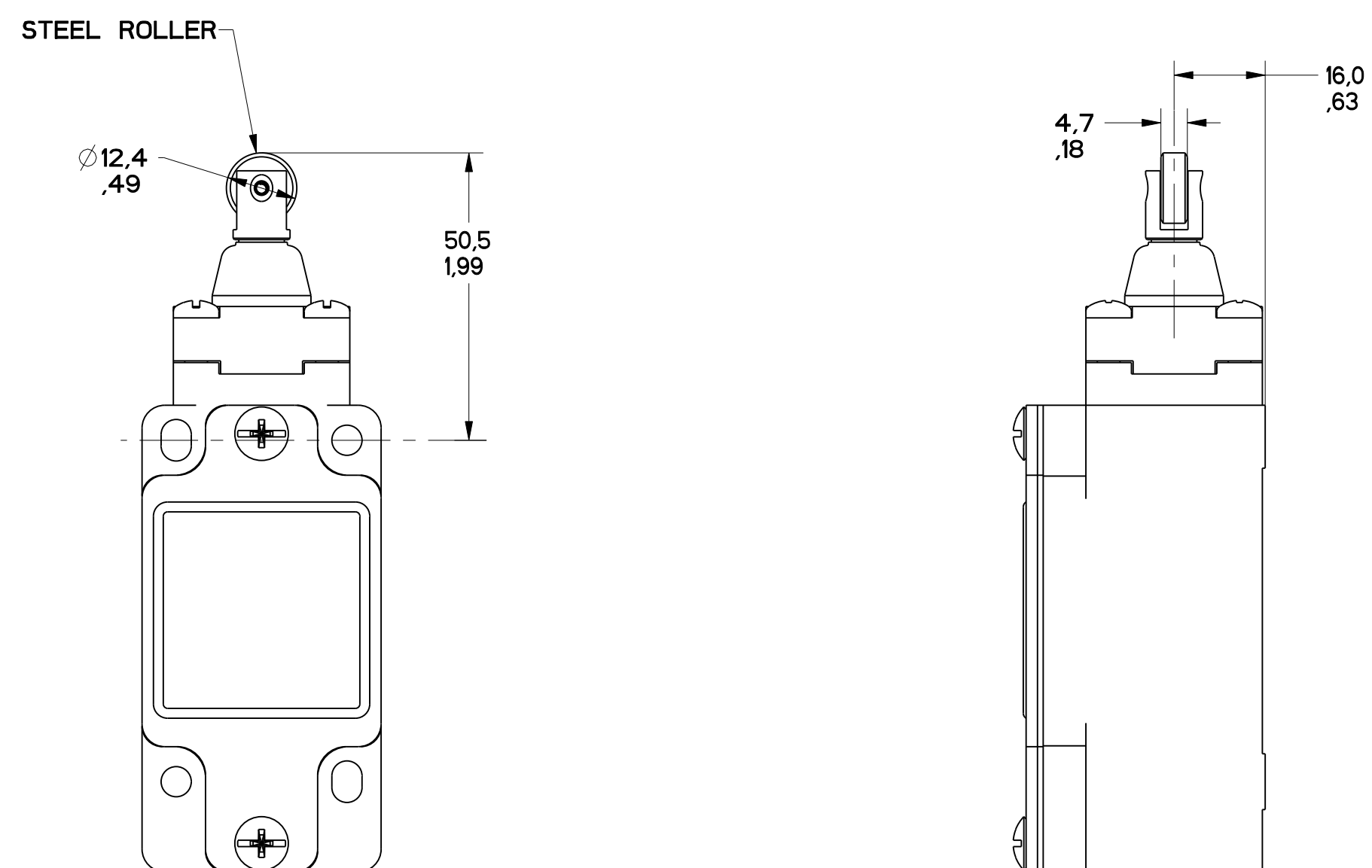


FIGURE 5 - TOP ROLLER PLUNGER HEAD  
OTHERWISE REFER TO  
FIGURE 1

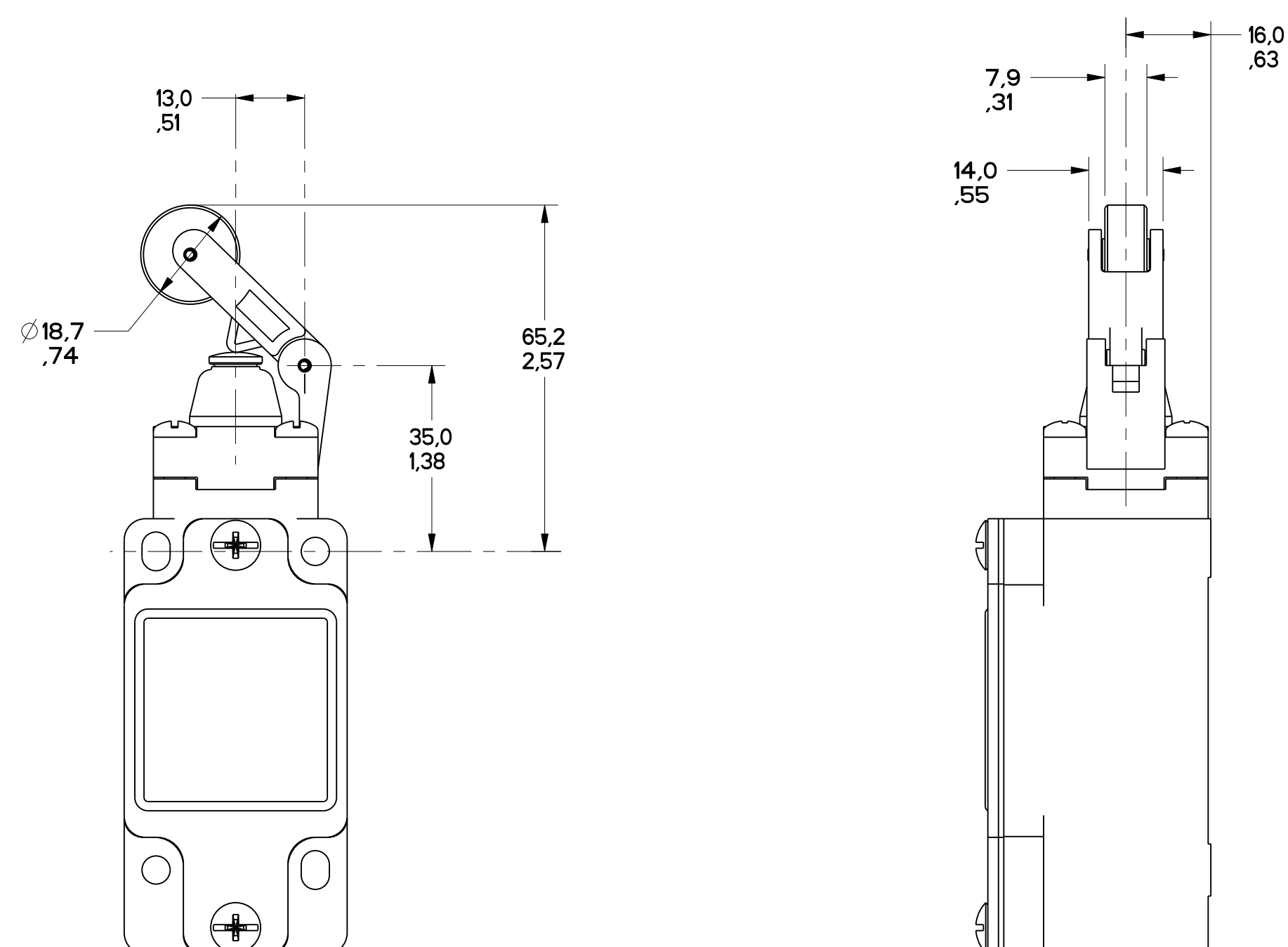


FIGURE 6 - TOP LEVER HEAD,  
OTHERWISE REFER TO  
FIGURE 1

MGL SERIES CHART 1  
 DRAWING NUMBER: 14  
 PAGE: 2 OF 13  
 RELEASE NO. PR-20782  
 REPLACES: 091 FEB 69  
 CHECK: CMH  
 DATE: 26 AUG 63  
 CHECK: G.H.  
 DATE: 26 AUG 63  
 P.T.C./CAD  
 W.L.S.

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TOLERANCES APPLY TO DESIGN UNITS. CONCESSIONS ARE ONLY FOR REFERENCE, UNLESS NOTED. TOLERANCES ARE:		THIRD ANGLE PROJECTION SCALE: 1:1 DO NOT SCALE PRINT	
NO PLACES	1X	±.04	±.04
TWO PLACES	1X	0.01 DIA	0.01 DIA
THREE PLACES	1X	0.151 DIA	0.151 DIA
ANGLES	±.2°		
WEIGHT			



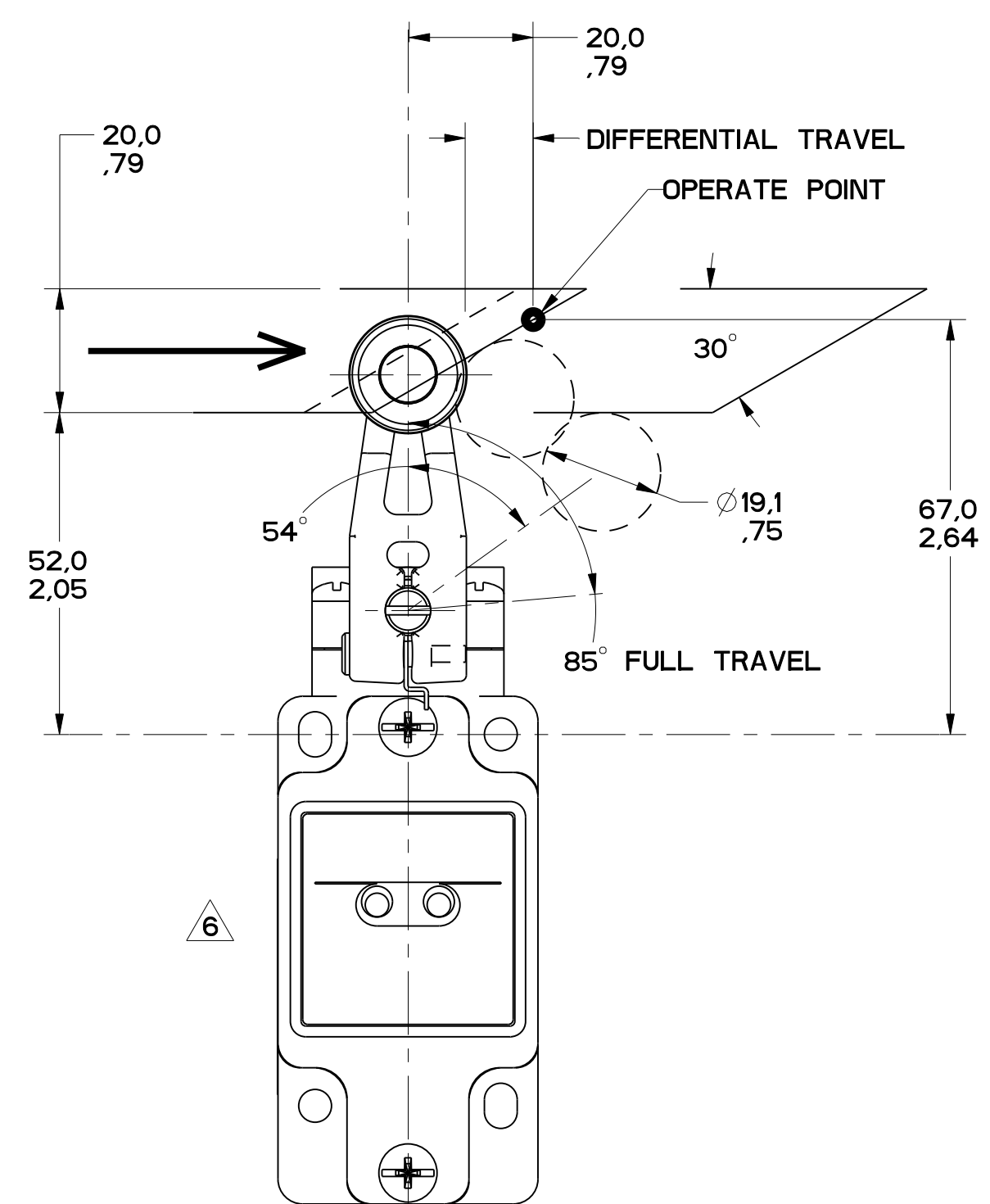


FIGURE 8

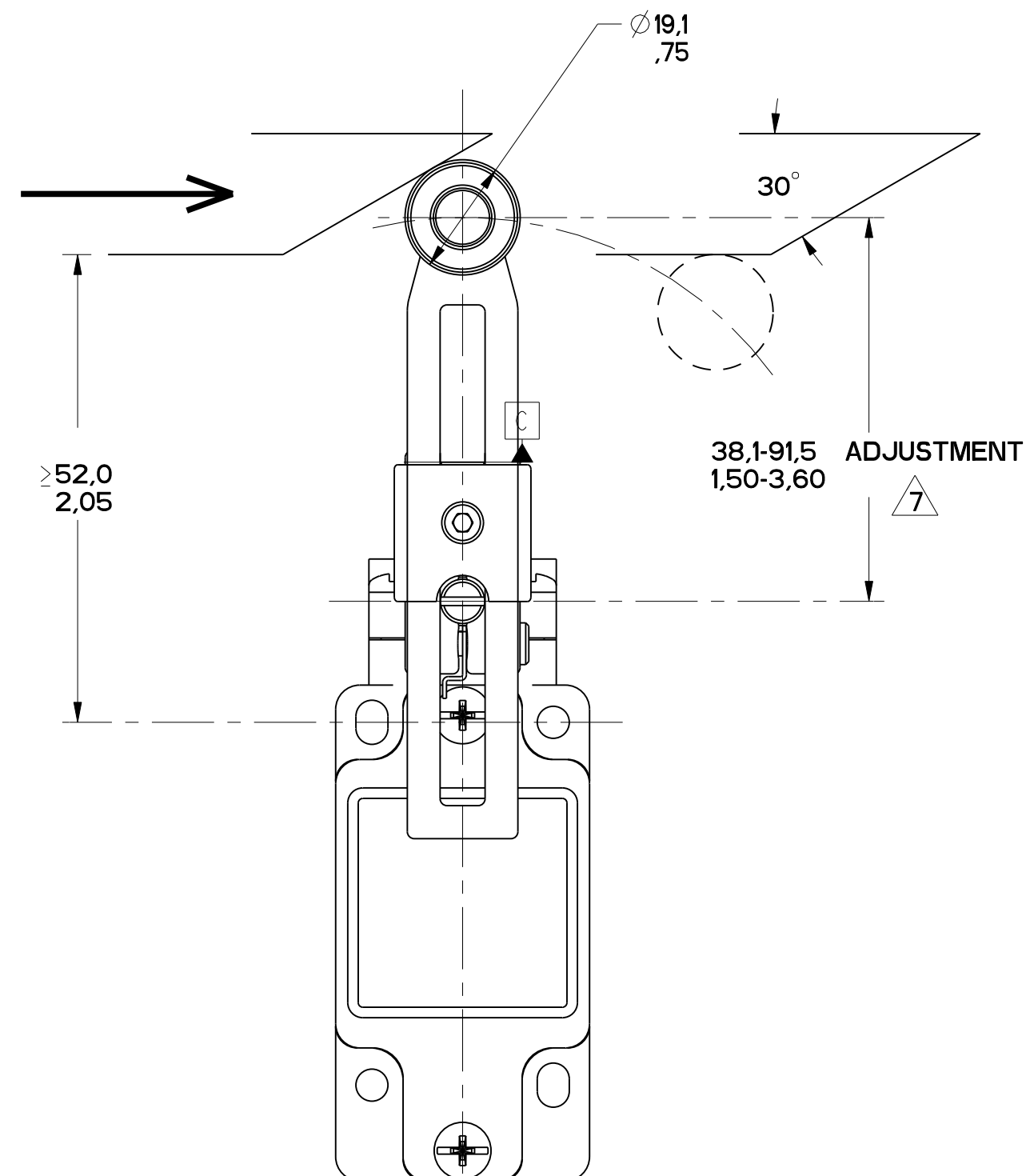


FIGURE 9

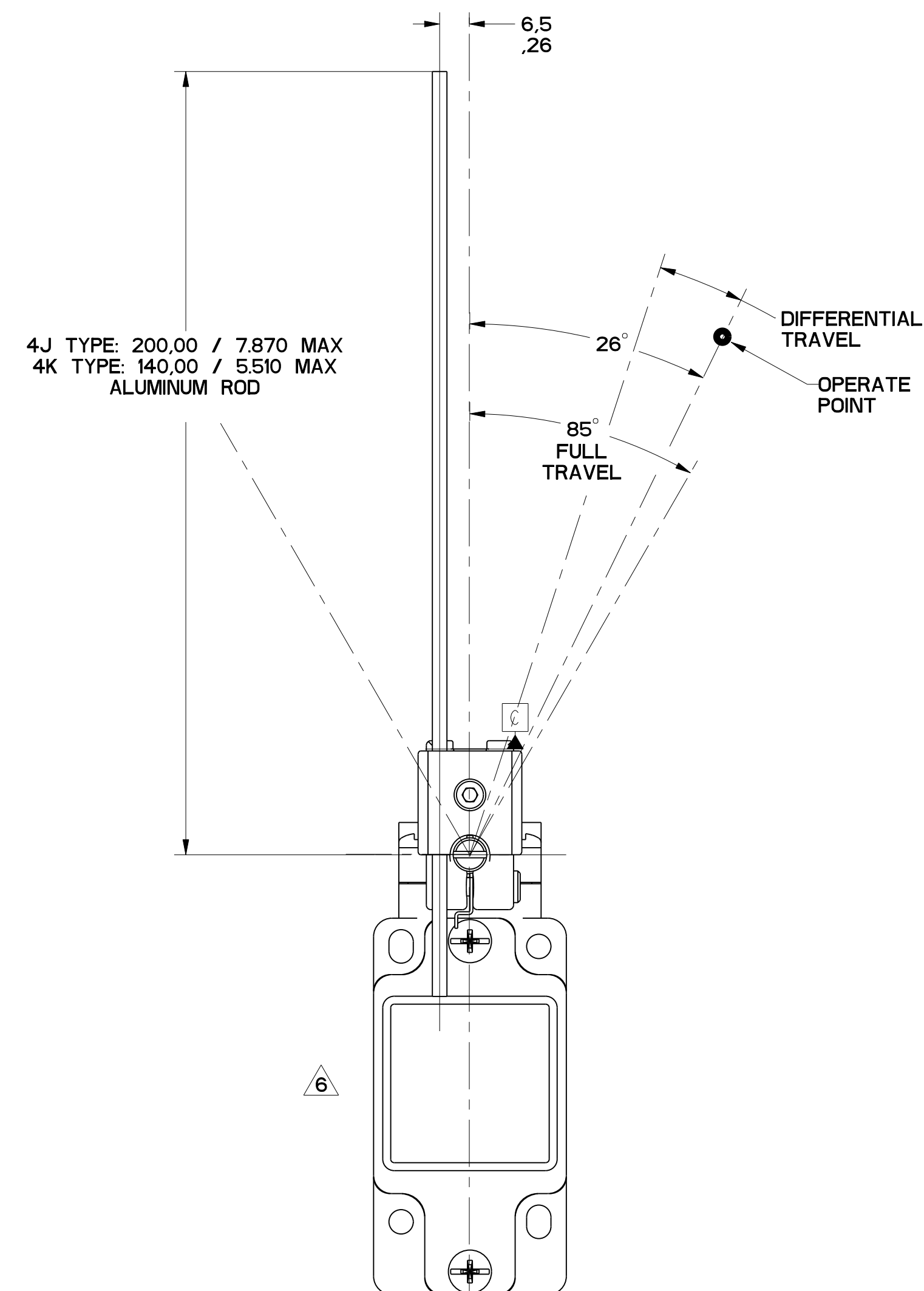


FIGURE 10

MGL SERIES CHART 1  
 DRAWING NUMBER: 4 OF 13  
 RELEASE NO. PR-20782  
 ISSUE: 14  
 P.T.C./CAD  
 S.A.V. 27 MAR 66  
 D.M. 07 AUG 66  
 D.M. 07 FEB 69  
 P.T.C. 023759  
 P.T.C. 07 JAN 66  
 P.T.C. 0037216  
 P.T.C. 001688  
 P.T.C. 0042629  
 P.T.C. 005708  
 P.T.C. 0048605  
 P.T.C. 001688

REV	DATE	BY	CHKD
1	080964	W	W
2	01053	W	W
3	002788	W	W
4	20 JAN 64	W	W
5	023759	W	W
6	07 JAN 66	W	W
7	0037216	W	W
8	001688	W	W
9	0042629	W	W
10	005708	W	W
11	0048605	W	W
12	001688	W	W

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CATALOG LISTING		GL SERIES CHART 1	
DESIGN UNITS: <input checked="" type="checkbox"/> SI METRIC <input type="checkbox"/> US CUSTOMARY		TOLERANCES: DO NOT SCALE PRINT APPLY TO DESIGN UNITS. CONCESSIONS ARE ONLY FOR REFERENCE, UNLESS NOTED. TOLERANCES ARE:	
NO PLACES	±.04	NO PLACES	±.01
TWO PLACES	±.02	TWO PLACES	±.005
THREE PLACES	±.01	THREE PLACES	±.0025
ANGLES	±.2°	ANGLES	±.2°
WEIGHT		WEIGHT	

FIGURES 8, 9, 10 SIDE ROTARY HEAD, ANGULAR ACTUATION

CATALOG LISTING	CONTACT BLOCK DIAGRAM	NOMINAL TRAVELS AND RELATED TERMINALS <small>■ - CONTACT CLOSED, □ - CONTACT OPEN, ▨ - CONTACT CLOSED DIFFERENTIAL TRAVEL, ** POSITIVE OPENING TO IEC 947-5-1</small>	MAXIMUM OPERATING TORQUE <small>N-m LB-IN</small>	MAXIMUM DISCONNECT TORQUE <small>N-m LB-IN</small>	MAX OPERATE DEGREE/S	MIN OPERATE DEGREE/S	MAX OPERATE FREQUENCY OPS/MIN
GL**01A GL**07A	SNAP - ACTION CONTACTS SINGLE POLE 	 21-22 26° 55**° 85° 13-14 12° DIFFERENTIAL TRAVEL	.330 2.9	.385 3.4	1290	13	250
GL**03A GL**33A	SLOW ACTING BREAK BEFORE MAKE 	 21-22 26**° 85° 13-14 38°	.330 2.9	.385 3.4	1290	13	250
GL**04A GL**34A	SLOW ACTING MAKE BEFORE BREAK 	 21-22 38**° 85° 13-14 26°	.330 2.9	.400 3.5	1290	13	250
GL**05A GL**35A	SLOW ACTING 	 13-14 38° 85° 23-24	.330 2.9	.385 3.4	1290	13	250
GL**06A GL**36A	SLOW ACTING 	 11-12 26**° 85° 21-22	.330 2.9	.385 3.4	1290	13	250
GL**20A GL**22A GL**24A GL**32A	SNAP ACTION CONTACTS DOUBLE POLE 	 11-12, 21-22 26° 55**° 85° 13-14, 23-24 12° DIFFERENTIAL TRAVEL	.330 2.9	.385 3.4	1290	13	250
GL**21A GL**25A GL**28A GL**31A	SNAP ACTION CONTACTS DOUBLE POLE SEQUENTIAL 	 11-12 27 42 13-14 21-22 23-24 8 DIFFERENTIAL TRAVEL 8 DIFFERENTIAL TRAVEL	.330 2.9	N/A	1290	13	250

SIDE ROTARY HEAD, CAM ACTUATION PER EN50041, FIGURES 8 AND 9

CATALOG LISTING	CONTACT BLOCK DIAGRAM	NOMINAL TRAVELS AND RELATED TERMINALS <small>■ - CONTACT CLOSED, □ - CONTACT OPEN, ▨ - CONTACT CLOSED DIFFERENTIAL TRAVEL, ** POSITIVE OPENING TO IEC 947-5-1 DIMENSIONS IN mm</small>	MAXIMUM OPERATING FORCE <small>N LB</small>	MAXIMUM DISCONNECT FORCE <small>N LB</small>	MAX OPERATE VEL <small>M/S IN/S</small>	MIN OPERATE VEL <small>mm/S IN/S</small>	MAX OPERATE FREQUENCY OPS/MIN
GL**01A GL**07A	SNAP - ACTION CONTACTS SINGLE POLE 	 21-22 0 20 56** 13-14 12 DIFFERENTIAL TRAVEL	9.7 2.2	11.4 2.6	.85 33.5	8.5 .33	250
GL**03A GL**33A	SLOW ACTING BREAK BEFORE MAKE 	 21-22 0 20** 13-14 32	9.7 2.2	11.4 2.6	.85 33.5	8.5 .33	250
GL**04A GL**34A	SLOW ACTING MAKE BEFORE BREAK 	 21-22 0 32 13-14 20	9.7 2.2	11.4 2.6	.85 33.5	8.5 .33	250
GL**05A GL**35A	SLOW ACTING 	 13-14 0 32° 85° 23-24	9.7 2.2	11.4 2.6	.85 33.5	8.5 .33	250
GL**06A GL**36A	SLOW ACTING 	 11-12 0 20** 21-22	9.7 2.2	11.4 2.6	.85 33.5	8.5 .33	250
GL**20A GL**22A GL**24A GL**32A	SNAP ACTION CONTACTS DOUBLE POLE 	 11-12, 21-22 0 20 56** 13-14, 23-24 12 DIFFERENTIAL TRAVEL	9.7 2.2	11.8 2.7	.85 33.5	8.5 .33	250
GL**21A GL**25A GL**28A GL**31A	SNAP ACTION CONTACTS DOUBLE POLE SEQUENTIAL 	 11-12 0 20 38.5 13-14 21-22 23-24 8.5 DIFFERENTIAL TRAVEL 7 DIFFERENTIAL TRAVEL	9.7 2.2	N/A	.85 33.5	8.5 .33	250
GL**26J GL**27J GL**29J GL**30J	SNAP ACTION CONTACTS DOUBLE POLE CENTER NEUTRAL 	 11-12 0 16 13-14 21-22 23-24 8 DIFFERENTIAL TRAVEL 8 DIFFERENTIAL TRAVEL	9.7 2.2	N/A	.85 33.5	8.5 .33	250

MGL SERIES CHART 1  
 DRAWING NUMBER: 5 OF 13  
 RELEASE NO. PR-20782  
 PTC/CAD  
 W. L. S. 26AUG93  
 G.H.  
 CHECK  
 14  
 ISSUE  
 01/15/05  
 01/15/05  
 0007986  
 20 JAN 04  
 0223759  
 07/16/06  
 0037216  
 08/18/08  
 0043629  
 05/08  
 0048605  
 08/18/09

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**SWITCH, ENCLOSED**

**GL SERIES CHART 1**

SI METRIC US CUSTOMARY

DESIGN UNITS WEIGHT

NO. PLACES	TOL.	NO. PLACES	TOL.
ONE PLACE	±.04	TWO PLACES	±.02
TWO PLACES	±.02	THREE PLACES	±.01
THREE PLACES	±.01	ANGLES	±.15

THIRD ANGLE PROJECTION

SCALE: -

DO NOT SCALE PRINT

TOLERANCES

APPLY TO DESIGN UNITS. CONVERSIONS ARE ONLY FOR REFERENCE. UNLESS NOTED, TOLERANCES ARE:

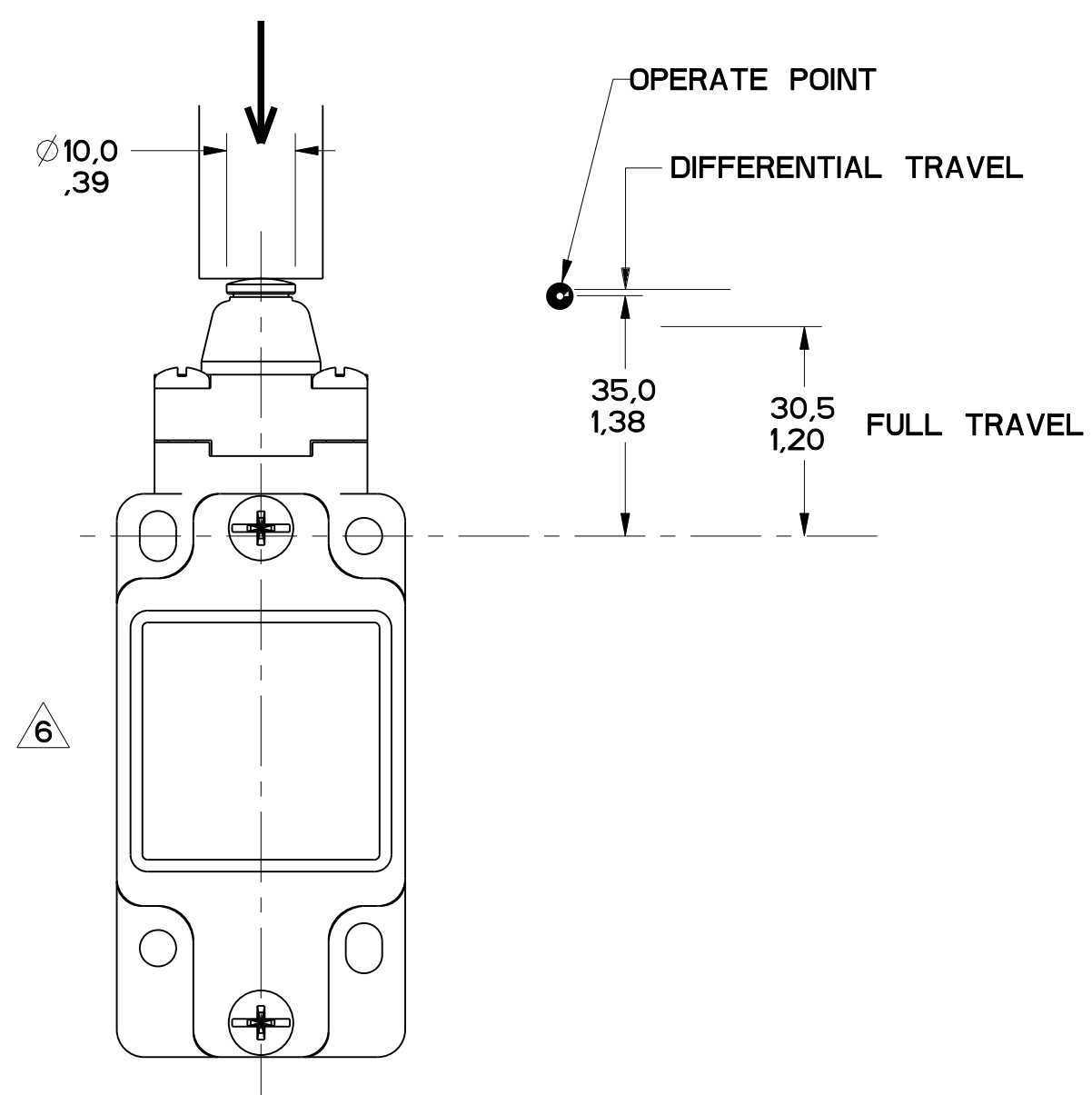


FIGURE 11

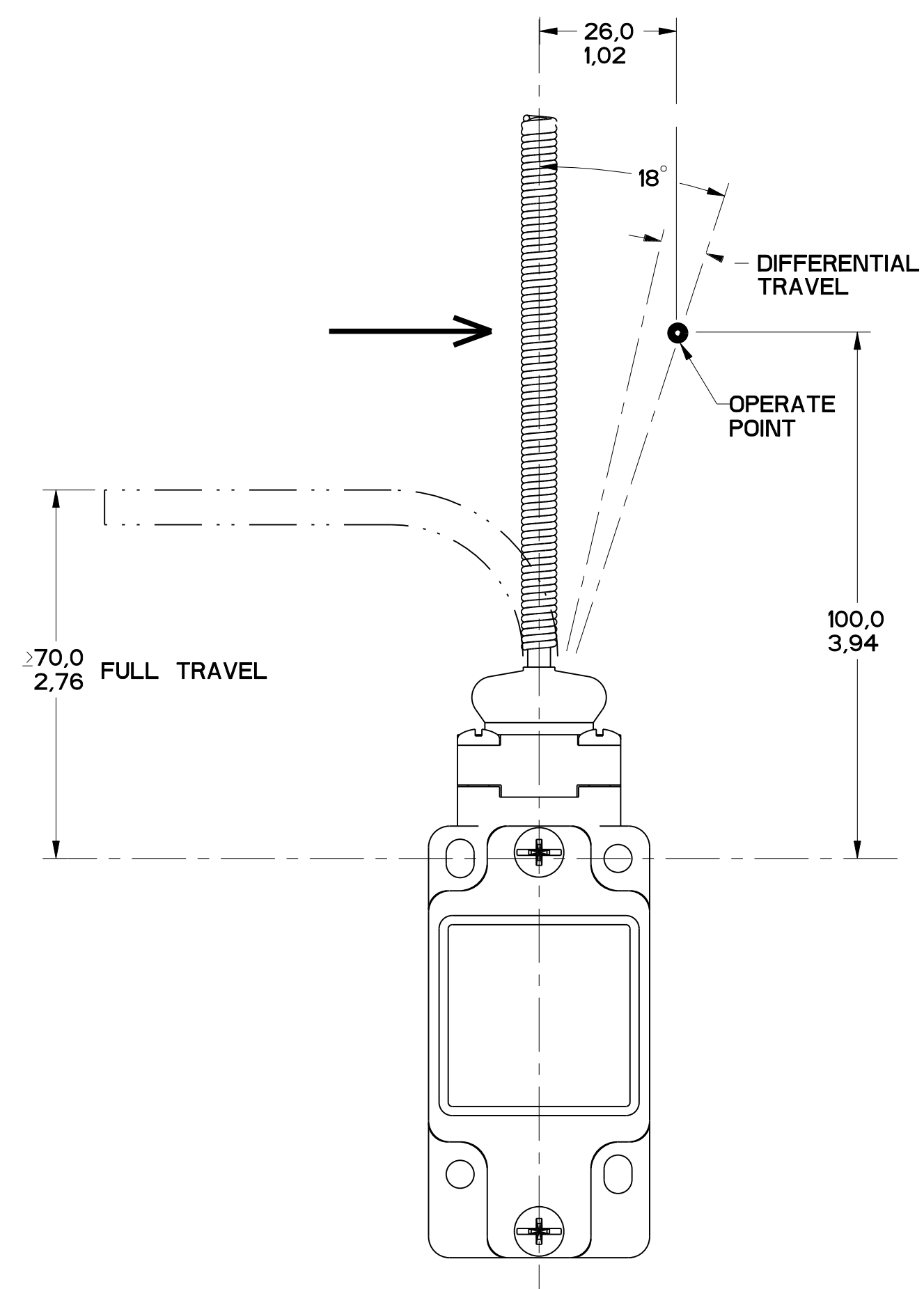


FIGURE 12

MGL SERIES CHART 1  
 DRAWING NUMBER: 6 OF 13  
 RELEASE NO. PR-20782  
 ISSUE: 14  
 P.T.C./CAD: 3D  
 DRAWN: W.L.S. 26AUG83  
 CHECK: G.H.  
 APPROVED: G.H.  
 DATE: 09 FEB 89  
 CHECK: CMH  
 DATE: 20 JAN 84  
 H: 0023759  
 W: 07AUG86  
 J: 0037216  
 BR: 001E88  
 K: 0042629  
 L: 0048605  
 W: 001E89  
 P.T.C./CAD: 3D  
 DRAWN: W.L.S. 26AUG83  
 CHECK: G.H.

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DESIGN UNITS: <input checked="" type="checkbox"/> SI METRIC <input type="checkbox"/> US CUSTOMARY		GL SERIES CHART 1	
TOLERANCES APPLY TO DESIGN UNITS. CONCESSIONS ARE ONLY FOR REFERENCE, UNLESS NOTED. TOLERANCES ARE:		THIRD ANGLE PROJECTION SCALE: 1:1 DO NOT SCALE PRINT	
NO PLACES ONE PLACE TWO PLACES THREE PLACES ANGLES	SI .04 .01 .005 ±.2°	US .0015 .005 .015 ±.2°	NO PLACES ONE PLACE TWO PLACES THREE PLACES ANGLES
WEIGHT		WEIGHT	

FIGURES 11, PIN PLUNGER HEAD, LINEAR ACTUATION

CATALOG LISTING	CONTACT BLOCK DIAGRAM	NOMINAL TRAVELS AND RELATED TERMINALS ■ CONTACT CLOSED, □ CONTACT OPEN, ▨ CONTACT CLOSED DIFFERENTIAL TRAVEL, ** POSITIVE OPENING TO IEC 947-5-1	MAXIMUM OPERATING FORCE $\frac{N}{LB}$	MAXIMUM DISCONNECT FORCE $\frac{N}{LB}$	MAX OPERATE VEL $\frac{M}{S}$ $\frac{IN}{S}$	MIN OPERATE VEL $\frac{MM}{S}$ $\frac{IN}{S}$	MAX OPERATE FREQUENCY OPS/MIN
GL**01B GL**07B	SNAP - ACTION CONTACTS SINGLE POLE 	 37.5 35 33** 30.5 21-22 13-14 0.9 DIFFERENTIAL TRAVEL	$\frac{16}{3.6}$	$\frac{27}{6.0}$	$\frac{0.1}{3.9}$	$\frac{1.0}{.04}$	250
GL**03B GL**33B	SLOW ACTING BREAK BEFORE MAKE 	 37.5 35** 30.5 21-22 13-14 34	$\frac{16}{3.6}$	$\frac{27}{6.0}$	$\frac{0.1}{3.9}$	$\frac{1.0}{.04}$	250
GL**04B GL**34B	SLOW ACTING MAKE BEFORE BREAK 	 37.5 34** 30.5 21-22 13-14 35	$\frac{16}{3.6}$	$\frac{27}{6.0}$	$\frac{0.1}{3.9}$	$\frac{1.0}{.04}$	250
GL**05B GL**35B	SLOW ACTING 	 37.5 34 30.5 13-14 23-24	$\frac{16}{3.6}$	$\frac{27}{6.0}$	$\frac{0.1}{3.9}$	$\frac{1.0}{.04}$	250
GL**06B GL**36B	SLOW ACTING 	 37.5 35** 30.5 11-12 21-22 34	$\frac{16}{3.6}$	$\frac{27}{6.0}$	$\frac{0.1}{3.9}$	$\frac{1.0}{.04}$	250
GL**20B GL**22B GL**24B GL**32B	SNAP ACTION CONTACTS DOUBLE POLE 	 37.5 35 33** 30.5 11-12, 21-22 13-14, 23-24 0.9 DIFFERENTIAL TRAVEL	$\frac{16}{3.6}$	$\frac{37}{8.2}$	$\frac{0.1}{3.9}$	$\frac{1.0}{.04}$	250
GL**21B GL**25B GL**28B GL**31B	STEP 1 STEP 2 SNAP ACTION CONTACTS DOUBLE POLE SEQUENTIAL 	 37.5 35 33.8 30.5 11-12 13-14 21-22 23-24 .8 DIFFERENTIAL TRAVEL	$\frac{16}{3.6}$	N/A	$\frac{0.1}{3.9}$	$\frac{1.0}{.04}$	250

FIGURE 12, WOBBLE HEAD, ANGULAR ACTUATION

CATALOG LISTING	CONTACT BLOCK DIAGRAM	NOMINAL TRAVELS AND RELATED TERMINALS ■ CONTACT CLOSED, □ CONTACT OPEN, ▨ CONTACT CLOSED DIFFERENTIAL TRAVEL, ** POSITIVE OPENING TO IEC 947-5-1	MAXIMUM OPERATING TORQUE $\frac{N-m}{LB/in}$	MAXIMUM DISCONNECT TORQUE $\frac{N-m}{LB/in}$	MAX OPERATE DEGREE/S	MIN OPERATE VELOCITY DEGREE/S	MAX OPERATE RATE CYCLES/MIN
GL**01E GL**07E	SNAP - ACTION CONTACTS SINGLE POLE 	 21-22 13-14 18° 8° DIFFERENTIAL TRAVEL	$\frac{0.2}{1.8}$	N/A	360	8	100
GL**03E GL**33E	SLOW ACTING BREAK BEFORE MAKE 	 21-22 13-14 0° 18° 25° 35°	$\frac{0.2}{1.8}$	N/A	360	8	100
GL**04E GL**34E	SLOW ACTING MAKE BEFORE BREAK 	 21-22 13-14 0° 18° 25° 35°	$\frac{0.2}{1.8}$	N/A	360	8	100
GL**05E GL**35E	SLOW ACTING 	 13-14 23-24 0° 25° 35°	$\frac{0.2}{1.8}$	N/A	360	8	100
GL**06E GL**36E	SLOW ACTING 	 11-12 21-22 0° 18° 35°	$\frac{0.2}{1.8}$	N/A	360	8	100
GL**20E GL**22E GL**24E GL**32E	SNAP ACTION CONTACTS DOUBLE POLE 	 11-12, 21-22 13-14, 23-24 18° 8° DIFFERENTIAL TRAVEL	$\frac{0.2}{1.8}$	N/A	360	8	100

FIGURE 12, WOBBLE HEAD, SIDE ACTUATION AT 100mm

CATALOG LISTING	CONTACT BLOCK DIAGRAM	NOMINAL TRAVELS AND RELATED TERMINALS ■ CONTACT CLOSED, □ CONTACT OPEN, ▨ CONTACT CLOSED DIFFERENTIAL TRAVEL, ** POSITIVE OPENING TO IEC 947-5-1	MAXIMUM OPERATING FORCE $\frac{N}{LB}$	MAXIMUM DISCONNECT FORCE $\frac{N}{LB}$	MAX OPERATE VEL $\frac{M}{S}$ $\frac{IN}{S}$	MIN OPERATE VEL $\frac{MM}{S}$ $\frac{IN}{S}$	MAX OPERATE FREQUENCY OPS/MIN
GL**01E GL**07E	SNAP - ACTION CONTACTS SINGLE POLE 	 21-22 13-14 26 12 DIFFERENTIAL TRAVEL	$\frac{2.5}{0.6}$	N/A	$\frac{.5}{19.7}$	$\frac{11}{.43}$	100
GL**03E GL**33E	SLOW ACTING BREAK BEFORE MAKE 	 21-22 13-14 26.5 38.1	$\frac{2.5}{0.6}$	N/A	$\frac{.5}{19.7}$	$\frac{11}{.43}$	100
GL**04E GL**34E	SLOW ACTING MAKE BEFORE BREAK 	 21-22 13-14 26.5 38.1	$\frac{2.5}{0.6}$	N/A	$\frac{.5}{19.7}$	$\frac{11}{.43}$	100
GL**05E GL**35E	SLOW ACTING 	 13-14 23-24 38.1	$\frac{2.5}{0.6}$	N/A	$\frac{.5}{19.7}$	$\frac{11}{.43}$	100
GL**06E GL**36E	SLOW ACTING 	 11-12 21-22 26.5	$\frac{2.5}{0.6}$	N/A	$\frac{.5}{19.7}$	$\frac{11}{.43}$	100
GL**20E GL**22E GL**24E GL**32E	SNAP ACTION CONTACTS DOUBLE POLE 	 11-12, 21-22 13-14, 23-24 26	$\frac{2.5}{0.6}$	N/A	360	8	100

THIRD ANGLE PROJECTION

SCALE -

DO NOT SCALE PRINT

TOLERANCES

APPLY TO DESIGN UNITS. CONVERSIONS ARE ONLY FOR REFERENCE. UNLESS NOTED, TOLERANCES ARE:

NO PLACES	ONE PLACE	TWO PLACES	THREE PLACES	ANGLES
±	±.1	±.01	±.001	±.01

DESIGN UNITS: SI METRIC  US CUSTOMARY

WEIGHT

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FED. MFG. CODE 91929 CATALOG LISTING

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SWITCH, ENCLOSED

GL SERIES CHART 1

MGL SERIES CHART 1  
 DRAWING NUMBER: 7 OF 13  
 RELEASE NO. PR-201782  
 PTC/CAD  
 DRAWN: W.L.S. 20AUG93  
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 DATE: 09/18/93  
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FIGURE 13A, ROLLER PLUNGER HEAD, PIN ACTUATION

CATALOG LISTING	CONTACT BLOCK DIAGRAM	NOMINAL TRAVELS AND RELATED TERMINALS ■ CONTACT CLOSED, □ CONTACT OPEN, ▨ CONTACT CLOSED DIFFERENTIAL TRAVEL, ** POSITIVE OPENING TO IEC 947-5-1	MAXIMUM OPERATING FORCE $\frac{N}{LB}$	MAXIMUM DISCONNECT FORCE $\frac{N}{LB}$	MAX OPERATE VEL $\frac{M/S}{IN/S}$	MIN OPERATE VEL $\frac{MM/S}{IN/S}$	MAX OPERATE FREQUENCY OPS/MIN
GL**01C GL**07C	SNAP - ACTION CONTACTS SINGLE POLE 		$\frac{16}{3.6}$	$\frac{27}{6.0}$	$\frac{0.1}{3.9}$	$\frac{1.0}{.04}$	250
GL**03C GL**33C	SLOW ACTING BREAK BEFORE MAKE 		$\frac{16}{3.6}$	$\frac{27}{6.0}$	$\frac{0.1}{3.9}$	$\frac{1.0}{.04}$	250
GL**04C GL**34C	SLOW ACTING MAKE BEFORE BREAK 		$\frac{16}{3.6}$	$\frac{27}{6.0}$	$\frac{0.1}{3.9}$	$\frac{1.0}{.04}$	250
GL**05C GL**35C	SLOW ACTING 		$\frac{16}{3.6}$	$\frac{27}{6.0}$	$\frac{0.1}{3.9}$	$\frac{1.0}{.04}$	250
GL**06C GL**36C	SLOW ACTING 		$\frac{16}{3.6}$	$\frac{27}{6.0}$	$\frac{0.1}{3.9}$	$\frac{1.0}{.04}$	250
GL**20C GL**22C GL**24C GL**32C	SNAP ACTION CONTACTS DOUBLE POLE 		$\frac{16}{3.6}$	$\frac{37}{8.2}$	$\frac{0.1}{3.9}$	$\frac{1.0}{.04}$	250
GL**21C GL**25C GL**28C GL**31C	STEP 1 STEP 2 SNAP ACTION CONTACTS DOUBLE POLE SEQUENTIAL 		$\frac{16}{3.6}$	N/A	$\frac{0.1}{3.9}$	$\frac{1.0}{.04}$	250

FIGURE 13B, TOP ROLLER PLUNGER HEAD, CAM ACTUATION PER EN50041

CATALOG LISTING	CONTACT BLOCK DIAGRAM	NOMINAL TRAVELS AND RELATED TERMINALS ■ CONTACT CLOSED, □ CONTACT OPEN, ▨ CONTACT CLOSED DIFFERENTIAL TRAVEL, ** POSITIVE OPENING TO IEC 947-5-1	MAXIMUM OPERATING FORCE $\frac{N}{LB}$	MAXIMUM DISCONNECT FORCE $\frac{N}{LB}$	MAX OPERATE VEL $\frac{M/S}{IN/S}$	MIN OPERATE VEL $\frac{MM/S}{IN/S}$	MAX OPERATE FREQUENCY OPS/MIN
GL**01C GL**07C	SNAP - ACTION CONTACTS SINGLE POLE 		$\frac{9.3}{2.1}$	$\frac{15.6}{3.5}$	$\frac{0.17}{6.7}$	$\frac{1.7}{.067}$	250
GL**03C GL**33C	SLOW ACTING BREAK BEFORE MAKE 		$\frac{9.3}{2.1}$	$\frac{15.6}{3.5}$	$\frac{0.17}{6.7}$	$\frac{1.7}{.067}$	250
GL**04C GL**34C	SLOW ACTING MAKE BEFORE BREAK 		$\frac{9.3}{2.1}$	$\frac{15.6}{3.5}$	$\frac{0.17}{6.7}$	$\frac{1.7}{.067}$	250
GL**05C GL**35C	SLOW ACTING 		$\frac{9.3}{2.1}$	$\frac{15.6}{3.5}$	$\frac{0.17}{6.7}$	$\frac{1.7}{.067}$	250
GL**06C GL**36C	SLOW ACTING 		$\frac{9.3}{2.1}$	$\frac{15.6}{3.5}$	$\frac{0.17}{6.7}$	$\frac{1.7}{.067}$	250
GL**20C GL**22C GL**24C GL**32C	SNAP ACTION CONTACTS DOUBLE POLE 		$\frac{9.3}{2.1}$	$\frac{21.4}{4.8}$	$\frac{0.17}{6.7}$	$\frac{1.7}{.067}$	250
GL**21C GL**25C GL**28C GL**31C	STEP 1 STEP 2 SNAP ACTION CONTACTS DOUBLE POLE SEQUENTIAL 		$\frac{9.3}{2.1}$	N/A	$\frac{0.17}{6.7}$	$\frac{1.7}{.067}$	250

THIRD ANGLE PROJECTION			
SCALE			
DO NOT SCALE PRINT			
TOLERANCES			
APPLY TO DESIGN UNITS. CONVERSIONS ARE ONLY FOR REFERENCE. UNLESS NOTED, TOLERANCES ARE:			
NO PLACES	X	12.04	0.01/0.5
ONE PLACE	X.1	0.40/0.16	0.30/0.15
TWO PLACES	X.11	0.15/0.06	0.13/0.05
THREE PLACES	X.111	±0.005	
ANGLES		±2'	
DESIGN UNITS	X	SI METRIC	US CUSTOMARY
WEIGHT			

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GL SERIES CHART 1



FIGURE 14A, TOP ROLLER LEVER HEAD WITH PIN ACTUATION

CATALOG LISTING	CONTACT BLOCK DIAGRAM	NOMINAL TRAVELS AND RELATED TERMINALS ■ - CONTACT CLOSED, □ - CONTACT OPEN, ▨ - CONTACT CLOSED DIFFERENTIAL TRAVEL, ** POSITIVE OPENING TO IEC 947-5-1	MAXIMUM OPERATING FORCE $\frac{N}{LB}$	MAXIMUM DISCONNECT FORCE $\frac{N}{LB}$	MAX OPERATE VEL $\frac{M/S}{IN/S}$	MIN OPERATE VEL $\frac{M/S}{IN/S}$	MAX OPERATE FREQUENCY OPS/MIN
GL**01D GL**07D	SNAP - ACTION CONTACTS SINGLE POLE 		$\frac{9.5}{2.1}$	$\frac{12}{2.7}$	$\frac{0.17}{6.7}$	$\frac{1.7}{.067}$	250
GL**03D GL**33D	SLOW ACTING BREAK BEFORE MAKE 		$\frac{9.5}{2.1}$	$\frac{12}{2.7}$	$\frac{0.17}{6.7}$	$\frac{1.7}{.067}$	250
GL**04D GL**34D	SLOW ACTING MAKE BEFORE BREAK 		$\frac{9.5}{2.1}$	$\frac{12}{2.7}$	$\frac{0.17}{6.7}$	$\frac{1.7}{.067}$	250
GL**05D GL**35D	SLOW ACTING 		$\frac{9.5}{2.1}$	$\frac{12}{2.7}$	$\frac{0.17}{6.7}$	$\frac{1.7}{.067}$	250
GL**06D GL**36D	SLOW ACTING 		$\frac{9.5}{2.1}$	$\frac{12}{2.7}$	$\frac{0.17}{6.7}$	$\frac{1.7}{.067}$	250
GL**20D GL**22D GL**24D GL**32D	SNAP ACTION CONTACTS DOUBLE POLE 		$\frac{9.5}{2.1}$	$\frac{16.4}{3.7}$	$\frac{0.17}{6.7}$	$\frac{1.7}{.067}$	250
GL**21D GL**25D GL**28D GL**31D	STEP 1 STEP 2 SNAP ACTION CONTACTS DOUBLE POLE SEQUENTIAL 		$\frac{9.5}{2.1}$	N/A	$\frac{0.17}{6.7}$	$\frac{1.7}{.067}$	250

FIGURE 14B, TOP ROLLER LEVER HEAD WITH CAM ACTUATION

CATALOG LISTING	CONTACT BLOCK DIAGRAM	NOMINAL TRAVELS AND RELATED TERMINALS ■ - CONTACT CLOSED, □ - CONTACT OPEN, ▨ - CONTACT CLOSED DIFFERENTIAL TRAVEL, ** POSITIVE OPENING TO IEC 947-5-1	MAXIMUM OPERATING FORCE $\frac{N}{LB}$	MAXIMUM DISCONNECT FORCE $\frac{N}{LB}$	MAX OPERATE VEL $\frac{M/S}{IN/S}$	MIN OPERATE VEL $\frac{M/S}{IN/S}$	MAX OPERATE FREQUENCY OPS/MIN
GL**01D GL**07D	SNAP - ACTION CONTACTS SINGLE POLE 		$\frac{5.5}{1.2}$	$\frac{7.0}{1.6}$	$\frac{0.29}{11.4}$	$\frac{2.9}{.11}$	250
GL**03D GL**33D	SLOW ACTING BREAK BEFORE MAKE 		$\frac{5.5}{1.2}$	$\frac{7.0}{1.6}$	$\frac{0.29}{11.4}$	$\frac{2.9}{.11}$	250
GL**04D GL**34D	SLOW ACTING MAKE BEFORE BREAK 		$\frac{5.5}{1.2}$	$\frac{9.6}{2.2}$	$\frac{0.29}{11.4}$	$\frac{2.9}{.11}$	250
GL**05D GL**35D	SLOW ACTING 		$\frac{5.5}{1.2}$	$\frac{7.0}{1.6}$	$\frac{0.29}{11.4}$	$\frac{2.9}{.11}$	250
GL**06D GL**36D	SLOW ACTING 		$\frac{5.5}{1.2}$	$\frac{7.0}{1.6}$	$\frac{0.29}{11.4}$	$\frac{2.9}{.11}$	250
GL**20D GL**22D GL**24D GL**32D	SNAP ACTION CONTACTS DOUBLE POLE 		$\frac{5.5}{1.2}$	$\frac{7.0}{1.6}$	$\frac{0.29}{11.4}$	$\frac{2.9}{.11}$	250
GL**21D GL**25D GL**28D GL**31D	STEP 1 STEP 2 SNAP ACTION CONTACTS DOUBLE POLE SEQUENTIAL 		$\frac{5.5}{1.2}$	N/A	$\frac{0.29}{11.4}$	$\frac{2.9}{.11}$	250

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**GL SERIES CHART 1**

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DESIGN UNITS:  WEIGHT

NO. PLACES	TOL.	NO. PLACES	TOL.	NO. PLACES	TOL.
ONE PLACES	±.04	TWO PLACES	±.01	THREE PLACES	±.005
FOUR PLACES	±.0025	FIVE PLACES	±.0015	SIX PLACES	±.001

THIRD ANGLE PROJECTION

SCALE: -

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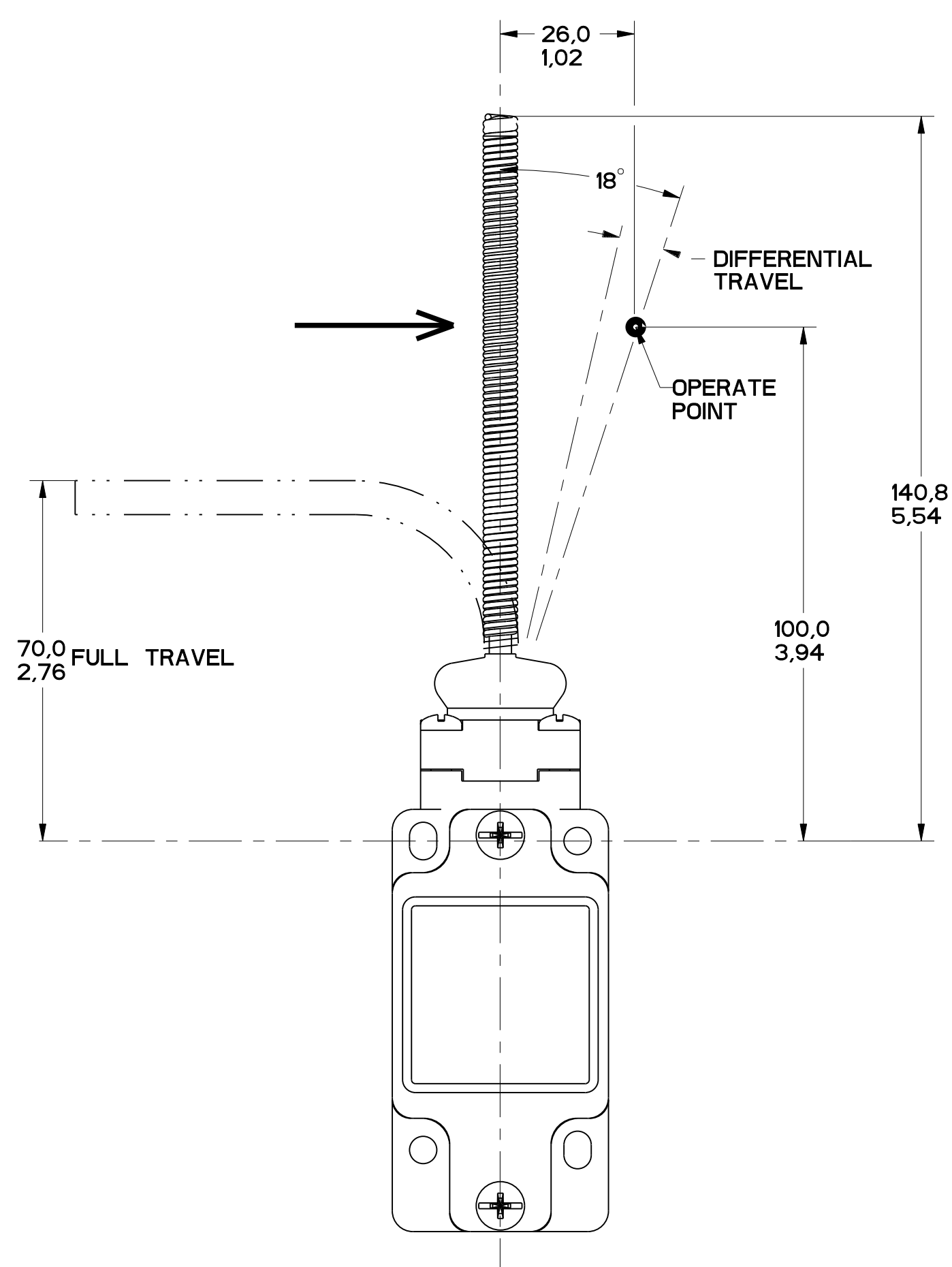


FIGURE 15

MGL SERIES CHART 1  
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 DATE: 03/18/83

REV	DESCRIPTION	DATE	BY	CHK
1	ISSUE	02/23/79	CMH	
2	REVISION	07/16/80	CMH	
3	REVISION	03/12/81	CMH	
4	REVISION	01/18/83	CMH	

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DESIGN UNITS: <input checked="" type="checkbox"/> SI METRIC <input type="checkbox"/> US CUSTOMARY		TOLERANCES: DO NOT SCALE PRINT APPLY TO DESIGN UNITS. CONCESSIONS ARE ONLY FOR REFERENCE, UNLESS NOTED. TOLERANCES ARE:	
NO PLACES	±0,05	ONE PLACE	±0,10
TWO PLACES	±0,02	TWO PLACES	±0,05
THREE PLACES	±0,01	THREE PLACES	±0,02
ANGLES	±2'	US CUSTOMARY	
WEIGHT			

FIGURE 15, CAT WISKER HEAD, ANGULAR ACTUATION

CATALOG LISTING	CONTACT BLOCK DIAGRAM	NOMINAL TRAVELS AND RELATED TERMINALS ■ - CONTACT CLOSED, □ - CONTACT OPEN, ▨ - CONTACT CLOSED DIFFERENTIAL TRAVEL	MAXIMUM OPERATING TORQUE $\frac{N \cdot m}{LB \cdot IN}$	MAXIMUM DISCONNECT TORQUE $\frac{N \cdot m}{LB \cdot IN}$	MAX OPERATE DEGREE/S	MIN OPERATE VELOCITY DEGREE/S	MAX OPERATE RATE CYCLES/MIN
GL**01K GL**07K	SNAP - ACTION CONTACTS SINGLE POLE 	 21-22 18° 13-14 8° DIFFERENTIAL TRAVEL	$\frac{0.1}{.9}$	N/A	360	8	100
GL**03K GL**33K	SLOW ACTING BREAK BEFORE MAKE 	 21-22 18° 13-14 25	$\frac{0.1}{.9}$	N/A	360	8	100
GL**04K GL**34K	SLOW ACTING MAKE BEFORE BREAK 	 21-22 25° 13-14 18°	$\frac{0.1}{.9}$	N/A	360	8	100
GL**05K GL**35K	SLOW ACTING 	 13-14 25° 23-24	$\frac{0.1}{.9}$	N/A	360	8	100
GL**06K GL**36K	SLOW ACTING 	 11-12 18° 21-22	$\frac{0.1}{.9}$	N/A	360	8	100
GL**20K GL**22K GL**24K GL**32K	SNAP ACTION CONTACTS DOUBLE POLE 	 11-12, 21-22 18° 13-14, 23-24 8° DIFFERENTIAL TRAVEL	$\frac{0.1}{.9}$	N/A	360	8	100

FIGURE 15, CAT WISKER HEAD, SIDE ACTUATION AT 100mm

CATALOG LISTING	CONTACT BLOCK DIAGRAM	NOMINAL TRAVELS AND RELATED TERMINALS ■ - CONTACT CLOSED, □ - CONTACT OPEN, ▨ - CONTACT CLOSED DIFFERENTIAL TRAVEL	MAXIMUM OPERATING FORCE $\frac{N}{LB}$	MAXIMUM DISCONNECT FORCE $\frac{N}{LB}$	MAX OPERATE VEL $\frac{m/s}{in/s}$	MIN OPERATE VEL $\frac{mm/s}{in/s}$	MAX OPERATE FREQUENCY OPS/MIN
GL**01K GL**07K	SNAP - ACTION CONTACTS SINGLE POLE 	 21-22 26 13-14 12 DIFFERENTIAL TRAVEL	$\frac{1.3}{.3}$	N/A	$\frac{.5}{19.7}$	$\frac{11}{.43}$	100
GL**03K GL**33K	SLOW ACTING BREAK BEFORE MAKE 	 21-22 26.5 38.1 13-14	$\frac{1.3}{0.3}$	N/A	$\frac{.5}{19.7}$	$\frac{11}{.43}$	100
GL**04K GL**34K	SLOW ACTING MAKE BEFORE BREAK 	 21-22 26.5 38.1 13-14	$\frac{1.3}{0.3}$	N/A	$\frac{.5}{19.7}$	$\frac{11}{.43}$	100
GL**05K GL**35K	SLOW ACTING 	 21-22 38.1 13-14	$\frac{1.3}{0.3}$	N/A	$\frac{.5}{19.7}$	$\frac{11}{.43}$	100
GL**06K GL**36K	SLOW ACTING 	 11-12 26.5 21-22	$\frac{1.3}{0.3}$	N/A	$\frac{.5}{19.7}$	$\frac{11}{.43}$	100
GL**20K GL**22K GL**24K GL**32K	SNAP ACTION CONTACTS DOUBLE POLE 	 11-12, 21-22 26 13-14, 23-24 12 DIFFERENTIAL TRAVEL	$\frac{1.3}{0.3}$	N/A	$\frac{.5}{19.7}$	$\frac{11}{.43}$	100

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 1 0000401  
 2 00003  
 3 0002986  
 4 0004884  
 5 0023759  
 6 0710586  
 7 0037216  
 8 001888  
 9 0043629  
 10 00000  
 11 0048605  
 12 001889

THIRD ANGLE PROJECTION

SCALE: -

DO NOT SCALE PRINT

TOLERANCES

APPLY TO DESIGN UNITS. CONVERSIONS ARE ONLY FOR REFERENCE. UNLESS NOTED, TOLERANCES ARE:

	DIM	TOL.	DIM	TOL.
NO PLACES	X	12.00	X	0.01/0.5
ONE PLACE	X	0.40/0.06	X	0.30/0.05
TWO PLACES	X	0.15/0.008	X	0.13/0.05
THREE PLACES	X	.02	X	

DESIGN UNITS:  SI METRIC  US CUSTOMARY

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