Honeywell Micro Global Limit Switch GLS Installation Guide

Contents

Honeywell

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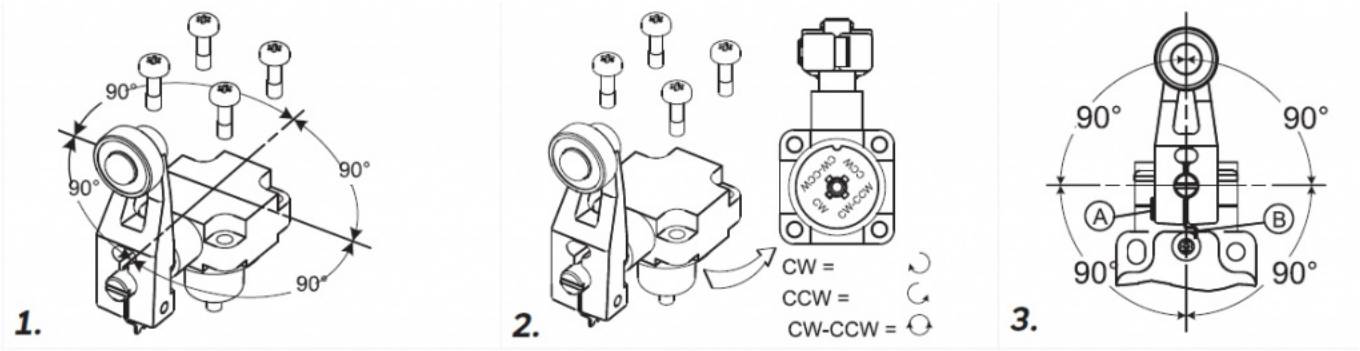
WARNING:

- Consult with local safety agencies and their requirements when designing a machine-control link, interface, and all control elements that affect safety.
- Strictly adhere to all installation instructions.
- Failure to comply with these instructions could result in death or serious injury.
- Ensure switch actuator achieves sufficient travel for positive opening of normally closed (NC) contacts to occur.
- Failure to comply with these instructions could result in death or serious injury.

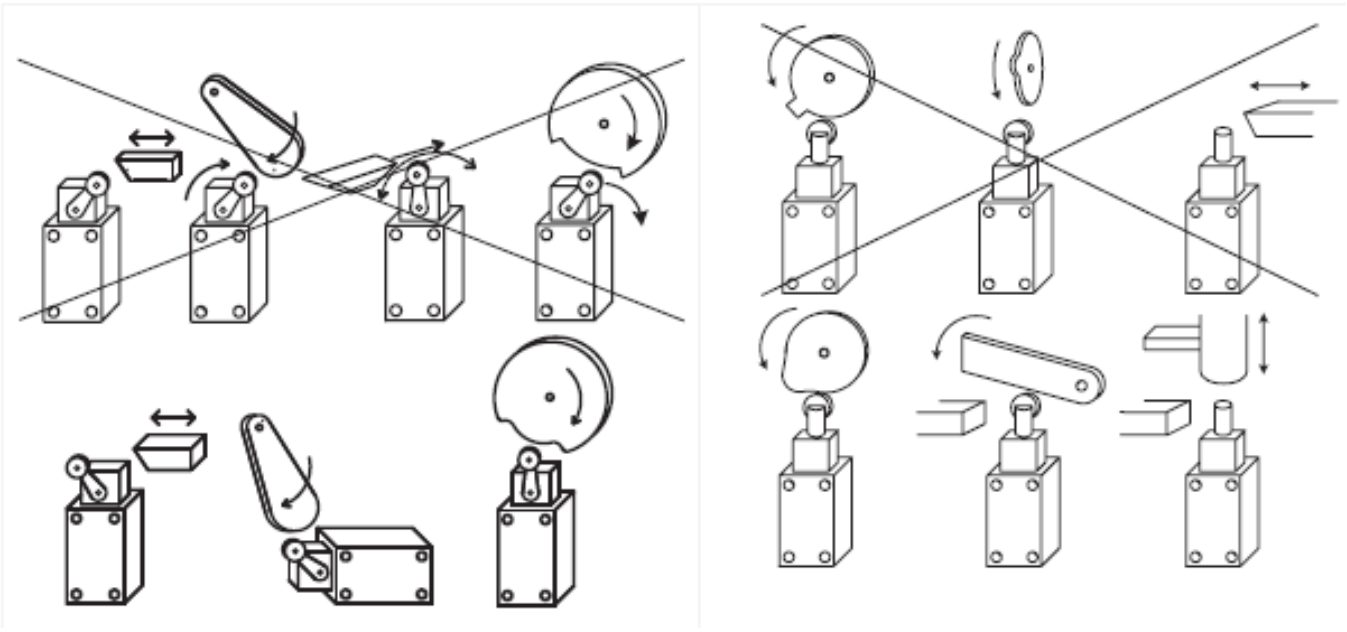
1. Refer to:
   • Page 5 for adjustments.
   • Pages 9 to 18 for specific travel distances for each switch code, and specifications.
   • Page 5 proper application of limit switches, and switch mounting dimensions.
2. Perform adjustments (if desired):
   • Head orientation, page 5.
   • Actuation direction (Figure 2, page 5).
   • Side rotary switches with 90* positive drive levers
   (catalog listings ending in A1A, A1B, A5A, A5B) (Figure 3):
   – Ensure flats of switch shaft engage groove in actuator lever.
   – Tighten locking screw (A) until tab (B) no longer moves.
3. Mount switch using four M5 or #10 screws. Torque screws to 4,9 Nm to 5,9 Nm [43 in-lb to 52 in-lb].
4. Remove screws on cover plate.
5. Connect stranded wire (0,75 mm2 to 2,5 mm2, 18-14 AWG) or solid wire (0,75 mm2 to 1,5 mm2, 18-16 AWG) to connector terminals (use 90 *C wire when ambient temperature is over 75 *C). Torque switch terminal screws to 0,8 Nm to 1,0 Nm [7 in-lb to 9 in-lb]. Wire strip length should be 7,3 mm [0.29 in] max.
6. Seal conduit opening according to instructions in PK 80112.

7. Reassemble cover plate, and torque cover screws to 0,5 Nm [4.4 in-lb].

FIELD ADJUSTABLE HEAD



OPERATION REQUIREMENTS



TERMS

- Contact Closed
- Contact Open
- Differential Travel
- Free Position
- Operating Position 1
- Positive Opening 1 to IEC 947-5-1
- Differential Travel 1
- Over Travel
- Maximum Operating Force
- Maximum Disconnect Force

READING OPERATING SPECIFICATIONS

FIGURE 1. READING OPERATING SPECIFICATIONS

Catalog listing	Contact block diagram	Nominal travels and related terminals Contact Closed / Contact Open / Diff. Travel **Positive Opening to IEC 947-5-1	Operating force max.	Disconnect force, max.	Operating degrees, max.	Operating degrees, min.	Max. operate frequency ops/min
GL**01A GL**07A	SNAP-ACTION CONTACTS SINGLE POLE Zb	20 mm / 56 mm** 21-22 >, 13-14 < 12 mm Differential travel	9,7 N [2.2 lb]	11,4 N [2.6 lb]	0,85 M/S [33.5 in/S]	8,5 mm/S [0.33 in/S]	250
⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆
Catalog Listing Code	**Contact Block Diagram** Shows the circuit configuration of the internal contact block.	**Operating Bar Charts** Show the state of the contacts relative to the position of the actuator.	**Operating Specifications**				

PRODUCT

GL — Switch Type: **GL** Series Global Limit Switch

A — Body Style Code

A	EN50041, non-plug-in
B	EN50041, plug-in
F	EN50041, non-plug-in, LED light box
G	EN50041, plug-in, LED light box
H	EN50041, plug-in, LED light box

A — Conduit Entry Threading Code

A	1/2-14 NPT
B	PG 13.5
C	20 mm
D	PF 1/2

01 — Basic Switch

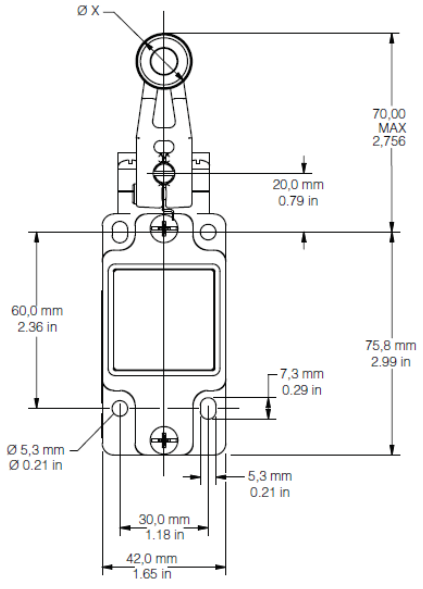
01	SPDT snap action	26	DPDT, snap action, center neutral
03	SPDT, BBM slow acting	27	DPDT, snap action, center neutral, Body E
04	SPDT, MBB slow acting	28	DPDT, snap action, gold, sequential
05	SPDT, 2NO slow acting	29	DPDT, snap action, center neutral, gold
06	SPDT, 2NC slow acting	30	DPDT, snap act, center neutral, gold, Body E
07	SPDT, snap action, gold	31	DPDT, snap action, gold, sequen., Body E
20	DPDT, snap action	32	DPDT, snap action, gold cont. Body E
21	DPDT, snap action, sequential	33	SPDT, BBM, slow acting, gold contacts
22	DPDT, snap action, gold contacts	34	SPDT, MBB slow acting, gold contacts
24	DPDT, snap action, Body E	35	SPDT, 2NO slow acting, gold contacts
25	DPDT, snap action, gold cont. Body E	36	SPDT, 2NC slow acting, gold contacts

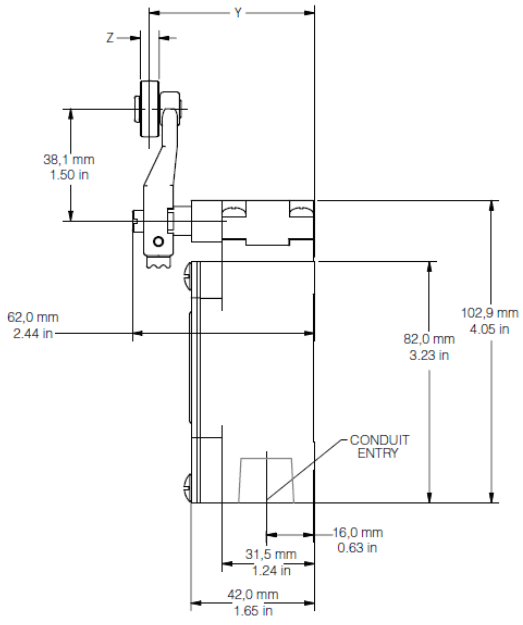
A1A — Head/Actuator

A1	Side rotary, fixed, no roller	A3A	Side rotary, yoke, 19 x 6 nylon roller	E7A	Wobble, plastic stick
A2	Side rotary, adjustable, no roller	A3B	Side rotary, yoke, 19 x 6 steel roller	E7B	Wobble, coil
A1A	Side rotary, fixed, 19 x 6 nylon roller	A4J	Side rotary, adjust., 200 mm aluminum rod	E7D	Wobble, cat whisker
A1B	Side rotary, fixed, 19 x 6 steel roller	A4K	Side rotary, adjust., 140 mm aluminum rod	F	Adj. top roller lever, Ø27,3 x 5 POM roller
A1Y	Side rotary, fixed, 50 x 10 rubber roller	A4N	Side rotary, adjust., 318 mm aluminum rod	K8A	Cat whisker, 140 mm
A2Y	Side rotary, adj., 50 x 10 rubber roller	A5A	Side rotary, offset, 19 x 6 nylon roller	K8B	Cat whisker, 190 mm
A2A	Side rotary, adjust., 19 x 6 nylon roller	A5B	Side rotary, offset, 19 x 6 steel roller	K8C	Wobble, cat whisker
A2B	Side rotary, adjust., 19 x 6 steel roller	A9A	Side rotary, conveyor lever		
A2D	Side rotary, adjust., 38 x 6 nylon roller	B	Top pin plunger		
A2W	Side rotary, adjust., 38 x 12 rubber roller	C	Top roller plunger		
		D	Top roller lever		

1	CW rotation only
2	CCW rotation only
3	Lever to right
4	Lever to left
5	Lever to mounting surf.
6	Roller perpendicular to mtg. surf.

Figure 2. Fixed Lever, Side Rotary Switch – Non-plug-in Body Style, GLZ51 lever, and GLA body





LEVER (catalog listing)	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
GLZ51C	NYLON	24,5 1.00	59,1 2.33	12,7 .50
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. Fixed Lever, Side Rotary Switch – Plug-in Body Style, GLZ51 lever, and GLB body

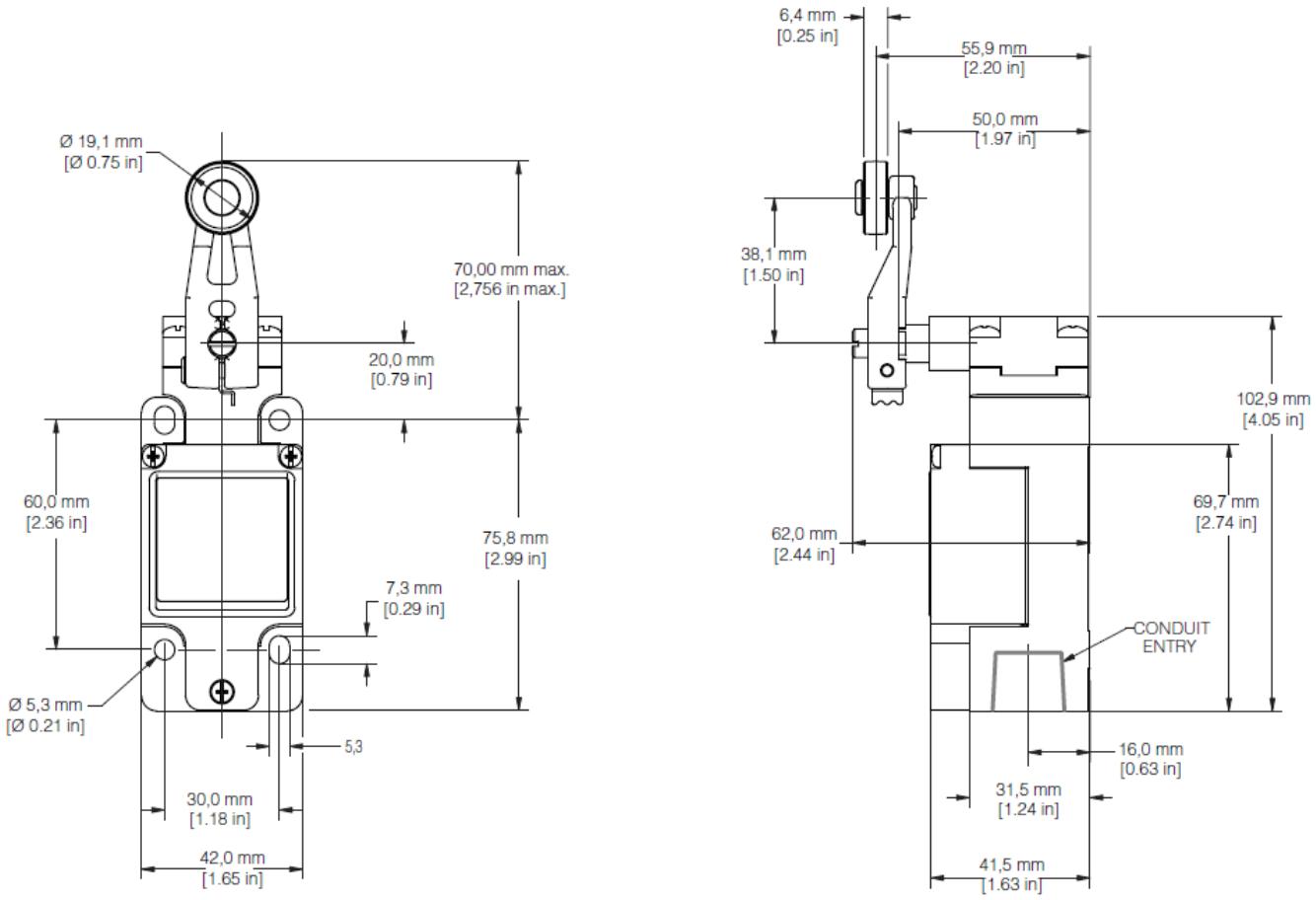
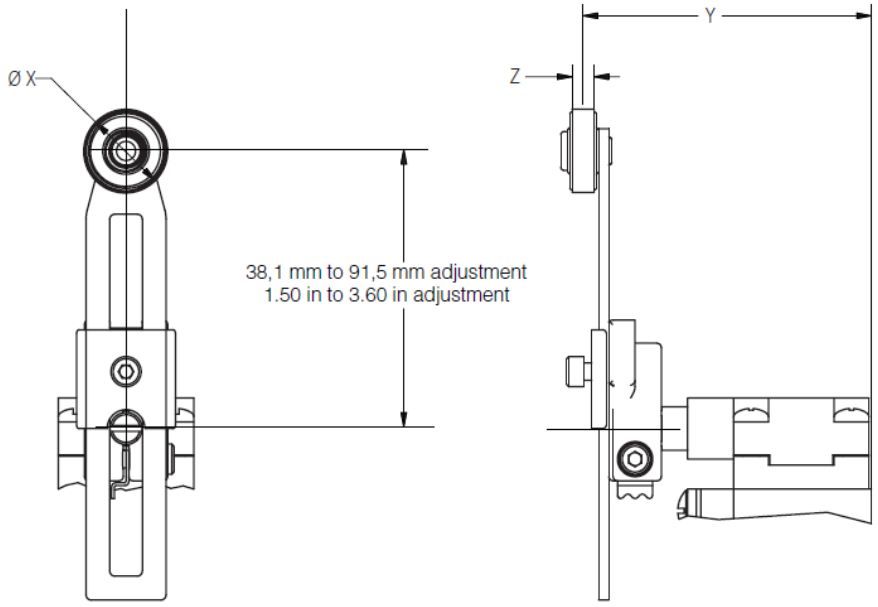
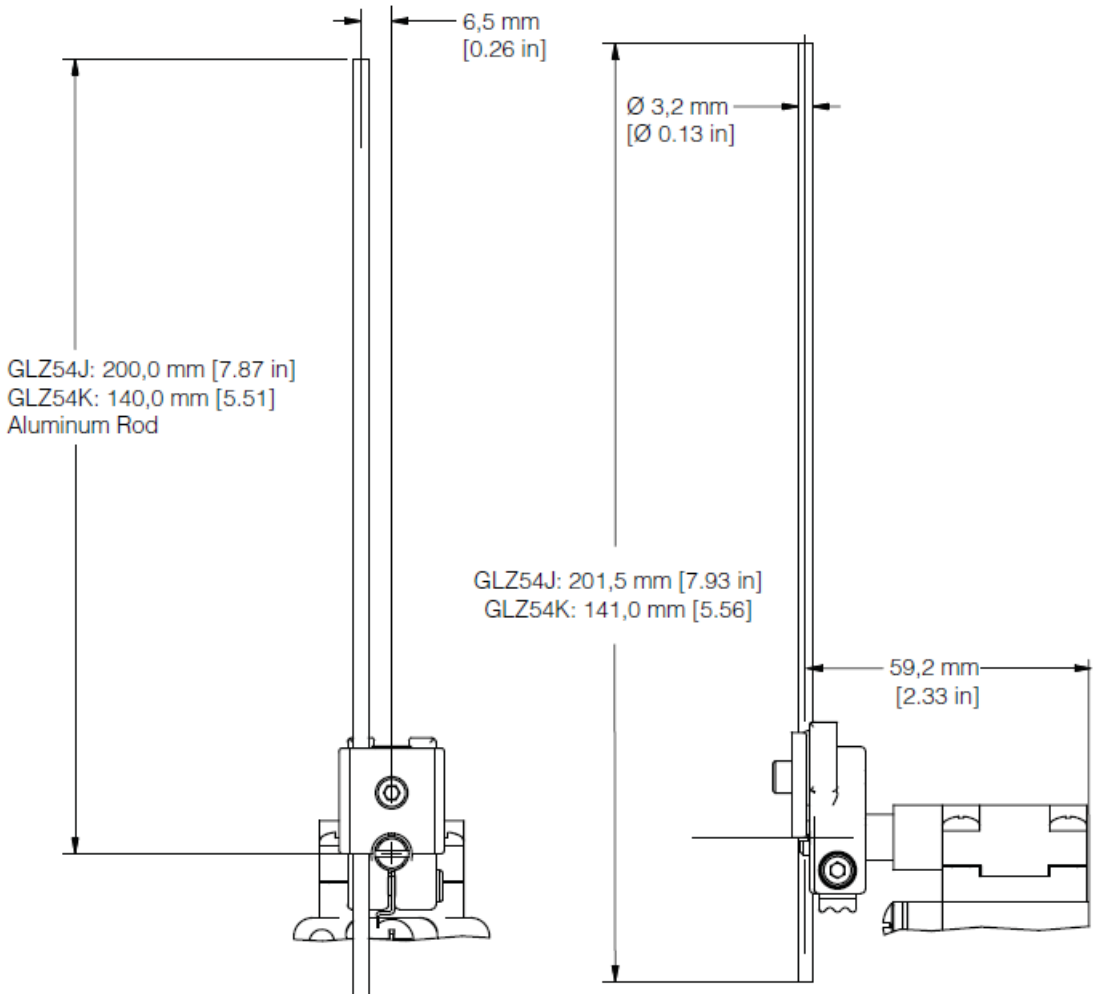


Figure 4. Adjustable Lever Dimensions, GLZ52



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

Figure 5. Aluminum Rod Lever Dimensions, GLZ54



Notes:

- Free position, operate point, over travel and pre-travel all to EN 50041
- Operating characteristics apply to counter clockwise (CCW) and clock wise (CW) actuation
- Refer to page 5 for instructions on how to read operating characteristics and specifications

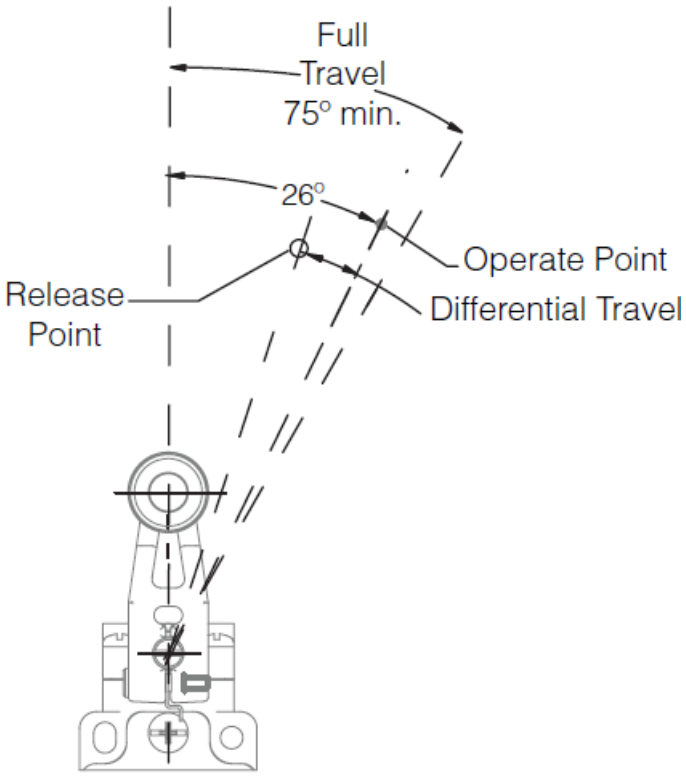
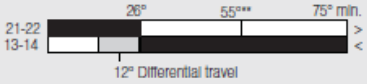
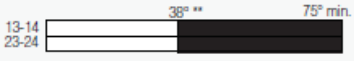
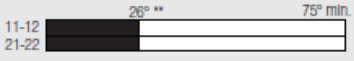
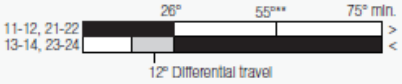
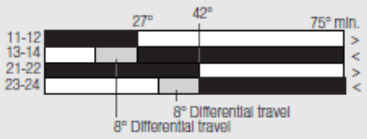


FIGURE 6. HEAD CODE: A

FIGURE 6. HEAD CODE: A
SIDE ROTARY ANGULAR OPERATING CHARACTERISTICS

Catalog listing	Contact block diagram	Nominal travels and related terminals Contact Closed / Contact Open / Diff. Travel **Positive Opening to IEC 947-5-1	Operating torque max.	Disconnect torque, max.	Operating degrees, max.	Operating degrees, min.	Max. operate frequency ops/min
GL**01A GL**07A	SNAP-ACTION CONTACTS SINGLE POLE Zb		0.330 Nm [2.9 in-lb]	0.385 Nm [3.4 in-lb]	1290°	13°	250
GL**03A GL**33A	SLOW ACTING BREAK BEFORE MAKE Zb		0.330 Nm [2.9 in-lb]	0.385 Nm [3.4 in-lb]	1290°	13°	250
GL**04A GL**34A	SLOW ACTING MAKE BEFORE BREAK Zb		0.330 Nm [2.9 in-lb]	0.400 Nm [3.5 in-lb]	1290°	13°	250
GL**05A GL**35A	SLOW ACTING 2X		0.330 Nm [2.9 in-lb]	0.385 Nm [3.4 in-lb]	1290°	13°	250
GL**06A GL**36A	SLOW ACTING 2Y		0.330 Nm [2.9 in-lb]	0.385 Nm [3.4 in-lb]	1290°	13°	250
GL**20A GL**22A GL**24A GL**32A	SNAP ACTION CONTACTS DOUBLE POLE		0.330 Nm [2.9 in-lb]	0.385 Nm [3.4 in-lb]	1290°	13°	250
GL**21A GL**25A GL**28A GL**31A	STEP 1 STEP 2 SNAP ACTION CONTACTS DOUBLE POLE SEQUENCIAL		0.330 Nm [2.9 in-lb]	n/a	1290°	13°	250

Notes:

- Cam travel for adjustable lever applies when lever is adjusted to 38,1 mm [1.5 in]
- Refer to page 5 for instructions on how to read operating characteristics and specifications

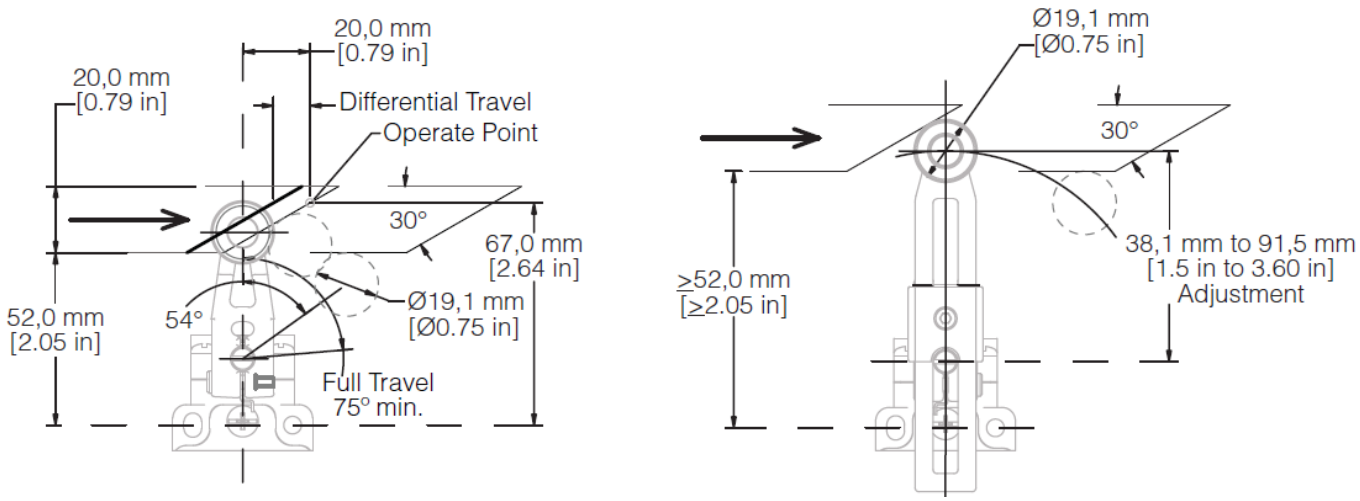


FIGURE 7. HEAD CODE: A • SIDE ROTARY CAM ACTUATION PER EN50041 OPERATING CHARACTERISTICS

FIGURE 7. HEAD CODE: A • SIDE ROTARY CAM ACTUATION PER EN50041 OPERATING CHARACTERISTICS

Catalog listing	Contact block diagram	Nominal travels and related terminals Contact Closed / Contact Open / Diff. Travel **Positive Opening to IEC 947-5-1	Operating force max.	Disconnect force, max.	Operating degrees, max.	Operating degrees, min.	Max. operate frequency ops/min
GL**01A GL**07A	SNAP-ACTION CONTACTS SINGLE POLE Zb	20 mm; 56 mm** 21-22 13-14 12 mm Differential travel	9,7 N [2.2 lb]	11,4 N [2.6 lb]	0,85 M/S [33.5 in/S]	8,5 mm/S [0.33 in/S]	250
GL**03A GL**33A	SLOW ACTING BREAK BEFORE MAKE Zb	20 mm ** 21-22 13-14 32 mm	9,7 N [2.2 lb]	11,4 N [2.6 lb]	0,85 M/S [33.5 in/S]	8,5 mm/S [0.33 in/S]	250
GL**04A GL**34A	SLOW ACTING MAKE BEFORE BREAK Zb	0 mm; 32 mm 21-22 13-14 20 mm	9,7 N [2.2 lb]	11,4 N [2.6 lb]	0,85 M/S [33.5 in/S]	8,5 mm/S [0.33 in/S]	250
GL**05A GL**35A	SLOW ACTING 2X	32 mm 13-14 23-24	9,7 N [2.2 lb]	11,4 N [2.6 lb]	0,85 M/S [33.5 in/S]	8,5 mm/S [0.33 in/S]	250
GL**06A GL**36A	SLOW ACTING 2Y	0 mm; 20 mm ** 11-12 21-22	9,7 N [2.2 lb]	11,4 N [2.6 lb]	0,85 M/S [33.5 in/S]	8,5 mm/S [0.33 in/S]	250
GL**20A GL**22A GL**24A GL**32A	SNAP ACTION CONTACTS DOUBLE POLE	20 mm; 56 mm** 11-12, 21-22 13-14, 23-24 12 mm Differential travel	9,7 N [2.2 lb]	11,8 N [2.7 lb]	0,85 M/S [33.5 in/S]	8,5 mm/S [0.33 in/S]	250
GL**21A GL**25A GL**28A GL**31A	STEP 1 STEP 2 SNAP ACTION CONTACTS DOUBLE POLE SEQUENCIAL	0 mm; 20 mm; 38.5 mm 11-12 13-14 21-22 23-24 8.5 mm Differential travel 7 mm Differential travel	9,7 N [2.2 lb]	n/a	0,85 M/S [33.5 in/S]	8,5 mm/S [0.33 in/S]	250
GL**26J GL**27J GL**29J GL**30J	CCW CW SNAP ACTION CONTACTS DOUBLE POLE CENTER NEUTRAL	0 mm; 16 mm 11-12 13-14 21-22 23-24 8 mm Differential travel 8 mm Differential travel	9,7 N [2.2 lb]	n/a	0,85 M/S [33.5 in/S]	8,5 mm/S [0.33 in/S]	250

Notes:

- Free position, operate point, overtravel, and pretravel all to EN50041
- Refer to page 5 for instructions on how to read operating characteristics and specifications

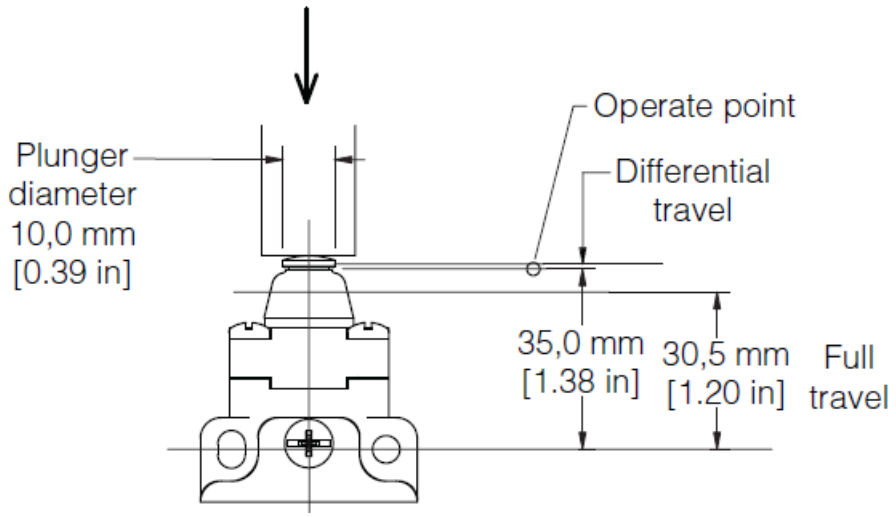


FIGURE 8. HEAD CODE: B
PIN PLUNGER OPERATING CHARACTERISTICS

Catalog listing	Contact block diagram	Nominal travels and related terminals (Contact Closed / Contact Open / Diff. Travel; **Positive Opening to IEC 947-5-1)	Operating torque max.	Disconnect torque, max.	Operating degrees, max.	Operating degrees, min.	Max. operate frequency ops/min
GL**01B GL**07B	SNAP-ACTION CONTACTS SINGLE POLE Zb	37.5 35 33** 30.5 21-22 13-14 0.9 Differential travel	16 N [3.6 lb]	27 N [6.0 lb]	0,1 M/S [3.9 in/S]	1,0 mm/S [0.04 in/S]	250
GL**03B GL**33B	SLOW ACTING BREAK BEFORE MAKE Zb	37.5 35** 30.5 21-22 13-14 34	16 N [3.6 lb]	27 N [6.0 lb]	0,1 M/S [3.9 in/S]	1,0 mm/S [0.04 in/S]	250
GL**04B GL**34B	SLOW ACTING MAKE BEFORE BREAK Zb	37.5 34** 30.5 21-22 13-14 35	16 N [3.6 lb]	27 N [6.0 lb]	0,1 M/S [3.9 in/S]	1,0 mm/S [0.04 in/S]	250
GL**05B GL**35B	SLOW ACTING 2X	37.5 34 30.5 13-14 23-24	16 N [3.6 lb]	27 N [6.0 lb]	0,1 M/S [3.9 in/S]	1,0 mm/S [0.04 in/S]	250
GL**06B GL**36B	SLOW ACTING 2Y	37.5 35** 30.5 11-12 21-22 34	16 N [3.6 lb]	27 N [6.0 lb]	0,1 M/S [3.9 in/S]	1,0 mm/S [0.04 in/S]	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	16 N [3.6 lb]	37 N [8.2 lb]	0,1 M/S [3.9 in/S]	1,0 mm/S [0.04 in/S]	250
GL**21B GL**25B GL**28B GL**31B	STEP 1 STEP 2 SNAP ACTION CONTACTS DOUBLE POLE SEQUENCIAL	37.5 35 33.8 30.5 11-12 13-14 21-22 23-24 0.8 Differential travel 0.8 Differential travel	16 N [3.6 lb]	n/a	0,1 M/S [3.9 in/S]	1,0 mm/S [0.04 in/S]	250

Notes:

- Free position, operate point, overtravel, and pretravel all to EN50041
- Refer to page 5 for instructions on how to read operating characteristics and specifications

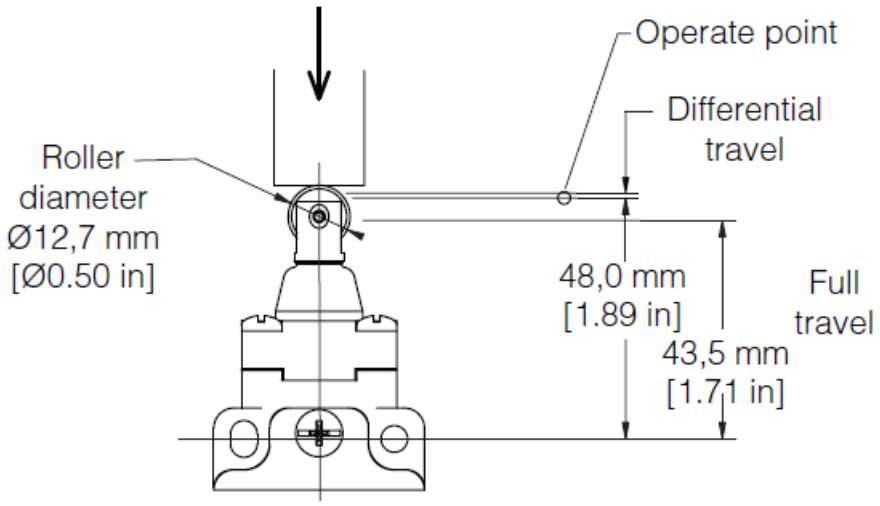


FIGURE 9. HEAD CODE: C
TOP ROLLER PLUNGER PIN ACTUATION OPERATING CHARACTERISTICS

FIGURE 9. HEAD CODE: C
TOP ROLLER PLUNGER PIN ACTUATION OPERATING CHARACTERISTICS

Catalog listing	Contact block diagram	Nominal travels and related terminals Contact Closed / Contact Open / Diff. Travel **Positive Opening to IEC 947-5-1	Operating force max.	Disconnect force, max.	Operating velocity, max.	Operating velocity, min.	Max. operate frequency ops/min
GL**01C GL**07C	SNAP-ACTION CONTACTS SINGLE POLE Zb	50.5 48 46** 43.5 21-22 13-14 0.9 Differential travel	16 N [3.6 lb]	27 N [6.0 lb]	0,1 M/S [3.9 in/S]	1,0 mm/S [0.04 in/S]	250
GL**03C GL**33C	SLOW ACTING BREAK BEFORE MAKE Zb	50.5 48** 43.5 21-22 13-14 47	16 N [3.6 lb]	27 N [6.0 lb]	0,1 M/S [3.9 in/S]	1,0 mm/S [0.04 in/S]	250
GL**04C GL**34C	SLOW ACTING MAKE BEFORE BREAK Zb	50.5 47** 43.5 21-22 13-14 48	16 N [3.6 lb]	27 N [6.0 lb]	0,1 M/S [3.9 in/S]	1,0 mm/S [0.04 in/S]	250
GL**05C GL**35C	SLOW ACTING 2X	50.5 47 43.5 13-14 23-24	16 N [3.6 lb]	27 N [6.0 lb]	0,1 M/S [3.9 in/S]	1,0 mm/S [0.04 in/S]	250
GL**06C GL**36C	SLOW ACTING 2Y	50.5 48** 43.5 11-12 21-22	16 N [3.6 lb]	27 N [6.0 lb]	0,1 M/S [3.9 in/S]	1,0 mm/S [0.04 in/S]	250
GL**20C GL**22C GL**24C GL**32C	SNAP ACTION CONTACTS DOUBLE POLE	50.5 48 46** 43.5 11-12, 21-22 13-14, 23-24 0.9 Differential travel	16 N [3.6 lb]	37 N [8.2 lb]	0,1 M/S [3.9 in/S]	1,0 mm/S [0.04 in/S]	250
GL**21C GL**25C GL**28C GL**31C	STEP 1 SNAP ACTION CONTACTS DOUBLE POLE SEQUENCIAL STEP 2	50.5 48 45.8 43.5 11-12 13-14 21-22 23-24 0.8 Differential travel 0.8 Differential travel	16 N [3.6 lb]	n/a	0,1 M/S [3.9 in/S]	1,0 mm/S [0.04 in/S]	250

Notes:

- Free position, operate point, overtravel, and pretravel all to EN50041
- Refer to page 5 for instructions on how to read operating characteristics and specifications

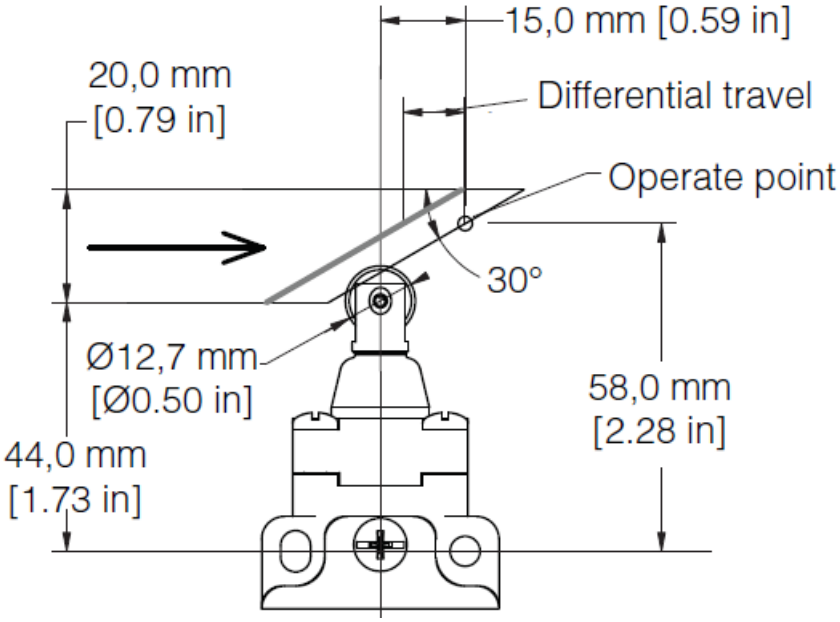


FIGURE 10. HEAD CODE: C
ROLLER PLUNGER CAM ACTUATION PER EN50041 OPERATING CHARACTERISTICS

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ROLLER PLUNGER CAM ACTUATION PER EN50041 OPERATING CHARACTERISTICS

Catalog listing	Contact block diagram	Nominal travels and related terminals Contact Closed / Contact Open / Diff. Travel **Positive Opening to IEC 947-5-1	Operating force max.	Disconnect force, max.	Operating velocity, max.	Operating velocity, min.	Max. operate frequency ops/min
GL**01C GL**07C	SNAP-ACTION CONTACTS SINGLE POLE Zb	0 15 18.3** 21-22 13-14 1.8 Differential travel	9,3 N [2.1 lb]	15,6 N [3.5 lb]	0,17 M/S [6.7 in/S]	1,7 mm/S [0.067 in/S]	250
GL**03C GL**33C	SLOW ACTING BREAK BEFORE MAKE Zb	0 15** 21-22 13-14 16.8	9,3 N [2.1 lb]	15,6 N [3.5 lb]	0,17 M/S [6.7 in/S]	1,7 mm/S [0.067 in/S]	250
GL**04C GL**34C	SLOW ACTING MAKE BEFORE BREAK Zb	0 16.8** 21-22 13-14 15	9,3 N [2.1 lb]	15,6 N [3.5 lb]	0,17 M/S [6.7 in/S]	1,7 mm/S [0.067 in/S]	250
GL**05C GL**35C	SLOW ACTING 2X	0 16.8 13-14 23-24	9,3 N [2.1 lb]	15,6 N [3.5 lb]	0,17 M/S [6.7 in/S]	1,7 mm/S [0.067 in/S]	250
GL**06C GL**36C	SLOW ACTING 2Y	0 15** 21-22 13-14	9,3 N [2.1 lb]	15,6 N [3.5 lb]	0,17 M/S [6.7 in/S]	1,7 mm/S [0.067 in/S]	250
GL**20C GL**22C GL**24C GL**32C	SNAP ACTION CONTACTS DOUBLE POLE	0 15 18.3** 11-12, 21-22 13-14, 23-24 1.8 Differential travel	9,3 N [2.1 lb]	21,4 N [4.8 lb]	0,17 M/S [6.7 in/S]	1,7 mm/S [0.067 in/S]	250
GL**21C GL**25C GL**28C GL**31C	STEP 1 STEP 2 SNAP ACTION CONTACTS DOUBLE POLE SEQUENCIAL	0 15 16.9 11-12 13-14 21-22 23-24 1.4 Differential travel 1.4 Differential travel	9,3 N [2.1 lb]	n/a	0,17 M/S [6.7 in/S]	1,7 mm/S [0.067 in/S]	250

Notes:

- Free position, operate point, overtravel, and pretravel all to EN50041
- Refer to page 5 for instructions on how to read operating characteristics and specifications

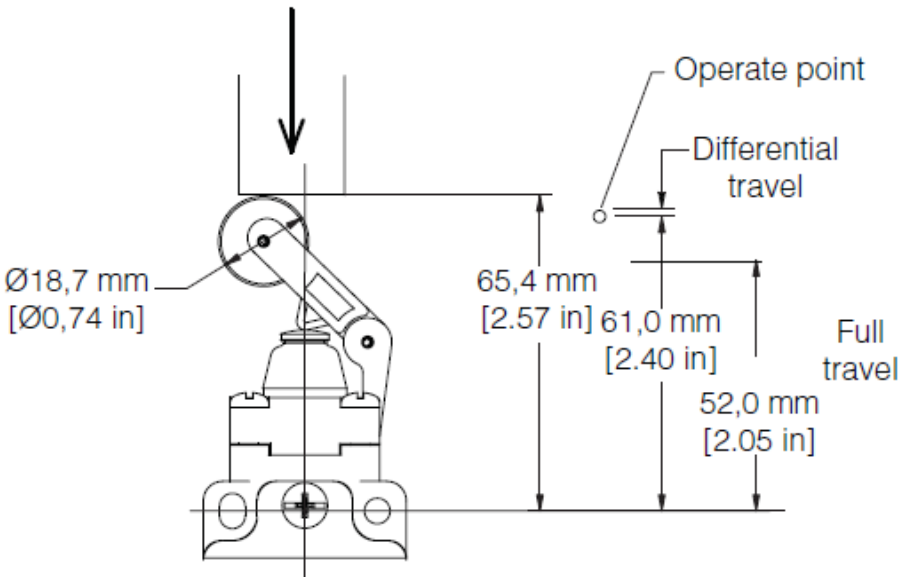


FIGURE 11. HEAD CODE: D
TOP ROLLER LEVER PIN ACTUATION OPERATING CHARACTERISTICS

FIGURE 11. HEAD CODE: D
TOP ROLLER LEVER PIN ACTUATION OPERATING CHARACTERISTICS

Catalog listing	Contact block diagram	Nominal travels and related terminals Contact Closed / Contact Open / Diff. Travel **Positive Opening to IEC 947-5-1	Operating force max.	Disconnect force, max.	Operating velocity, max.	Operating velocity, min.	Max. operate frequency ops/min
GL**01D GL**07D	SNAP-ACTION CONTACTS SINGLE POLE Zb	65.2 61 56.9** 52 21-22 >, 13-14 < 1.7 Differential travel	9,5 N [2.1 lb]	12 N [2.7 lb]	0,17 M/S [6.7 in/S]	1,7 mm/S [0.067 in/S]	250
GL**03D GL**33D	SLOW ACTING BREAK BEFORE MAKE Zb	65.2 61** 52 21-22 >, 13-14 < 59.1	9,5 N [2.1 lb]	12 N [2.7 lb]	0,17 M/S [6.7 in/S]	1,7 mm/S [0.067 in/S]	250
GL**04D GL**34D	SLOW ACTING MAKE BEFORE BREAK Zb	65.2 59.1** 52 21-22 >, 13-14 < 61	9,5 N [2.1 lb]	12 N [2.7 lb]	0,17 M/S [6.7 in/S]	1,7 mm/S [0.067 in/S]	250
GL**05D GL**35D	SLOW ACTING 2X	65.2 59.1 52 13-14 >, 23-24 <	9,5 N [2.1 lb]	12 N [2.7 lb]	0,17 M/S [6.7 in/S]	1,7 mm/S [0.067 in/S]	250
GL**06D GL**36D	SLOW ACTING 2Y	65.2 61** 52 11-12 >, 21-22 <	9,5 N [2.1 lb]	12 N [2.7 lb]	0,17 M/S [6.7 in/S]	1,7 mm/S [0.067 in/S]	250
GL**20D GL**22D GL**24D GL**32D	SNAP ACTION CONTACTS DOUBLE POLE	65.2 61 56.9** 52 11-12, 21-22 >, 13-14, 23-24 < 1.7 Differential travel	9,5 N [2.1 lb]	16,4 N [3.7 lb]	0,17 M/S [6.7 in/S]	1,7 mm/S [0.067 in/S]	250
GL**21D GL**25D GL**28D GL**31D	STEP 1 STEP 2 SNAP ACTION CONTACTS DOUBLE POLE SEQUENCIAL	65.2 61 58.6** 11-12 >, 13-14 <, 21-22 >, 23-24 < 1.6 Differential travel 1.6 Differential travel	9,5 N [2.1 lb]	n/a	0,17 M/S [6.7 in/S]	1,7 mm/S [0.067 in/S]	250

Notes:

- Free position, operate point, overtravel, and pretravel all to EN50041
- Refer to page 5 for instructions on how to read operating characteristics and specifications

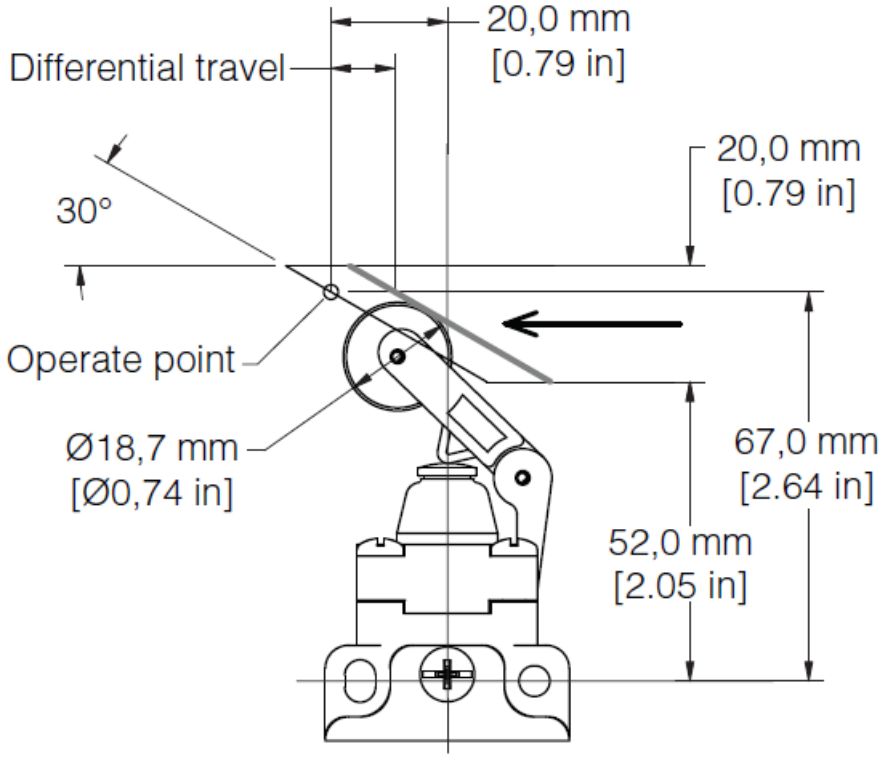


FIGURE 12. HEAD CODE: D
TOP ROLLER LEVER CAM ACTUATION PER EN50041 OPERATING CHARACTERISTICS

FIGURE 12. HEAD CODE: D
TOP ROLLER LEVER CAM ACTUATION PER EN50041 OPERATING CHARACTERISTICS

Catalog listing	Contact block diagram	Nominal travels and related terminals Contact Closed · Contact Open · Diff. Travel **Positive Opening to IEC 947-5-1	Operating force max.	Disconnect force, max.	Operating velocity, max.	Operating velocity, min.	Max. operate frequency ops/min
GL**01D GL**07D	SNAP-ACTION CONTACTS SINGLE POLE Zb	0 · 20 · 29.1** 21-22 >, 13-14 < 4.1 Differential travel	5,5 N [1.2 lb]	7,0 N [1.6 lb]	0,29 M/S [11.4 in/S]	2.9 mm/S [0.11 in/S]	250
GL**03D GL**33D	SLOW ACTING BREAK BEFORE MAKE Zb	0 · 20** 21-22 >, 13-14 < 24.1	5,5 N [1.2 lb]	7,0 N [1.6 lb]	0,29 M/S [11.4 in/S]	2.9 mm/S [0.11 in/S]	250
GL**04D GL**34D	SLOW ACTING MAKE BEFORE BREAK Zb	0 · 24.1** 21-22 >, 13-14 < 20	5,5 N [1.2 lb]	9,6 N [2.2 lb]	0,29 M/S [11.4 in/S]	2.9 mm/S [0.11 in/S]	250
GL**05D GL**35D	SLOW ACTING 2X	0 · 24.1 13-14 >, 23-24 <	5,5 N [1.2 lb]	7,0 N [1.6 lb]	0,29 M/S [11.4 in/S]	2.9 mm/S [0.11 in/S]	250
GL**06D GL**36D	SLOW ACTING 2Y	0 · 20** 11-12 >, 21-22 <	5,5 N [1.2 lb]	7,0 N [1.6 lb]	0,29 M/S [11.4 in/S]	2.9 mm/S [0.11 in/S]	250
GL**20D GL**22D GL**24D GL**32D	SNAP ACTION CONTACTS DOUBLE POLE	0 · 20 · 29.1** 11-12, 21-22 >, 13-14, 23-24 < 4.1 Differential travel	5,5 N [1.2 lb]	7,0 N [1.6 lb]	0,29 M/S [11.4 in/S]	2.9 mm/S [0.11 in/S]	250
GL**21D GL**25D GL**28D GL**31D	STEP 1 STEP 2 SNAP ACTION CONTACTS DOUBLE POLE SEQUENCIAL	0 · 20 · 25.5 11-12 >, 13-14 <, 21-22 >, 23-24 < 3.7 Differential travel 3.7 Differential travel	5,5 N [1.2 lb]	n/a	0,29 M/S [11.4 in/S]	2.9 mm/S [0.11 in/S]	250

Head Code: E • WOBBLE AND CAT WHISKER ACTUATOR DIMENSIONS

Figure 13. Coil Actuator

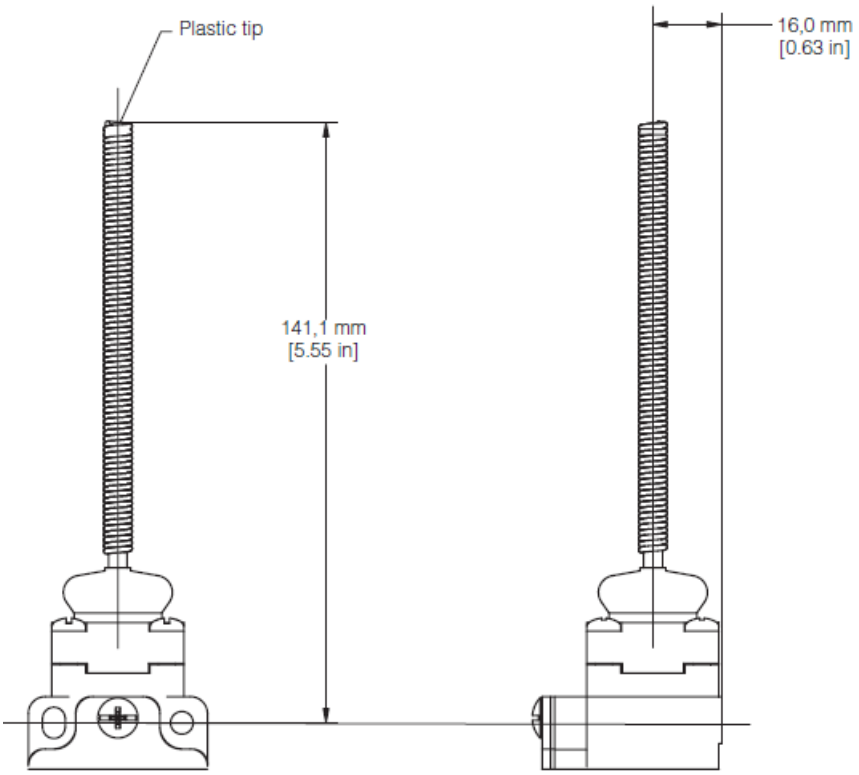


Figure 14. Plastic Rod and Flexible Cable

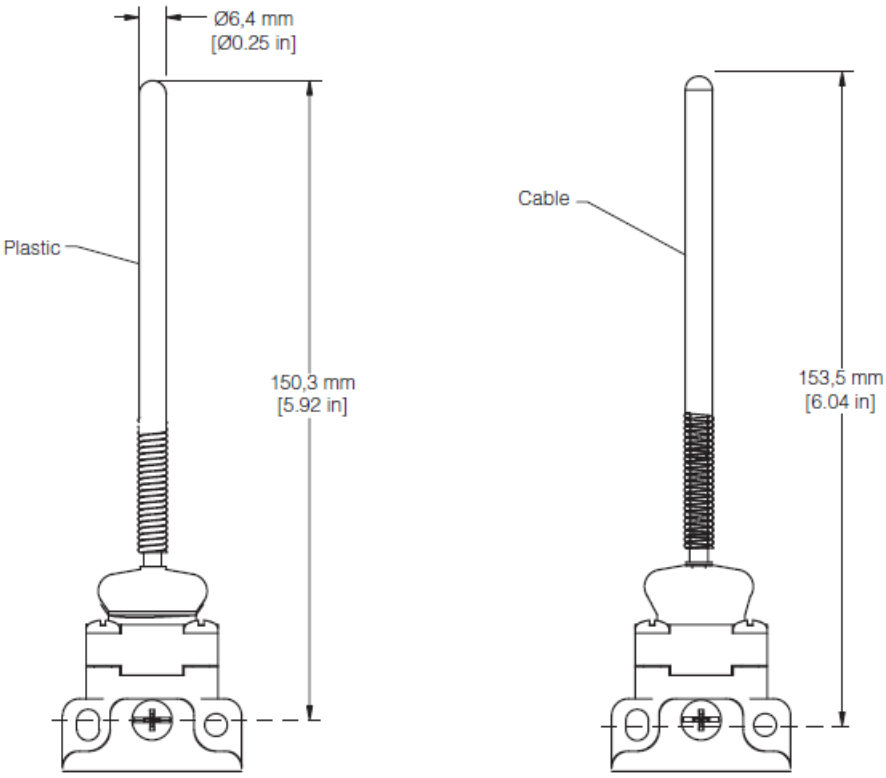
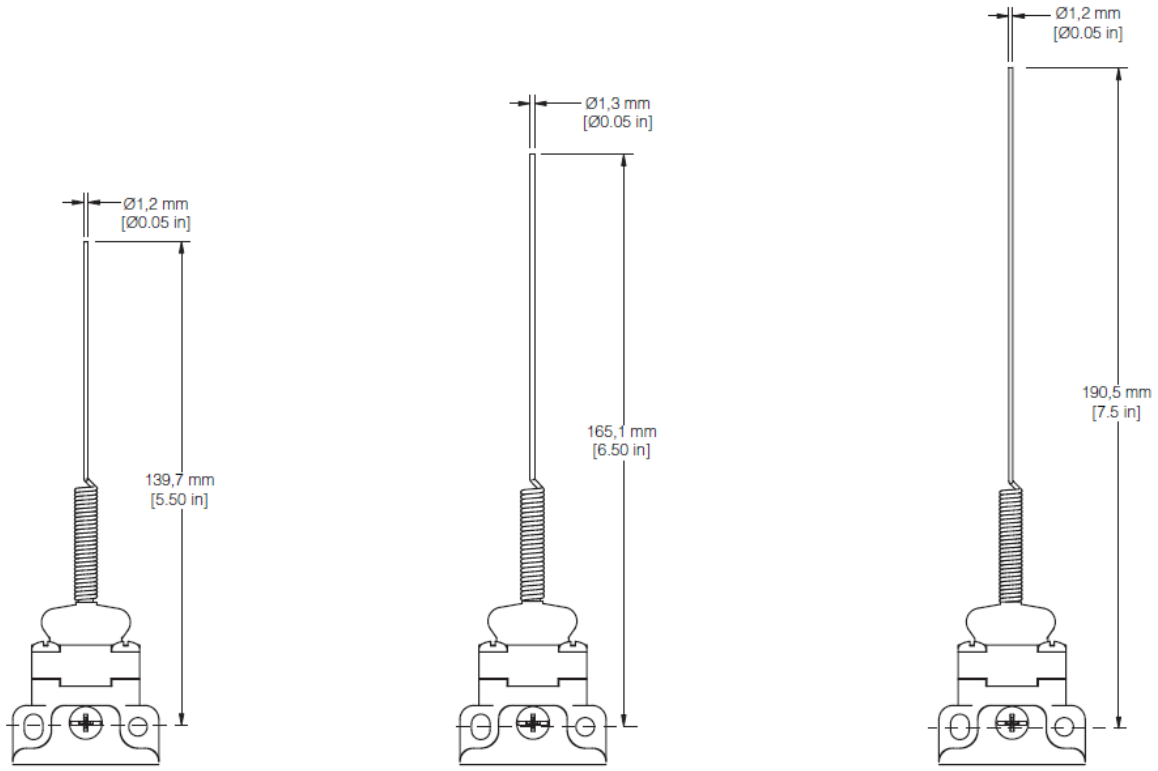


Figure 15. Cat Whisker Wobbles

5.5 inches (stainless steel) **6.5 inches (stainless steel)** **7.5 inches (stainless steel)**



Notes:

- Free position, operate point, overtravel, and pretravel all to EN50041
- Refer to page 5 for instructions on how to read operating characteristics and specifications

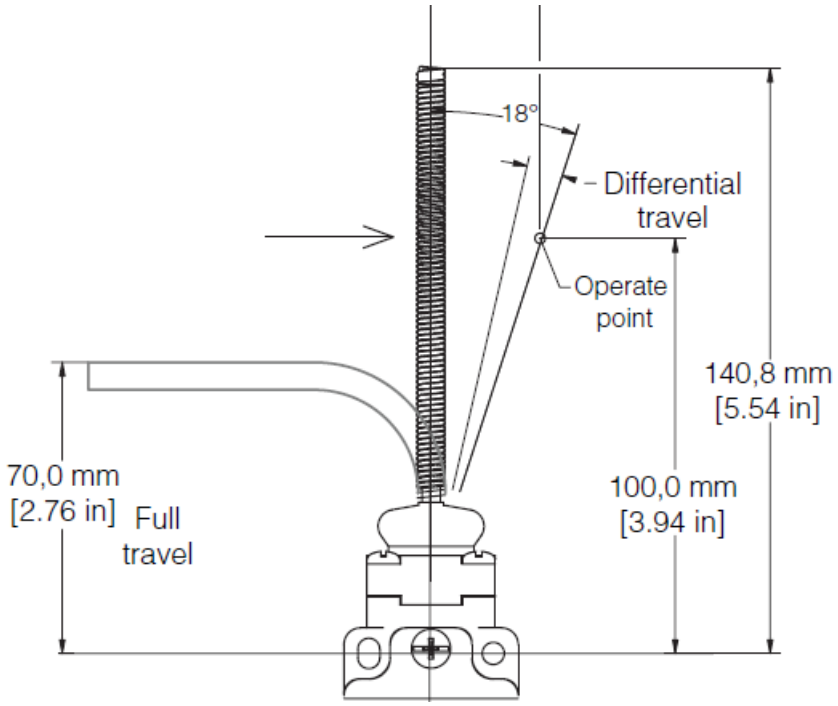


FIGURE 16. HEAD CODE: E
WOBBLE STICK ANGULAR ACTUATION OPERATING CHARACTERISTICS

FIGURE 16. HEAD CODE: E
WOBBLE STICK ANGULAR ACTUATION OPERATING CHARACTERISTICS

Catalog listing	Contact block diagram	Nominal travels and related terminals Contact Closed / Contact Open / Diff. Travel **Positive Opening to IEC 947-5-1	Operating force max.	Disconnect force, max.	Operating degrees, max.	Operating velocity, min.	Max. operate rate cycles/min
GL**01K GL**07K	SNAP-ACTION CONTACTS SINGLE POLE Zb	18° 21-22 13-14 8° Differential travel	0,1 N [0.9 lb]	n/a	360°	8°	100
GL**03K GL**33K	SLOW ACTING BREAK BEFORE MAKE Zb	18° 21-22 13-14 25°	0,1 N [0.9 lb]	n/a	360°	8°	100
GL**04K GL**34K	SLOW ACTING MAKE BEFORE BREAK Zb	25° 21-22 13-14 18°	0,1 N [0.9 lb]	n/a	360°	8°	100
GL**05K GL**35K	SLOW ACTING 2X	25° 13-14 23-24	0,1 N [0.9 lb]	n/a	360°	8°	100
GL**06K GL**36K	SLOW ACTING 2Y	18° 11-12 21-22	0,1 N [0.9 lb]	n/a	360°	8°	100
GL**20K GL**22K GL**24K GL**32K	SNAP ACTION CONTACTS DOUBLE POLE	18° 11-12, 21-22 13-14, 23-24 8° Differential travel	0,1 N [0.9 lb]	n/a	360°	8°	100

Notes:

- Free position, operate point, overtravel, and pretravel all to EN50041
- Refer to page 5 for instructions on how to read operating characteristics and specifications

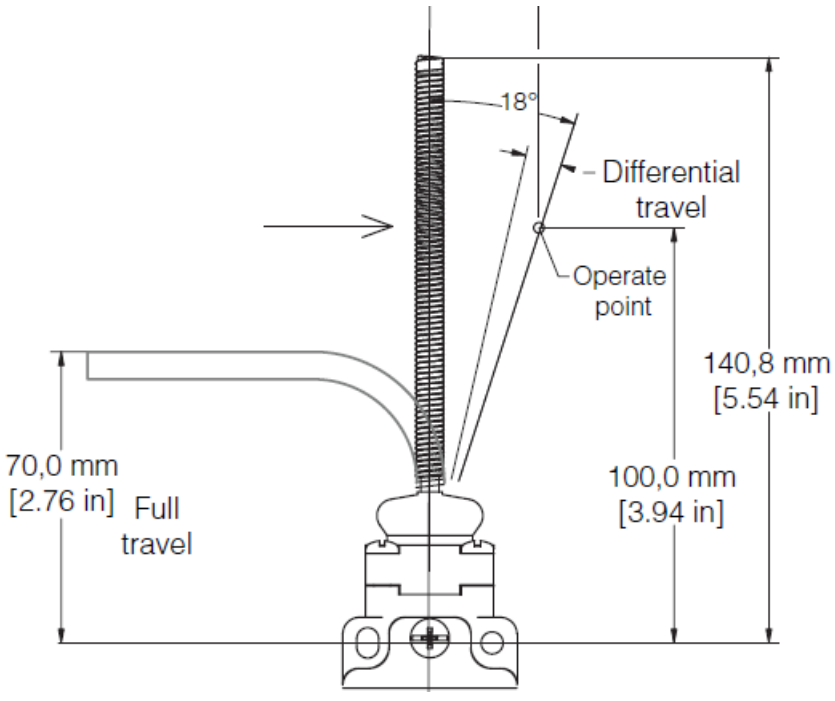


FIGURE 17. HEAD CODE: K

WOBBLE STICK ANGULAR ACTUATION OPERATING CHARACTERISTICS

FIGURE 17. HEAD CODE: K
WOBBLE STICK ANGULAR ACTUATION OPERATING CHARACTERISTICS

Catalog listing	Contact block diagram	Nominal travels and related terminals Contact Closed · Contact Open · Diff. Travel **Positive Opening to IEC 947-5-1	Operating force max.	Disconnect force, max.	Operating degrees, max.	Operating velocity, min.	Max. operate rate cycles/min
GL**01K GL**07K	SNAP-ACTION CONTACTS SINGLE POLE Zb	21-22, 13-14: 26°; 12° Differential travel	1,3 N [0.3 lb]	n/a	0,5 M/S [19.7 in/S]	11 mm/S [0.43 in/S]	100
GL**03K GL**33K	SLOW ACTING BREAK BEFORE MAKE Zb	21-22, 13-14: 26.5°; 38.1°	1,3 N [0.3 lb]	n/a	0,5 M/S [19.7 in/S]	11 mm/S [0.43 in/S]	100
GL**04K GL**34K	SLOW ACTING MAKE BEFORE BREAK Zb	21-22, 13-14: 38.1°; 26.5°	1,3 N [0.3 lb]	n/a	0,5 M/S [19.7 in/S]	11 mm/S [0.43 in/S]	100
GL**05K GL**35K	SLOW ACTING 2X	21-22, 13-14: 38.1°	1,3 N [0.3 lb]	n/a	0,5 M/S [19.7 in/S]	11 mm/S [0.43 in/S]	100
GL**06K GL**36K	SLOW ACTING 2Y	11-12, 21-22: 26.5°	1,3 N [0.3 lb]	n/a	0,5 M/S [19.7 in/S]	11 mm/S [0.43 in/S]	100
GL**20K GL**22K GL**24K GL**32K	SNAP ACTION CONTACTS DOUBLE POLE	11-12, 21-22, 13-14, 23-24: 26°; 12° Differential travel	1,3 N [0.3 lb]	n/a	0,5 M/S [19.7 in/S]	11 mm/S [0.43 in/S]	100

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Documents / Resources

	Honeywell Micro Global Limit Switch GLS [pdf] Installation Guide Micro Global Limit Switch GLS

References

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