

# **Honeywell Sensing and Control**

# and Control

### **GLAA20C**



Global Limit Switches Series GLS: Top Roller Plunger, 2NC 2NO DPDT Snap Action, 0.5 in - 14NPT conduit

Actual product appearance may vary.

#### **Features**

- Designed to IEC standard for worldwide 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**

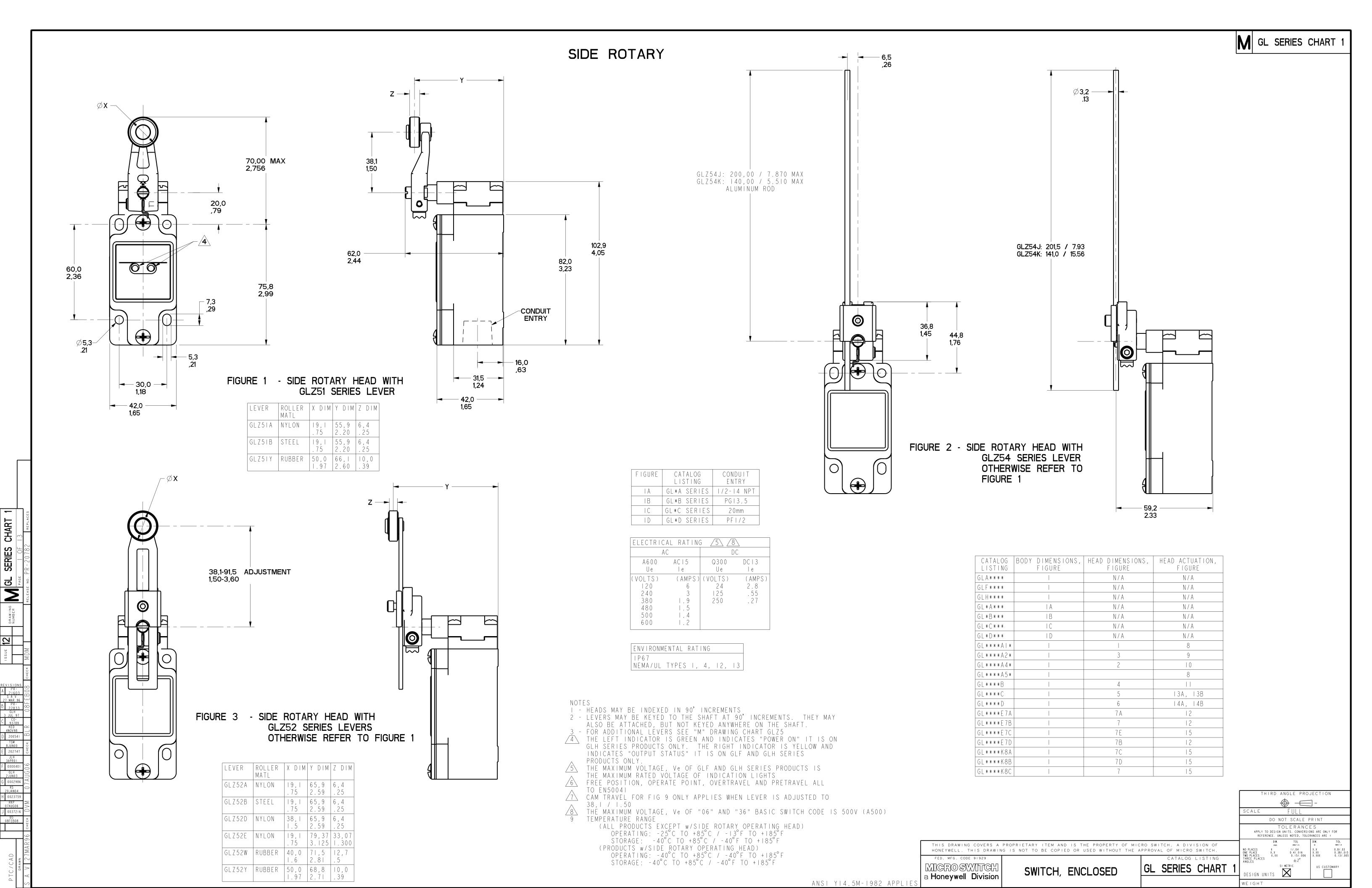
- Machine tools: metal fabrication equipment, presses, transfer lines and special machinery
- Material handling equipment: conveyors, elevators, cranes, and hoists
- Packaging machinery and process equipment
- Textile machinery
- Construction machinery and equipment, vehicles and lift trucks

#### 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.)     | 16,0 N [3.60 lb]               |  |  |  |  |
| Pretravel (P.T.)           | 2,5 mm [0.10 in]               |  |  |  |  |
| Overtravel (O.T.)          | 4,5 mm [0.18 in]               |  |  |  |  |
| Differential Travel (D.T.) | 0,9 mm [0.035 in]              |  |  |  |  |
| Product Type               | EN50041/47 Global Limit Switch |  |  |  |  |
| Actuator                   | Top Roller Plunger             |  |  |  |  |
| Lever Style                | None                           |  |  |  |  |
| 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<br>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]      |
| 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.)      | 48,0 mm [1.89 in]                       |



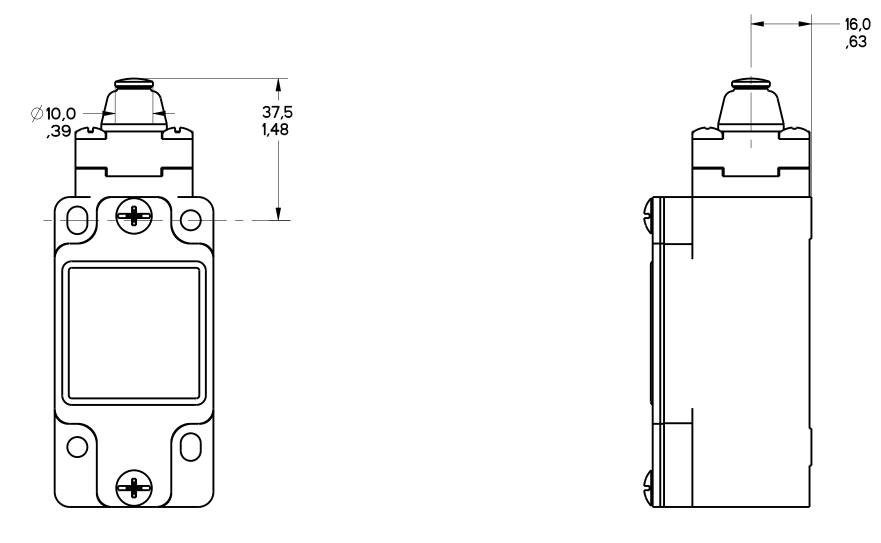
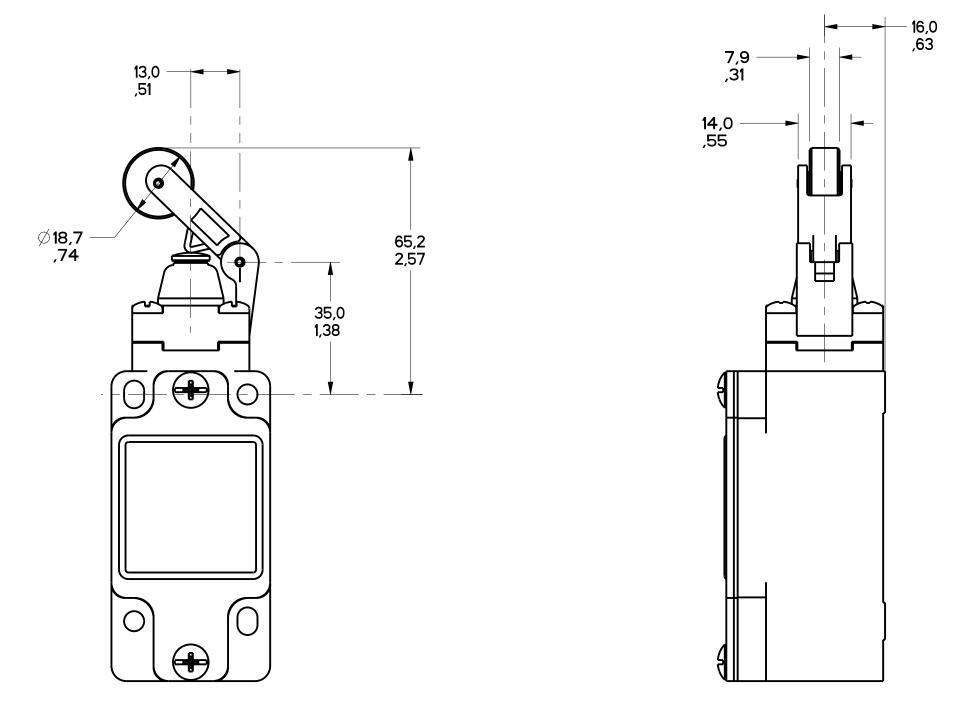


FIGURE 4 - TOP PIN PLUNGER HEAD OTHERWISE REFER TO FIGURE 1



GL SERIES CHART 1

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

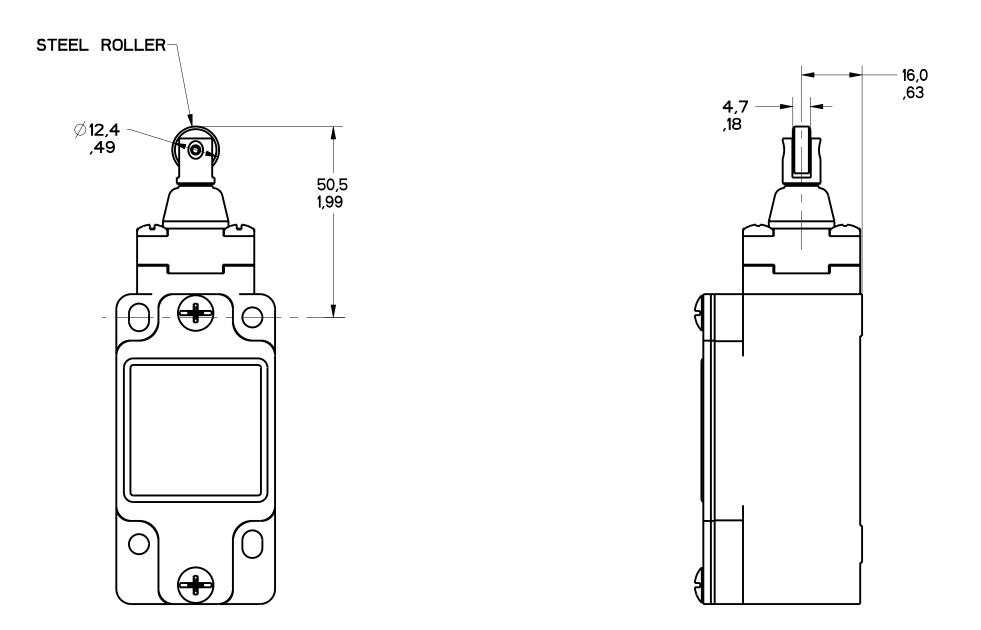


FIGURE 5 - TOP ROLLER PLUNGER HEAD OTHERWISE REFER TO FIGURE 1

ANSI YI4.<u>5M-1982 APPLIES</u>

THIRD ANGLE PROJECTION

SCALE FULL

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SWITCH, ENCLOSED

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THIRD ANGLE PROJECTION

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TOLERANCES ARE:

100 PLACES X 1/1.04 0/1.015

11 METRIC

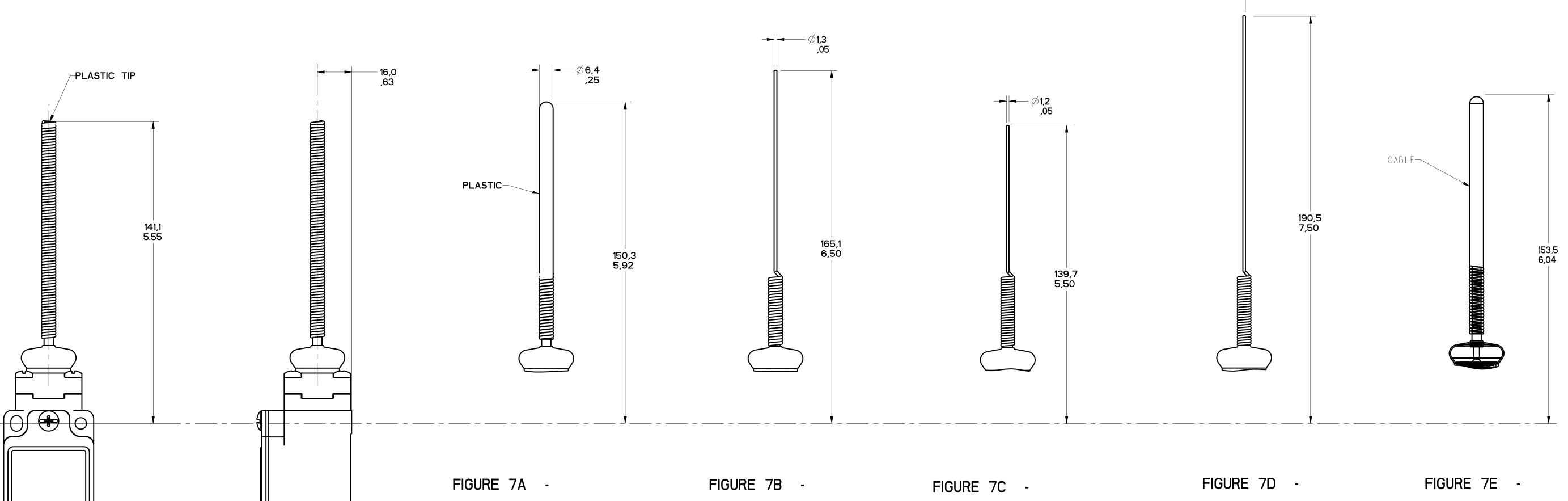
SWITCH, ENCLOSED

GL SERIES CHART 1

DESIGN UNITS

US CUSTOMARY

WE LICHT



WOBBLE HEAD

STAINLESS STEEL SPRING

ACTUATOR, OTHERWISE

SAME AS FIGURE 7

CAT WHISKER ACTUATOR,

STAINLESS STEEL SPRING,

ANSI YI4.5M-1982 APPLIES

OTHERWISE SAME AS FIGURE 7

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

WOBBLE HEAD,

PLASTIC ACTUATOR,

OTHERWISE SAME AS FIGURE 7

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

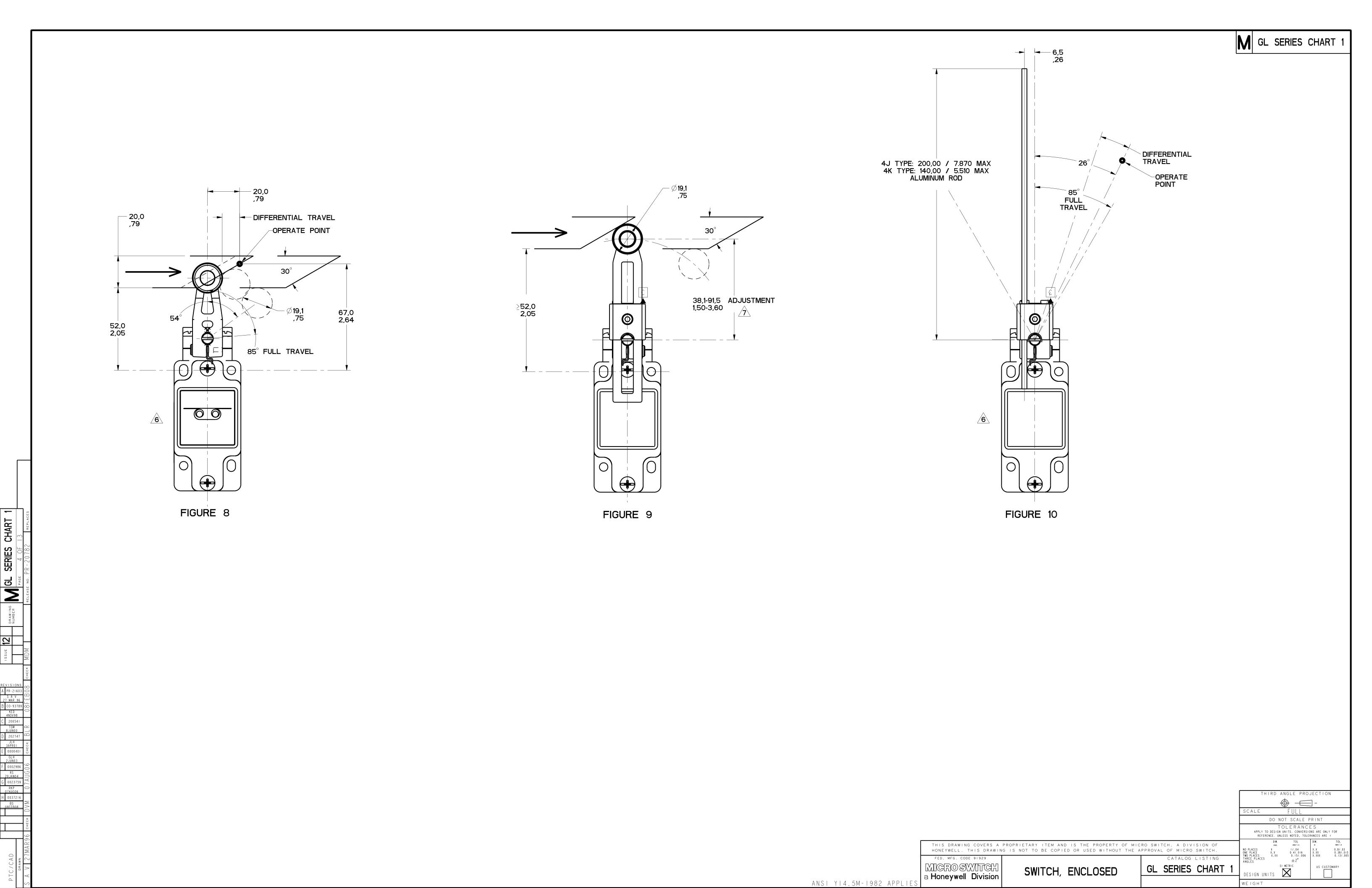
CABLE WOBBLE ACTUATOR, OTHERWISE SAME AS FIGURE 7

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GL SERIES CHART 1



| FIGURES 8, 9, 10 SIDE ROTARY HEAD, ANGULAR ACTUATION |  |  |   |   |   |   |                            |                            |  |
|--|--|--|---|---|---|---|----------------------------|----------------------------|--|
| CATALOG<br>LISTING                                   | CONTACT BLOCK DIAGRAM                              | NOMINAL - CONTACT CLOS DIFFERENTIAL TRAV         | TRAVELS AND RELATED TED, ———————————————————————————————————— | ERMINALS<br>CONTACT CLOSED<br>NG TO TEC 947-5 | MAXIMUM<br>OPERATING<br>-T <sub>I</sub> ORQUE <u>N-m</u><br>LB-IN | MAXIMUM<br>DISCONNECT<br>TORQUE <u>N-m</u><br>LB-IN | MAX<br>OPERATE<br>DEGREE/S | MIN<br>OPERATE<br>DEGREE/S | MAX<br>OPERATE<br>FREQUENCY<br>OPS/MIN |
| GL**0 A<br>GL**07A                                   | SNAP - ACTION CONTACTS SINGLE POLE  Zb             | 21-22  | 26° 55**°  12° DIFFERENTIAL TR                                | 85°<br>><br><<br>4VEL                         | <u>. 330</u><br>2.9   | <u>. 385</u><br>3. 4                                | 1290                       | 13                         | 250                                    |
| GL**03A<br>GL**33A                                   | SLOW ACTING BREAK BEFORE MAKE  Zb                  | 2   - 22<br>  3 -   4                            | 26**°<br>38°  | 85°   | <u>. 330</u><br>2.9   | <u>. 385</u><br>3. 4                                | 1290                       | 13                         | 250                                    |
| GL**04A<br>GL**34A                                   | SLOW ACTING MAKE BEFORE BREAK  Zb                  | 2   - 22   | 38**°<br>26°  | 85°   | <u>. 330</u><br>2 . 9   | <u>. 400</u><br>3.5                                 | 1290                       | 13                         | 250                                    |
| GL**05A<br>GL**35A                                   | SLOW ACTING  O  ZX                                 | 3 -   4<br>  23 - 24                             | 38°   | 85°   | <u>. 330</u><br>2 . 9   | <u>. 385</u><br>3 . 4                               | 1290                       | 13                         | 250                                    |
| GL**06A<br>GL**36A                                   | SLOW ACTING  O  2Y                                 | -   2<br>2   - 22                                | 26**°   | 85°   | <u>. 330</u><br>2.9   | <u>. 385</u><br>3.4                                 | 1290                       | 13                         | 250                                    |
| GL**20A<br>GL**22A<br>GL**24A<br>GL**32A             | SNAP ACTION CONTACTS DOUBLE POLE                   | - 2, 2 -22<br> 3- 4, 23-24                       | 26° 55**°  12° DIFFERENTIAL TR                                | 85°<br>><br><<br>AVEL                         | <u>. 330</u><br>2. 9  | <u>. 385</u><br>3.4                                 | 1290                       | 13                         | 250                                    |
| GL**2 A<br>GL**25A<br>GL**28A<br>GL**3 A             | STEP   SNAP ACTION CONTACTS DOUBLE POLE SEQUENCIAL | -   2<br>  3 -   4<br>  2   - 2 2<br>  2 3 - 2 4 | 27 42<br>8 DIFFERENTI<br>8 DIFFERENTIAL TRAV                  | > < > < > < AL TRAVEL                         | <u>. 330</u><br>2. 9  | N / A   | 1290                       | 13                         | 250                                    |

MDM | SSUE | 12 | DRAWING | WIGHER CHART 1

| GL SERIES CHART 1 SIDE ROTARY HEAD, CAM ACTUATION PER EN50041, FIGURES 8 AND 9 A |  |  |  |                      |                           |                                   |                   |  |
|--|--|--|--|----------------------|---------------------------|-----------------------------------|-------------------|--|
| CATALOG<br>LISTING   | CONTACT BLOCK DIAGRAM                              | NOMINAL TRAVELS AND RELA                           | TED TERMINALS PEN, 2001 - CONTACT CLOSED OPENING TO LEC 947-5- | MAXIMUM<br>OPERATING | MAXIMUM<br>DISCONNECT     | MAX<br>OPERATE<br>VEL M/S<br>in/S | MIN<br>OPERATE    | MAX<br>OPERATE<br>FREQUENCY<br>OPS/MIN |
| GL**0 A<br>GL**07A   | SNAP - ACTION CONTACTS SINGLE POLE  Zb             |  | 6 * *  | 9.72.2               | 11.42.6                   | <u>. 85</u><br>33.5               | 8.5<br>.33        | 250                                    |
| GL**03A<br>GL**33A   | SLOW ACTING BREAK BEFORE MAKE   Zb                 | 0 20** 21-22 13-14                                 |  | 9.72.2               | <u>    . 4</u><br>  2 . 6 | <u>. 85</u><br>33.5               | <u>8.5</u><br>.33 | 250                                    |
| GL**04A<br>GL**34A   | SLOW ACTING MAKE BEFORE BREAK   Zb                 | 0 32<br>2   - 22<br>  3 -   4 20                   |  | <u>9.7</u><br>2.2    | <u>    . 4</u><br>2 . 6   | <u>. 85</u><br>33 . 5             | <u>8.5</u><br>.33 | 250                                    |
| GL**05A<br>GL**35A   | SLOW ACTING  O  ZX                                 | 0 32°<br>13-14<br>23-24                            | 85°  | 9.7                  | <u>II.4</u><br>2.6        | <u>. 85</u><br>33.5               | <u>8.5</u><br>.33 | 250                                    |
| GL**06A<br>GL**36A   | SLOW ACTING  O  2Y                                 | 0 20**   |  | 9.72.2               | <u>    . 4</u><br>  2 . 6 | <u>. 85</u><br>33.5               | <u>8.5</u><br>.33 | 250                                    |
| GL**20A<br>GL**22A<br>GL**24A<br>GL**32A   | SNAP ACTION CONTACTS DOUBLE POLE                   | 0 20 <u>5</u><br>  - 2, 2 -22<br>  3- 4, 23-24<br> | 6**  AL TRAVEL   | 9.72.2               | <u>    . 8</u><br>  2 . 7 | <u>. 85</u><br>33 . 5             | <u>8.5</u><br>.33 | 250                                    |
| GL**2 A<br>GL**25A<br>GL**28A<br>GL**3 A   | STEP I SNAP ACTION CONTACTS DOUBLE POLE SEQUENCIAL | 23-24  | >  | 9.72.2               | N / A                     | <u>. 85</u><br>33.5               | <u>8.5</u><br>.33 | 250                                    |
|  | Q  |  |  |                      |                           |                                   |                   |  |

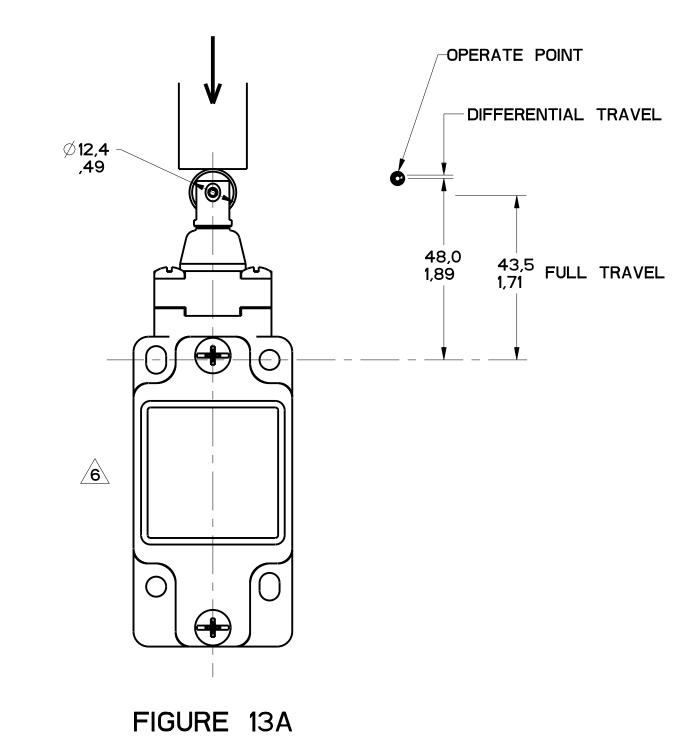
/ 8 DIFFERENTIAL TRAVEL

8 DIFFERENTIAL TRAVEL

ANSI YI4.5M-1982 APPLIES

SNAP ACTION CONTACTS DOUBLE POLE CENTER NEUTRAL

GL\*\*26J GL\*\*27J GL\*\*29J GL\*\*30J



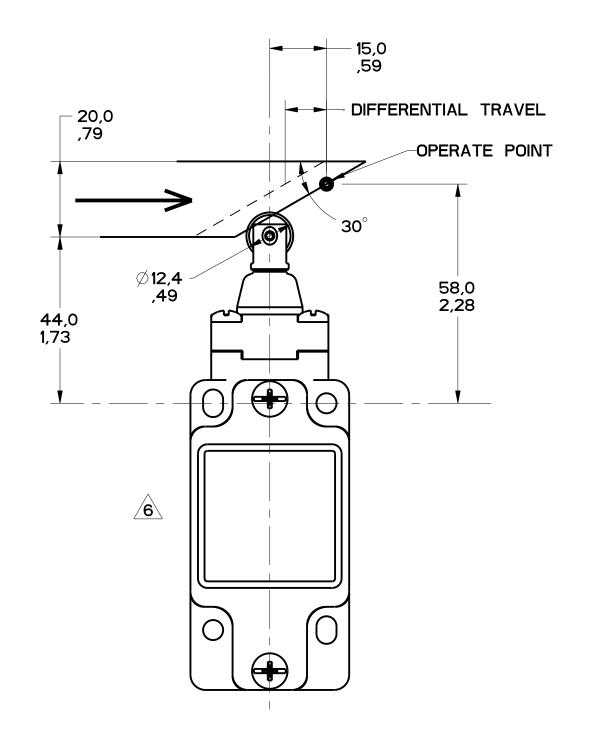


FIGURE 13B

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DRAWING MGL SERIES CHART 1

ANSI YI4.5M-1982 APPLIES

| FIGURE 13A, ROLLER PLUNGER HEAD, PIN ACTUATION                   |  |  |                             |  |  |   |  |  |
|--|--|--|-----------------------------|--|--|---|--|--|
| CATALOG<br>LISTING   | CONTACT BLOCK DIAGRAM                              | NOMINAL TRAVELS AND RELATED TERMINALS CONTACT CLOSED, CONTACT OPEN - CONTACT DIFFERENTIAL TRAVEL, ** POSITIVE OPENING TO IEC | CLOSED OPERATING FORCE N LB | MAXIMUM<br>DISCONNECT<br>FORCE N<br>LB | MAX<br>OPERATE<br>VEL <u>M/S</u><br>in/S | MIN<br>OPERATE<br>VEL <u>mm/S</u><br>in/S | MAX<br>OPERATE<br>FREQUENCY<br>OPS/MIN |  |
| GL**0 C<br>GL**07C   | SNAP - ACTION CONTACTS SINGLE POLE  Zb             | 50.5 48 46** 43.5<br>21-22<br>13-14 0.9 DIFFERENTIAL TRAVEL  | <u>  16</u><br>  3.6        | <u>27</u> 6.0                          | 0.1                                      | 1.0                                       | 250                                    |  |
| GL**03C<br>GL**33C   | SLOW ACTING BREAK BEFORE MAKE  O  Zb               | 50.5   | <u>  16</u><br>  3.6        | <u>27</u><br>6.0                       | <u>0.1</u><br>3.9                        | 1.0                                       | 250                                    |  |
| G L * * 0 4 C<br>G L * * 3 4 C                                   | SLOW ACTING MAKE BEFORE BREAK  O Zb                | 50.5 47** 43.5<br>21-22<br>13-14 48  | <u>  16</u><br>  3.6        | <u>27</u><br>6.0                       | <u>0.1</u><br>3.9                        | 1.0                                       | 250                                    |  |
| GL**05C<br>GL**35C   | SLOW ACTING  O  ZX                                 | 50.5 47 43.5<br> 3- 4<br> 23-24  | <u>  16</u><br>  3.6        | <u>27</u><br>6.0                       | 0.1                                      | 1.0                                       | 250                                    |  |
| GL**06C<br>GL**36C   | SLOW ACTING  O  2Y                                 | 50.5   | <u>  16</u><br>  3.6        | <u>27</u><br>6.0                       | <u>0.1</u><br>3.9                        | 1.0                                       | 250                                    |  |
| G L * * 2 0 C<br>G L * * 2 2 C<br>G L * * 2 4 C<br>G L * * 3 2 C | SNAP ACTION CONTACTS DOUBLE POLE                   | 50.5 48 46** 43.5      -   2   | <u>  16</u><br>  3.6        | <u>37</u><br>8.2                       | <u>0.1</u><br>3.9                        | 1.0                                       | 250                                    |  |
| GL**2 C<br>GL**25C<br>GL**28C<br>GL**3 C                         | STEP I SNAP ACTION CONTACTS DOUBLE POLE SEQUENCIAL | 50.5 48 46.8 43.5      -   2   | <u>  16</u><br>  3.6        | N / A                                  | 0.1                                      | 1.0                                       | 250                                    |  |

DRAWING MGL SERIES CHART 1

|  |  |   |  |  | M GL                                     | SERIES C                                  | CHART 1                                |
|--|--|---|--|--|--|---|--|
|  | FIGURE 13B, TOF                                    | P ROLLER PLUNGER HEAD, CAM AC   | CTUATIO                                | N PER                                  | EN500                                    | 41  |  |
| CATALOG<br>LISTING                       | CONTACT BLOCK DIAGRAM                              | NOMINAL TRAVELS AND RELATED TERMINALS  CONTACT CLOSED, CONTACT OPEN, - CONTACT CLOSED  DIFFERENTIAL TRAVEL, ** POSITIVE OPENING TO IEC 947-5- | MAXIMUM<br>OPERATING<br>IFORCE N<br>LB | MAXIMUM<br>DISCONNECT<br>FORCE N<br>LB | MAX<br>OPERATE<br>VEL <u>M/S</u><br>in/S | MIN<br>OPERATE<br>VEL <u>mm/S</u><br>in/S | MAX<br>OPERATE<br>FREQUENCY<br>OPS/MIN |
| G L * * 0   C<br>G L * * 0 7 C           | SNAP - ACTION CONTACTS SINGLE POLE  O  Zb          | 0   15   18.3**<br>21-22<br>13-14   | 9.3                                    | <u>  5.6</u><br>3.5                    | <u>0.   7</u><br>6. 7                    | <u>1.7</u><br>.067                        | 250                                    |
| G L * * 0 3 C<br>G L * * 3 3 C           | SLOW ACTING BREAK BEFORE MAKE  O Zb                | 0  5** 2 -22  3- 4  | 9.3                                    | <u>  5.6</u><br>3.5                    | <u>0.17</u><br>6.7                       | <u>1.7</u><br>.067                        | 250                                    |
| G L * * 0 4 C<br>G L * * 3 4 C           | SLOW ACTING MAKE BEFORE BREAK  O Zb                | 0   16.8** 21-22  | 9.3                                    | <u>  5.6</u><br>3.5                    | <u>0.17</u><br>6.7                       | <u>1.7</u><br>.067                        | 250                                    |
| GL**05C<br>GL**35C                       | SLOW ACTING  O  ZX                                 | 0   16.8   >  | 9.3                                    | <u>  5 . 6</u><br>3 . 5                | <u>0.17</u><br>6.7                       | <u>1.7</u><br>.067                        | 250                                    |
| GL**06C<br>GL**36C                       | SLOW ACTING  2Y                                    | 0  5**  | 9.3                                    | <u>  5 . 6</u><br>3 . 5                | <u>0.17</u><br>6.7                       | <u>1.7</u><br>.067                        | 250                                    |
| GL**20C<br>GL**22C<br>GL**24C<br>GL**32C | SNAP ACTION CONTACTS DOUBLE POLE                   | 0   15   18.3**<br>   | 9.3                                    | <u>2   . 4</u><br>4 . 8                | <u>0 .   7</u><br>6 . 7                  | <u>l.7</u><br>.067                        | 250                                    |
| G L * * 2 5 C<br>G L * * 2 8 C           | STEP I SNAP ACTION CONTACTS DOUBLE POLE SEQUENCIAL | 0   15   16.9<br>  11-12<br>  13-14<br>  21-22<br>  23-24<br>  I.4 DIFFERENTIAL TRAVEL<br>  I.4 DIFFERENTIAL TRAVEL                           | 9.3                                    | N / A                                  | <u>0.17</u><br>6.7                       | <u>1.7</u><br>.067                        | 250                                    |

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GL SERIES CHART 1