



GLAA20A1A



Actual product appearance may vary.

Global Limit Switches Series GLS: Side Rotary With Roller - Standard, 2NC 2NO DPDT Snap Action, 0.5 in - 14NPT conduit

Features

- Designed to IEC standard for world-wide applications
- UL, CSA, and CE
- International conduit sizes
- Direct PLC interface compatible (two circuit)
- Modular construction reduces maintenance parts costs
- Designed for ease of installation
- Variety of basic switch versions
- Wide choice of actuators

Potential Applications

- Machine tools: metal fabrication equipment, presses, transfer lines and special machinery
- Material handling equipment: conveyors, elevators, cranes, and hoists
- Packaging machinery and process equipment
- Textile machinery
- Construction machinery and equipment, vehicles and lift trucks

Description

The GLS series limit switches are specifically designed for world-wide applications and are supported by Honeywell global resources for sale and after sale service.

| Product Specifications | |
|----------------------------|--------------------------------|
| Availability | Global |
| Operating Force (O.F.) | 0,330 N m [2.90 in lb] |
| Pretravel (P.T.) | 26° |
| Overtravel (O.T.) | 59° |
| Differential Travel (D.T.) | 12° |
| Product Type | EN50041/47 Global Limit Switch |
| Actuator | Side Rotary |
| Lever Style | Roller - Standard |
| Circuitry | 2NC 2NO DPDT Snap Action |
| Ampere Rating | 10 A (Thermal) |
| Supply Voltage | 600 Vac and 250 Vdc max. |
| Housing Material | Zinc Die-Cast |

| | |
|--------------------------------|---|
| Termination Type | 0.5 in - 14NPT conduit |
| Housing Type | EN 50041 |
| Series Name | GLS DIN |
| Shock | 50 g per IEC 68-2-27c (w/o Actuator) |
| Vibration | 10 g per IEC 68-2-6 (w/o Actuator) |
| Sealing | NEMA 1, 4, 12, 13 IP67 |
| Approvals | UL, CSA, CE |
| CSA File # | LR94369-3 |
| UL File # | E37138 & E157416 |
| Mechanical Life | 15 million |
| Operating Temperature Range | -25 °C to 85 °C [-13 °F to 185 °F] |
| Comment | Roller Material: Plastic |
| Agency Approvals and Standards | IEC 947-5-1, EN60947-5-1, UL508 |
| UNSPSC Code | 302119 |
| UNSPSC Commodity | 302119 Switches and controls and relays |
| Sealed | Industrial |
| Operating Position (O.P.) | 26° |

SIDE ROTARY

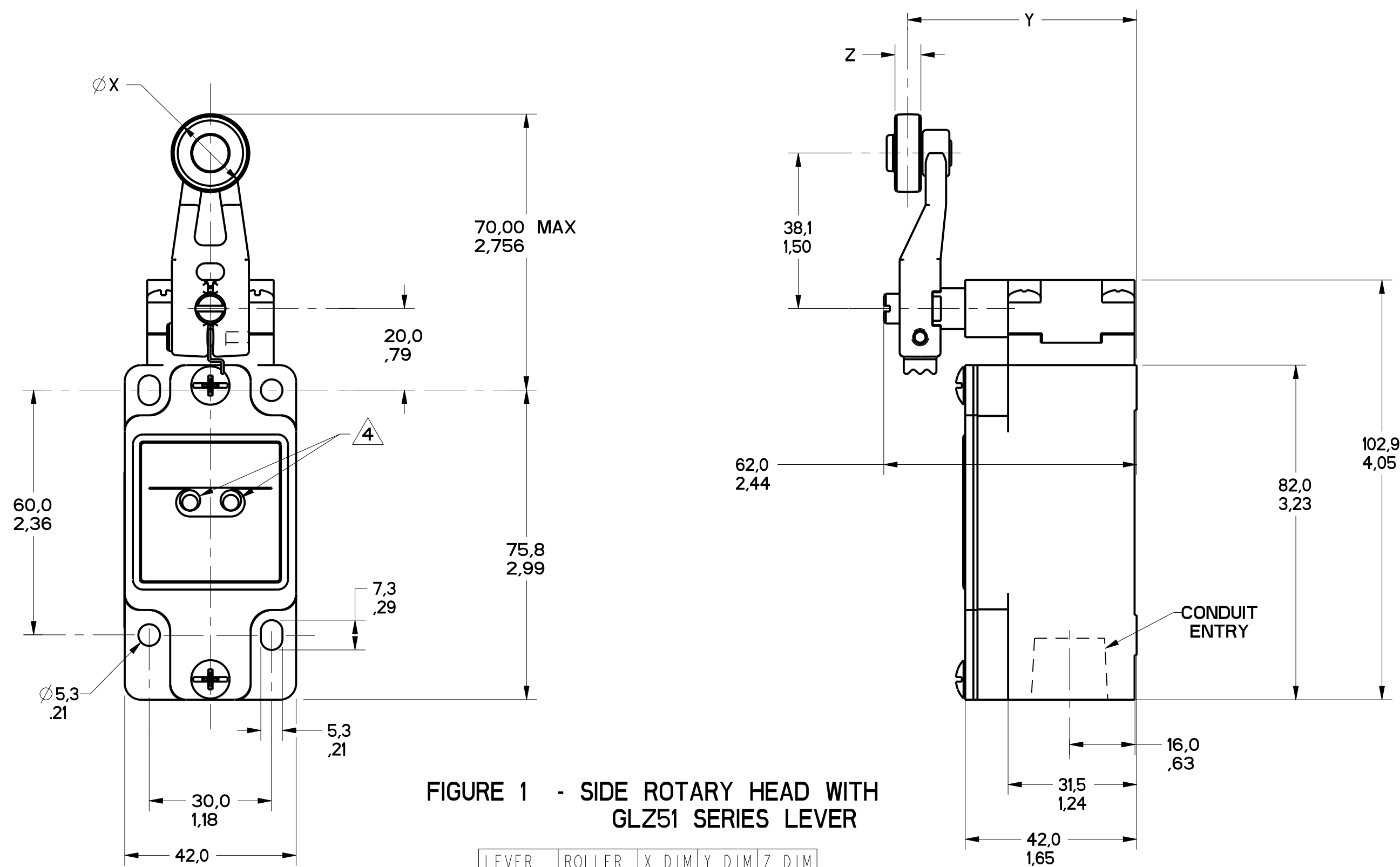


FIGURE 1 - SIDE ROTARY HEAD WITH GLZ51 SERIES LEVER

| 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 |

GLZ54J: 200,00 / 7.870 MAX
GLZ54K: 140,00 / 5.510 MAX
ALUMINUM ROD

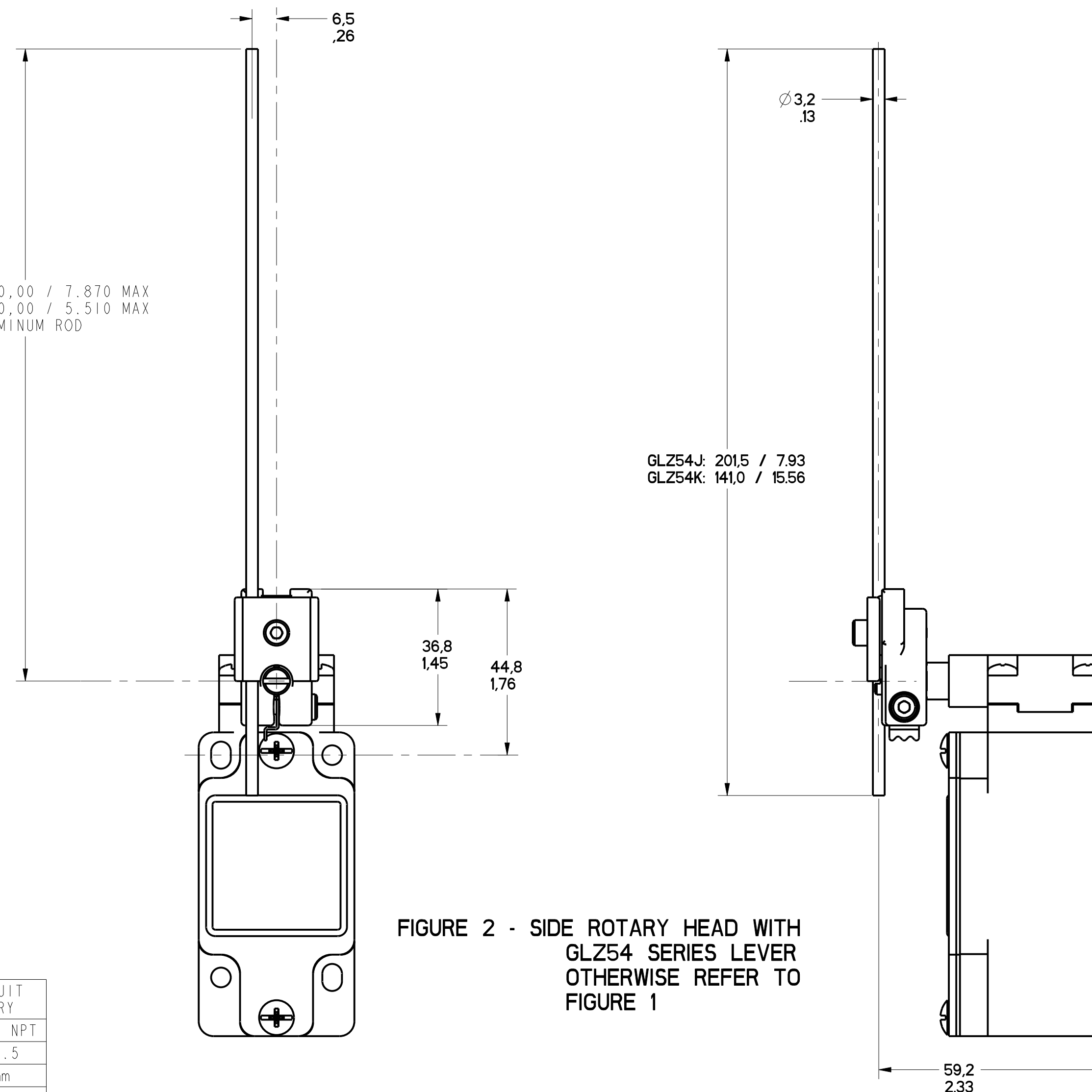


FIGURE 2 - SIDE ROTARY HEAD WITH GLZ54 SERIES LEVER OTHERWISE REFER TO FIGURE 1

| 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 | AC15 Ie | O300 Ue | DC13 Ie |
| (VOLTS) | (AMPS) | (VOLTS) | (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 |

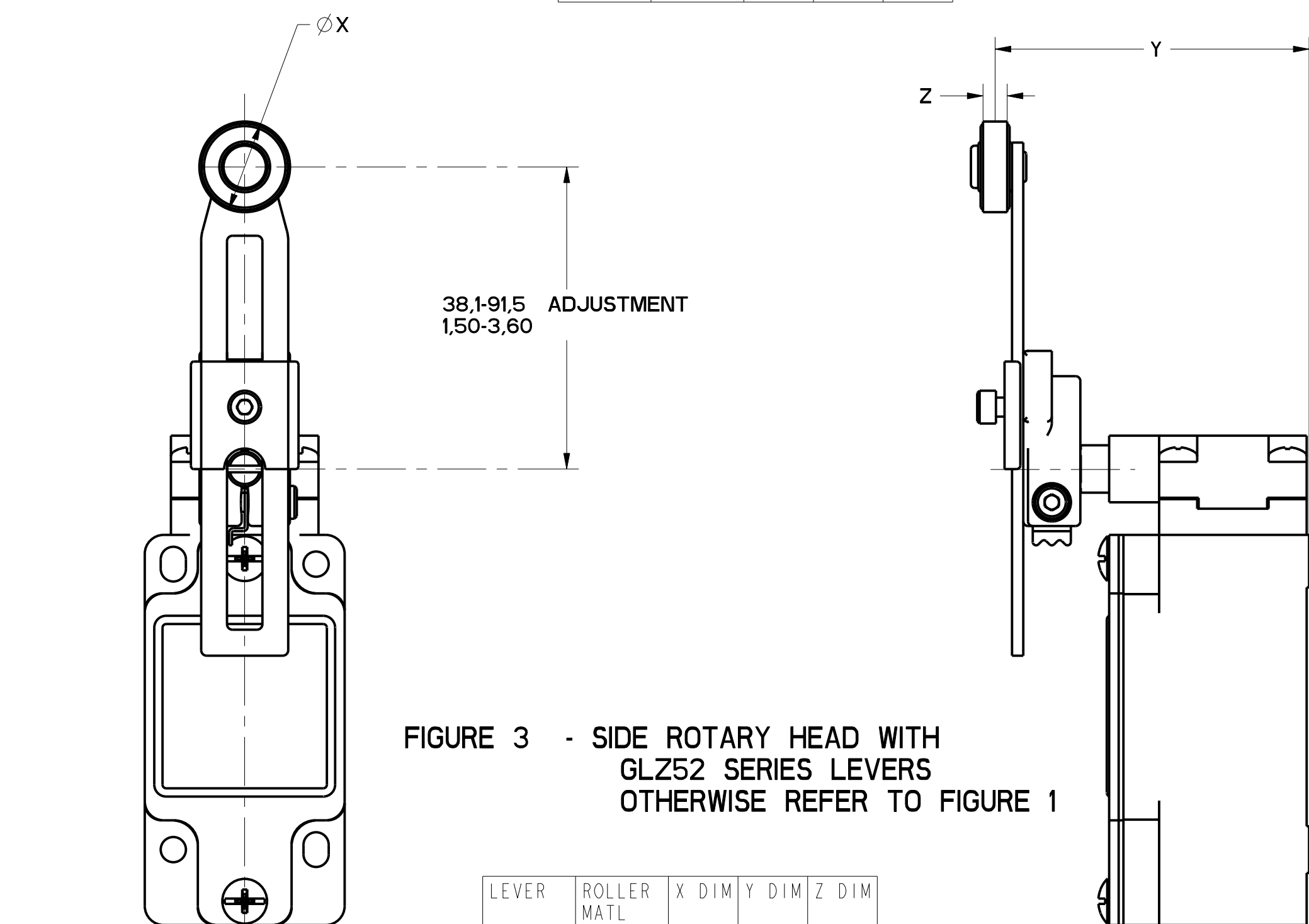


FIGURE 3 - SIDE ROTARY HEAD WITH GLZ52 SERIES LEVERS OTHERWISE REFER TO FIGURE 1

| 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 |

MGL SERIES CHART 1
 DRAWING NUMBER: 12
 PAGE: 1 OF 13
 RELEASE NO.: PR-201782
 APPROVALS: [Signatures]
 PTC/CAD: [Signature]
 S.A.V. 2/MAR/06
 DWM: 07AUG/06
 08FEB/08
 08FEB/08

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SWITCH, ENCLOSED

CATALOG LISTING
GL SERIES CHART 1

ANSI Y14.5M-1982 APPLIES

THIRD ANGLE PROJECTION

SCALE: FULL

DO NOT SCALE PRINT

TOLERANCES

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

| | MM | IN | MM | IN |
|--------------|--------|---------|--------|---------|
| NO PLACES | | | | |
| ONE PLACE | ±0.04 | ±0.0015 | ±0.01 | ±0.0005 |
| TWO PLACES | ±0.01 | ±0.0006 | ±0.005 | ±0.0002 |
| THREE PLACES | ±0.002 | ±0.0002 | ±0.002 | ±0.0001 |
| ANGLES | ±2° | | | |

DESIGN UNITS: SI METRIC US CUSTOMARY

WEIGHT

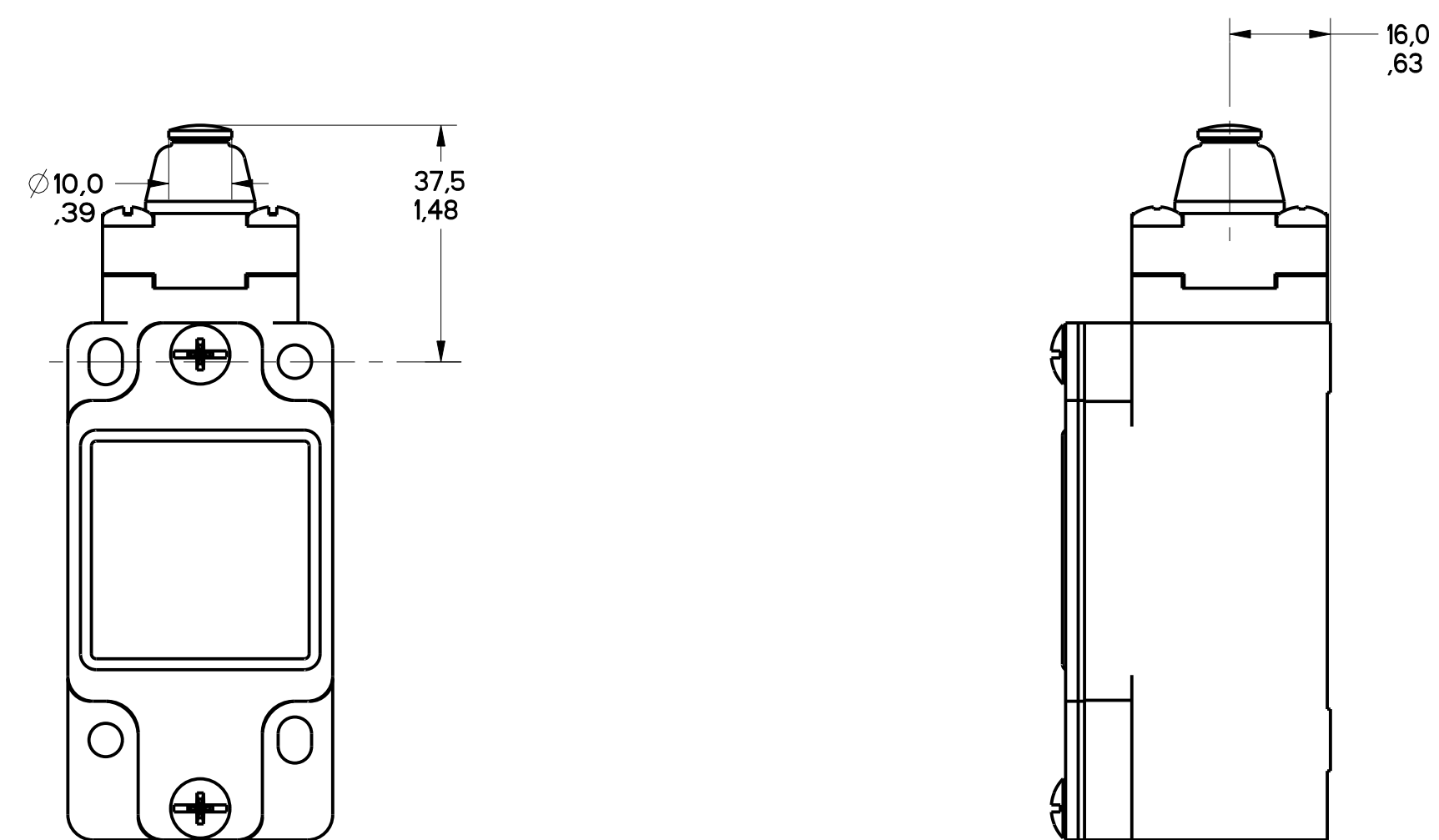


FIGURE 4 - TOP PIN PLUNGER HEAD
OTHERWISE REFER TO
FIGURE 1

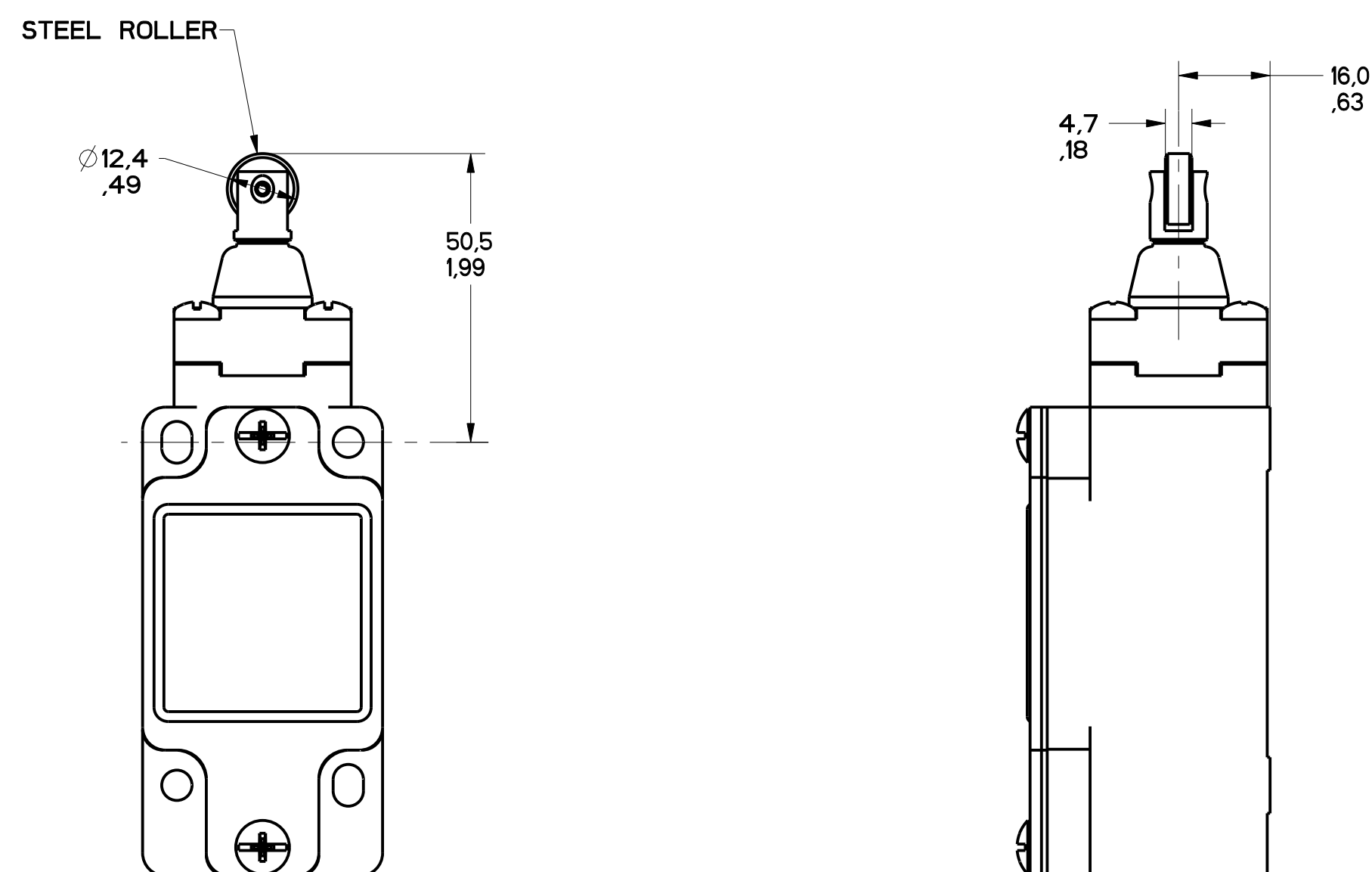


FIGURE 5 - TOP ROLLER PLUNGER HEAD
OTHERWISE REFER TO
FIGURE 1

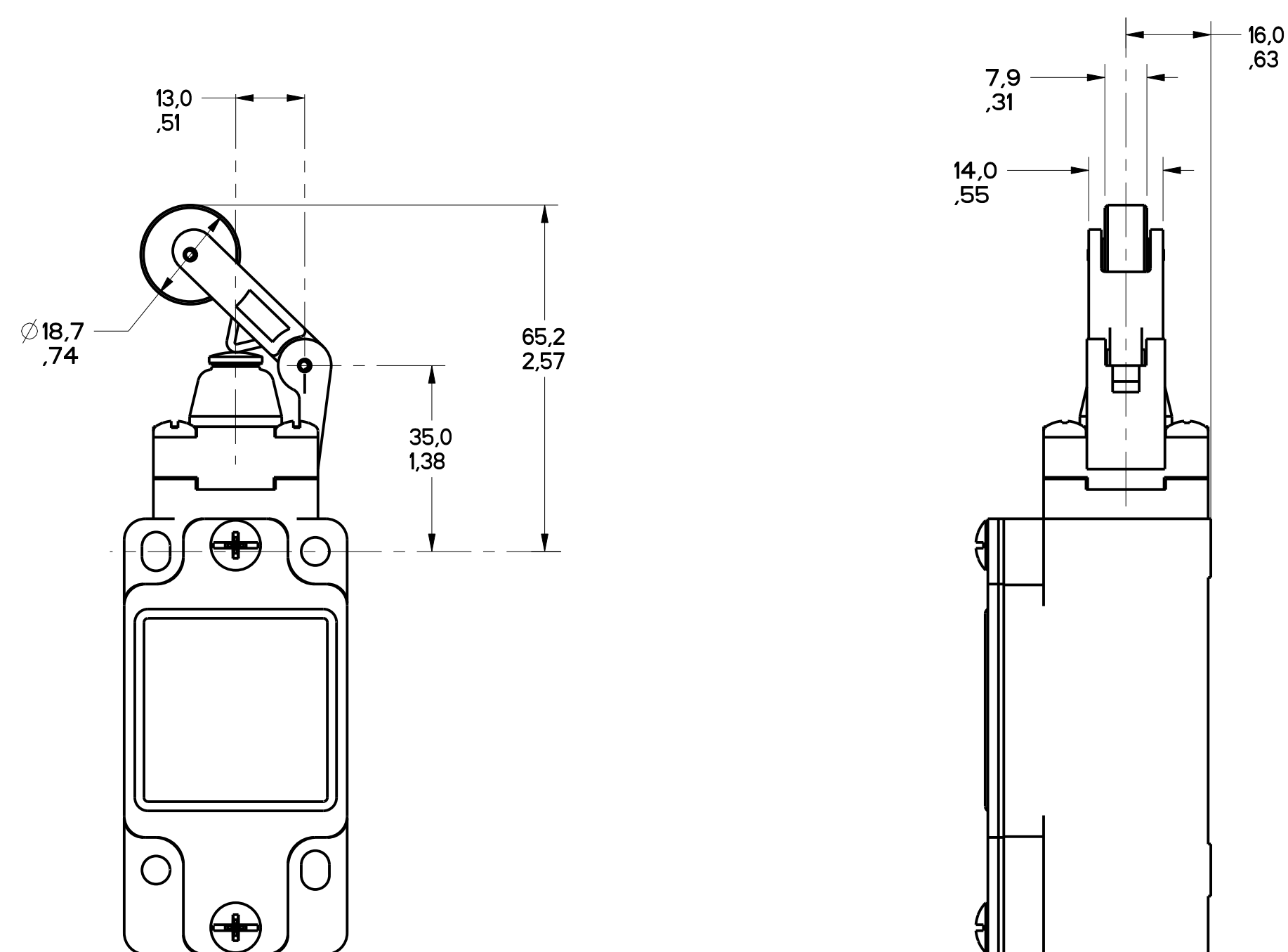


FIGURE 6 - TOP LEVER HEAD,
OTHERWISE REFER TO
FIGURE 1

MGL SERIES CHART 1
 DRAWING NUMBER: 2 OF 13
 RELEASE NO. PR-20782
 REPLACES: MDV
 CHECK: BLP
 CHECK: G.H.
 26 AUG 83
 P.T.C./CAD
 W.L.S.

| | | | |
|-----|-------|-----|------|
| REV | DATE | BY | CHKD |
| A | 01/88 | MDV | MDV |
| B | 02/88 | MDV | MDV |
| C | 02/88 | MDV | MDV |
| D | 02/88 | MDV | MDV |
| E | 02/88 | MDV | MDV |
| F | 02/88 | MDV | MDV |
| G | 02/88 | MDV | MDV |
| H | 02/88 | MDV | MDV |
| I | 02/88 | MDV | MDV |
| J | 02/88 | MDV | MDV |
| K | 02/88 | MDV | MDV |
| L | 02/88 | MDV | MDV |
| M | 02/88 | MDV | MDV |
| N | 02/88 | MDV | MDV |
| O | 02/88 | MDV | MDV |
| P | 02/88 | MDV | MDV |
| Q | 02/88 | MDV | MDV |
| R | 02/88 | MDV | MDV |
| S | 02/88 | MDV | MDV |
| T | 02/88 | MDV | MDV |
| U | 02/88 | MDV | MDV |
| V | 02/88 | MDV | MDV |
| W | 02/88 | MDV | MDV |
| X | 02/88 | MDV | MDV |
| Y | 02/88 | MDV | MDV |
| Z | 02/88 | MDV | MDV |

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SWITCH, ENCLOSED

GL SERIES CHART 1

DESIGN UNITS: SI METRIC US CUSTOMARY

WEIGHT

| | | | | |
|--------------|--------|--------|--------|--------|
| NO. PLACES | 1/4 | 1/2 | 3/4 | 1 |
| ONE PLACE | 0.0015 | 0.002 | 0.0025 | 0.003 |
| TWO PLACES | 0.002 | 0.0025 | 0.003 | 0.0035 |
| THREE PLACES | 0.0025 | 0.003 | 0.0035 | 0.004 |

THIRD ANGLE PROJECTION

SCALE: FULL

DO NOT SCALE PRINT

TOLERANCES

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

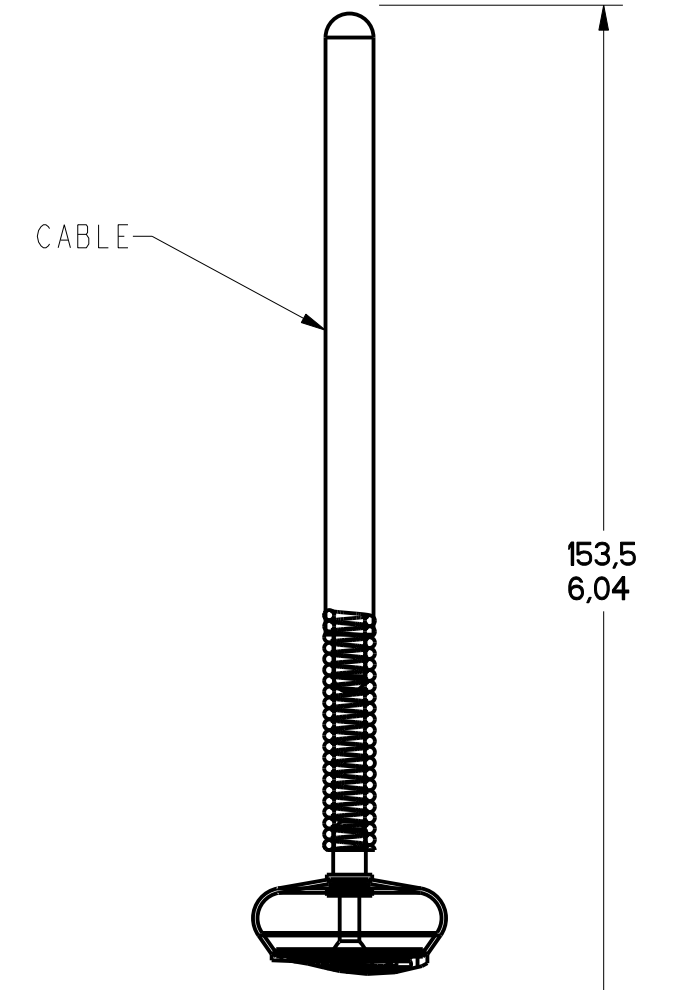
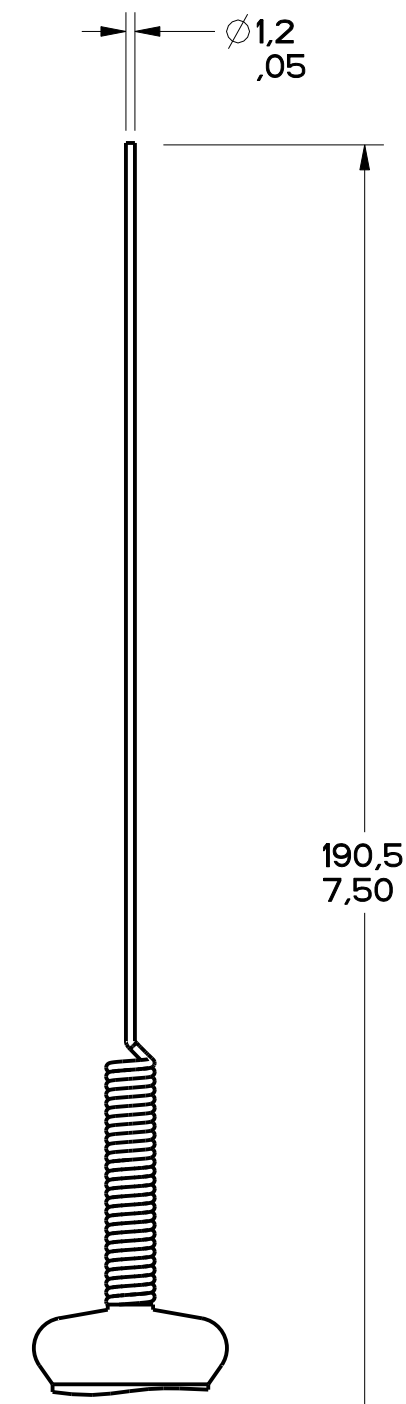
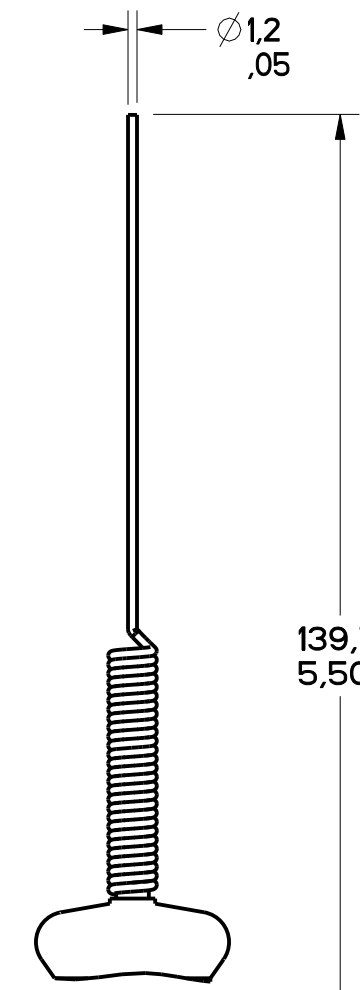
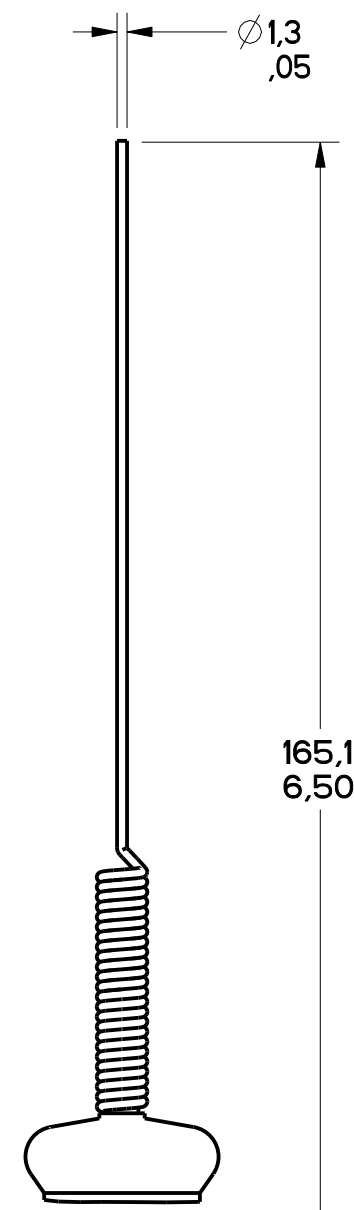
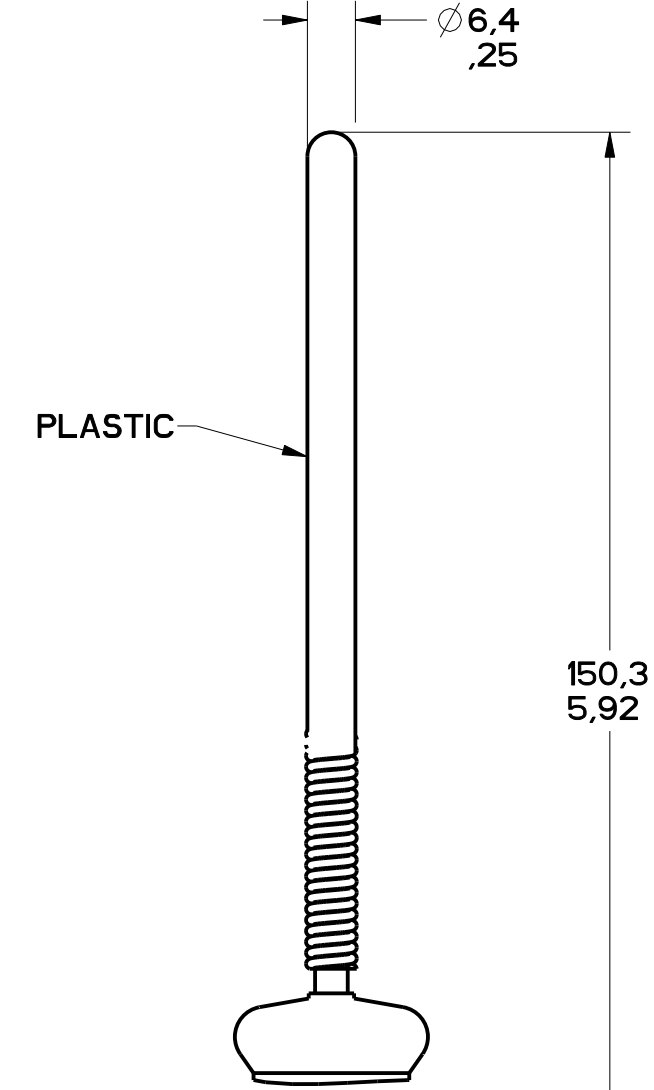
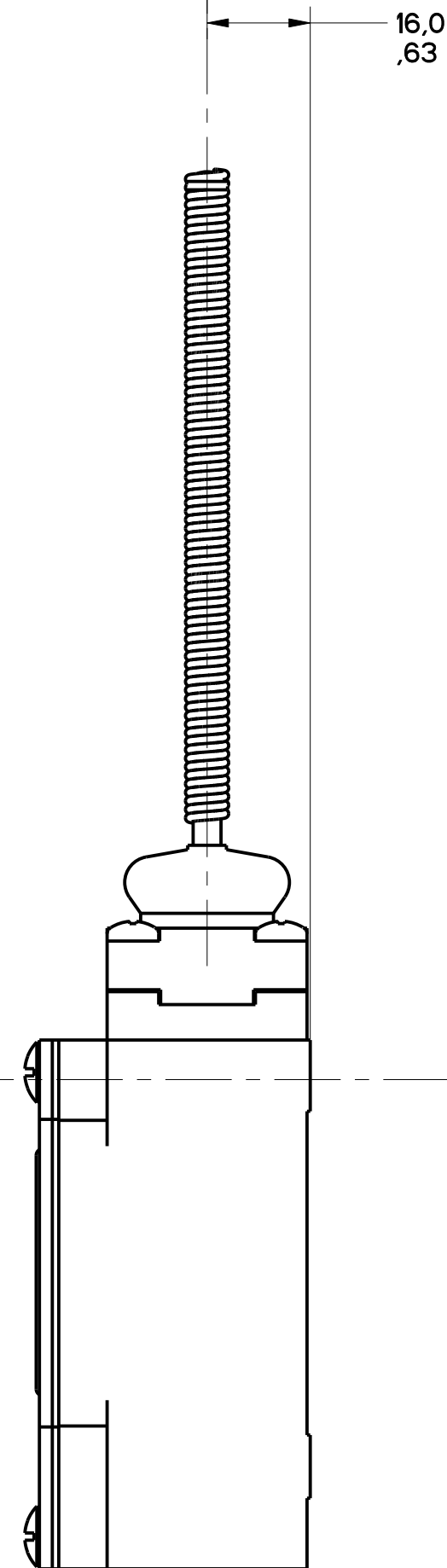
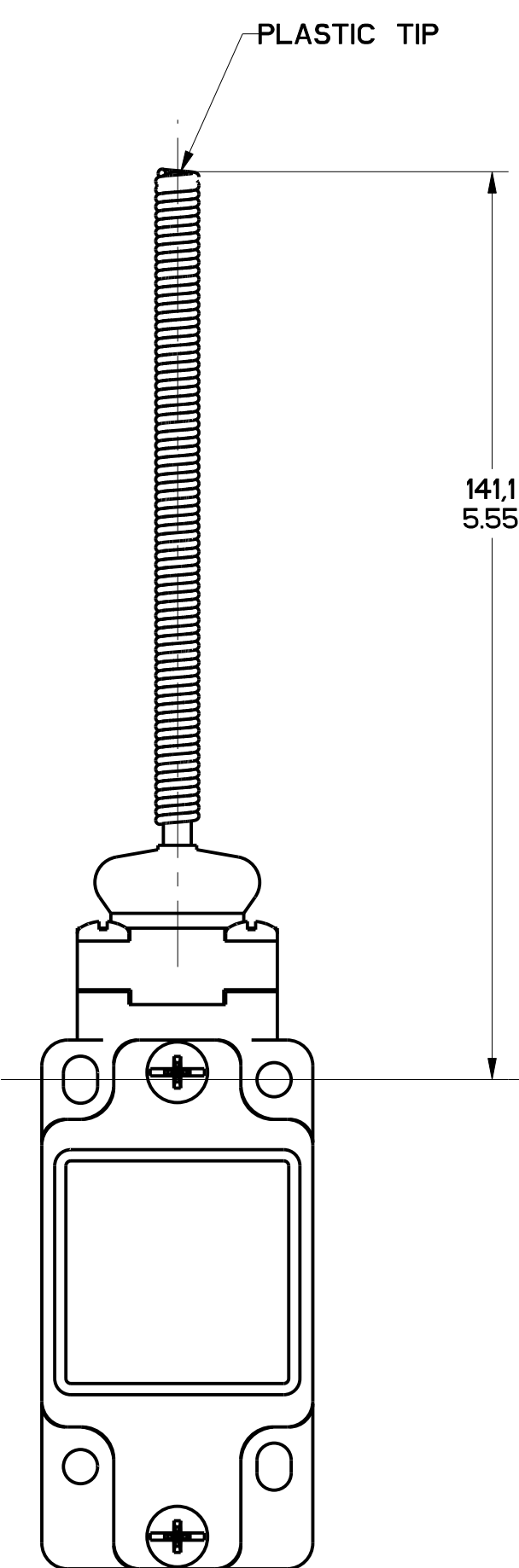


FIGURE 7A -
WOBBLE HEAD,
PLASTIC ACTUATOR,
OTHERWISE SAME AS FIGURE 7

FIGURE 7B -
WOBBLE HEAD
STAINLESS STEEL SPRING
ACTUATOR, OTHERWISE
SAME AS FIGURE 7

FIGURE 7C -
CAT WHISKER ACTUATOR,
STAINLESS STEEL SPRING,
OTHERWISE SAME AS FIGURE 7

FIGURE 7D -
CAT WHISKER ACTUATOR,
STAINLESS STEEL
SPRING, OTHERWISE
SAME AS FIGURE 7

FIGURE 7E -
CABLE WOBBLE
ACTUATOR, OTHERWISE
SAME AS FIGURE 7

FIGURE 7 - WOBBLE HEAD, AND CAT WISKER HEAD
COIL ACTUATOR,
OTHERWISE REFER TO
FIGURE 1

MGL SERIES CHART 1
 DRAWING NUMBER 3 OF 13
 RELEASE NO. PR-21557
 REPLACES
 ISSUE 12
 P.T.C./CAD
 S.A.V. MAY 96
 CHECKED BY
 APPROVED BY
 DATE
 202747
 349301
 0000401
 002986
 0023759
 0037216
 081608

| | | | |
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| DESIGN UNITS | | GL SERIES CHART 1 | |
| WEIGHT | | SI METRIC <input checked="" type="checkbox"/> US CUSTOMARY <input type="checkbox"/> | |

| | | | |
|--|-------|--------|--------|
| THIRD ANGLE PROJECTION | | | |
| SCALE FULL | | | |
| DO NOT SCALE PRINT | | | |
| TOLERANCES | | | |
| APPLY TO DESIGN UNITS. CONVERSIONS ARE ONLY FOR REFERENCE. UNLESS NOTED, TOLERANCES ARE: | | | |
| NO PLACES | X | 0.00 | 0.00 |
| ONE PLACE | X.1 | 0.01 | 0.01 |
| TWO PLACES | X.11 | 0.005 | 0.005 |
| THREE PLACES | X.111 | 0.0005 | 0.0005 |
| ANGLES | | ±2° | |

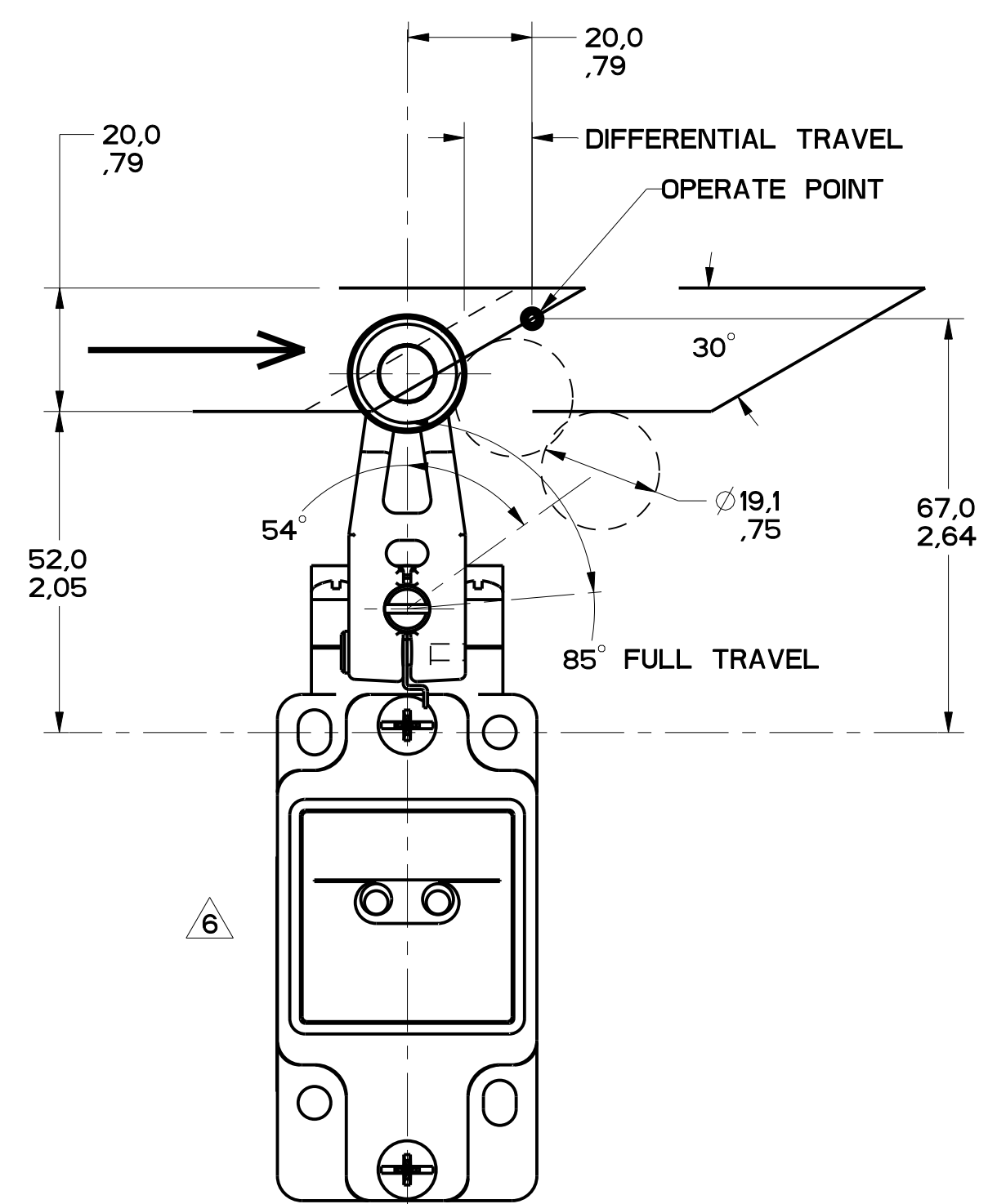


FIGURE 8

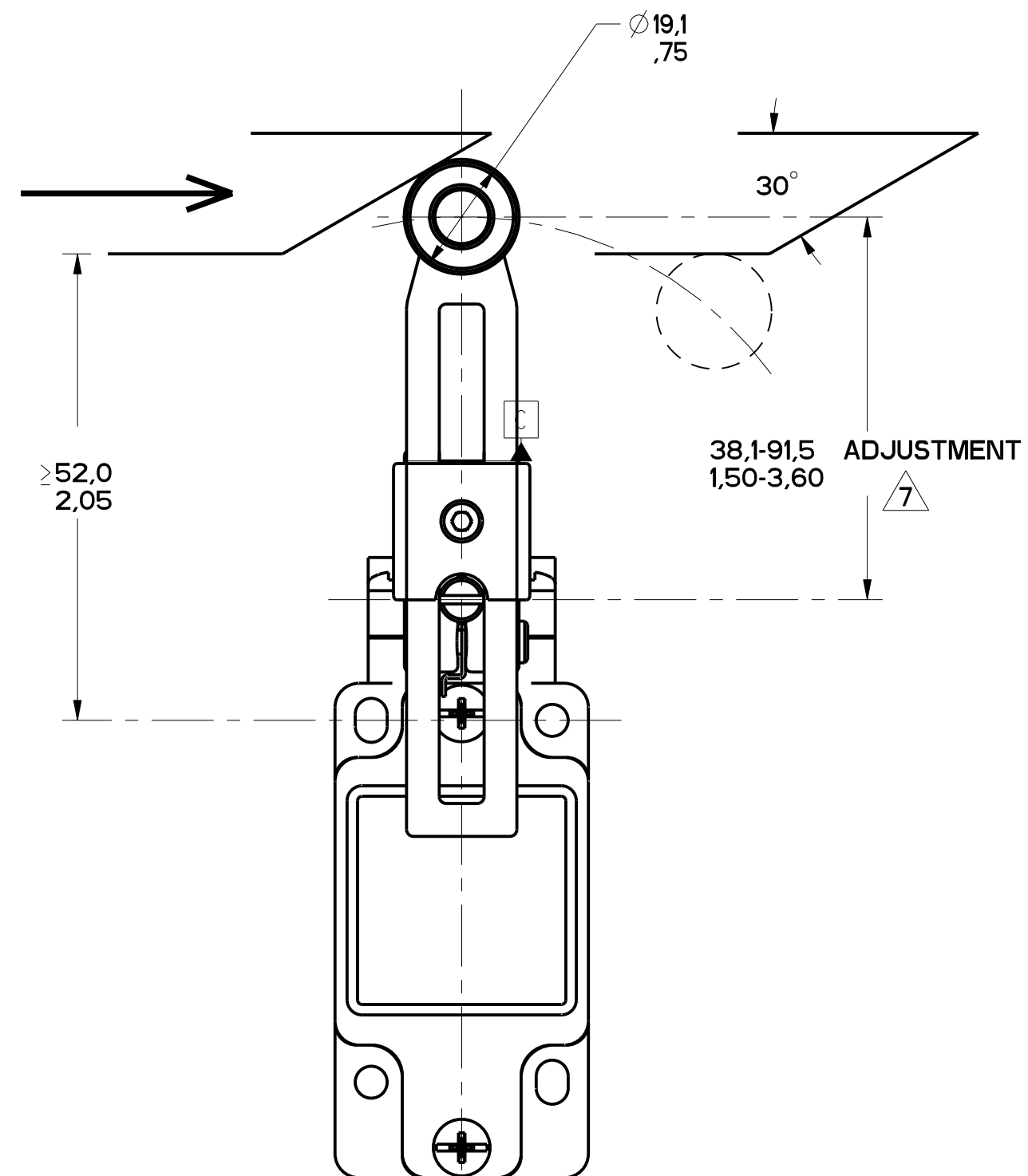


FIGURE 9

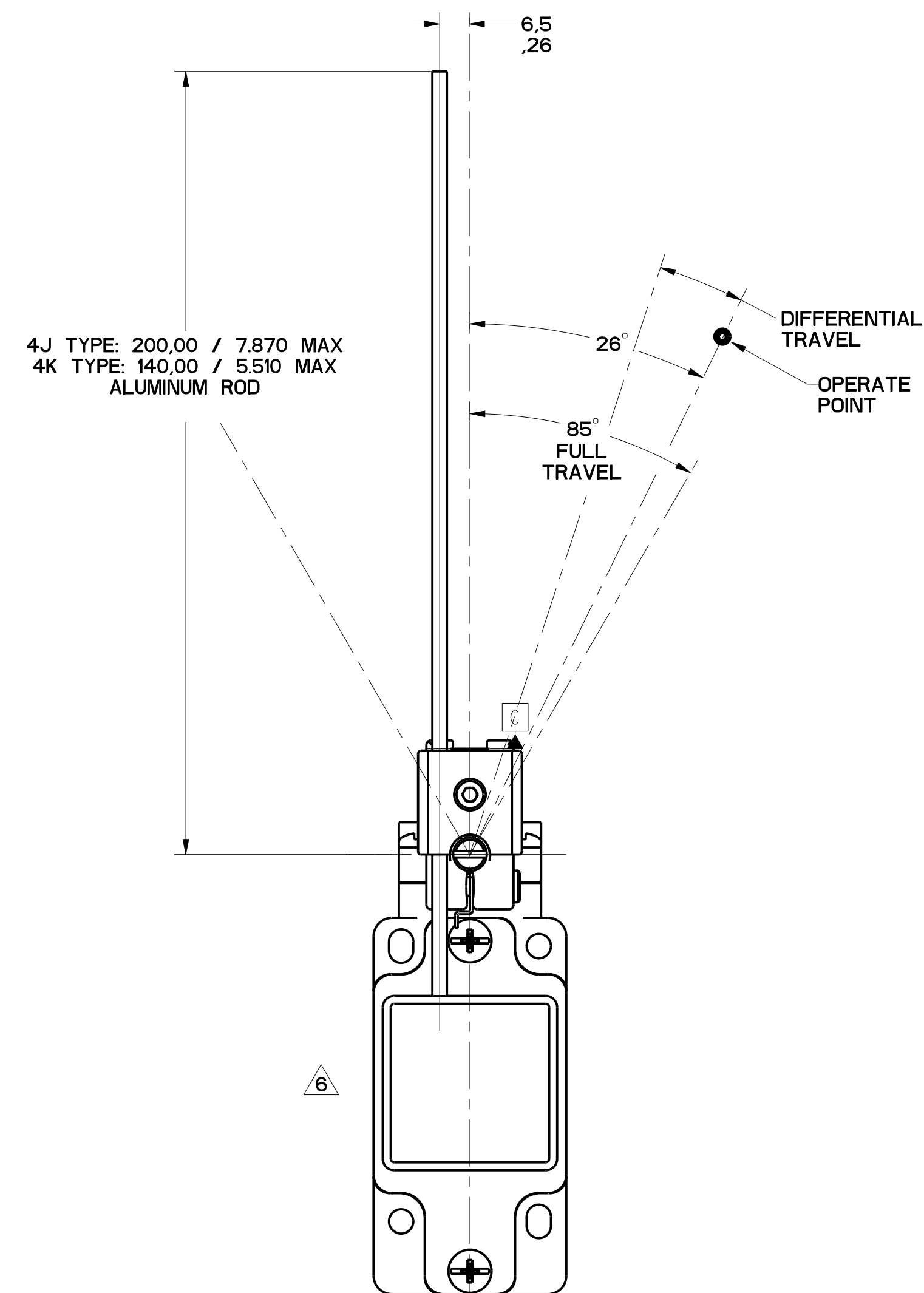


FIGURE 10

MGL SERIES CHART 1
 DRAWING NUMBER: 4 OF 13
 RELEASE NO. PR-20782
 PTC/CAD
 S. A. V. 27 MAR 86
 DVM
 12
 ISSUE
 12
 27 MAR 86
 CO-93181
 200541
 202741
 349501
 0000401
 0002986
 0002759
 00037216
 001588

| | | | |
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| MICRO SWITCH a Honeywell Division | | SWITCH, ENCLOSED | |
| DESIGN UNITS: <input checked="" type="checkbox"/> SI METRIC <input type="checkbox"/> US CUSTOMARY | | GL SERIES CHART 1 | |
| TOLERANCES APPLY TO DESIGN UNITS. CONVERSIONS ARE ONLY FOR REFERENCE, UNLESS NOTED. TOLERANCES ARE: | | THIRD ANGLE PROJECTION FULL DO NOT SCALE PRINT | |
| NO PLACES | X | ±.04 | ±.04 |
| TWO PLACES | X, XX | 0.01, 0.04 | 0.01, 0.05 |
| THREE PLACES | X, XX, XXX | 0.01, 0.04, 0.08 | 0.01, 0.05, 0.10 |
| ANGLES | | ±.2° | |

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

| CATALOG LISTING | CONTACT BLOCK DIAGRAM | NOMINAL TRAVELS AND RELATED TERMINALS DIFFERENTIAL TRAVEL, ** POSITIVE OPENING TO IEC 947-5 | MAXIMUM OPERATING TORQUE N-m LB-IN | MAXIMUM DISCONNECT TORQUE N-m LB-IN | 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 DIFFERENTIAL TRAVEL, ** POSITIVE OPENING TO IEC 947-5 DIMENSIONS IN mm | MAXIMUM OPERATING FORCE N LB | MAXIMUM DISCONNECT FORCE N LB | MAX OPERATE VEL M/S IN/S | MIN OPERATE VEL mm/S IN/S | 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 |

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CATALOG LISTING
MICRO SWITCH a Honeywell Division
SWITCH, ENCLOSED
GL SERIES CHART 1

THIRD ANGLE PROJECTION
SCALE FULL
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 .15 .15 .04 X .1 0.01 .05
ONE PLACE X .1 0.10 .04 X .1 0.10 .05
TWO PLACES X .1X 0.15 .04 X .1X 0.15 .05
THREE PLACES X .1XX 0.15 .04 X .1XX 0.15 .05
ANGLES
DESIGN UNITS SI METRIC US CUSTOMARY
WEIGHT