# **GLA SERIES**

## MICRO SWITCH Global Limit Switches



**DESCRIPTION** 

Honeywell's MICRO SWITCH GLA Limit Switch Series is designed to global EN50041 standards and well suited for worldwide applications. The modular design (heads/actuators, bodies, and contact blocks) of the limit switch allows for rapid response to meet customer applications. The rugged die-cast metal housing of the switch is ideal for indoor and outdoor applications where a degree of IP or NEMA enclosure sealing is required. Normally closed snap-action contacts and normally closed slow-action contacts are positive opening .

## **VALUE TO CUSTOMERS**

- Easy to install and maintain
- Rugged metal construction

#### **FEATURES**

- Designed to EN50041 standard, 30 mm x 60 mm mounting
- Available as a standard body or plug-in body with same footprint
- Wide range of actuator heads and levers
- Side rotary switches factory set for CW and CCW actuation; field adjustable for CW only or CCW only
- Certified for global applications; UL/ CSA (Americas/Canada), CE (Europe), CCC (Asia-Pacific)<sup>1</sup>
- Conforms to IEC/EN 60947-5-1, EN 45545-2 (GLA/GLF Series), and EN 61373 (GLA)
- Sealed to IP67 and NEMA/UL 1, 4, 12, and 13
- Operating temperatures as low as -40 °C to 85 °C [-40 °F to 185 °F]
- Multiple connectivity options to meet most applications: four different threaded conduits, micro-change connectors, mini-change connectors, Deutsch style 4-pin connector
- One or two LED indicators available in switch body
- Single pole double throw, two pole single throw contact blocks (1NC/1NO, 2NC, 2NO) are galvanically (electrically) isolated (Zb) and designed with bifurcated contacts
- Two pole double throw contact block (2NC/2NO) has each pole galvanically (electrically) isolated (Zb)
- Normally closed contacts are positive opening , except center neutral style
- Contact blocks are available as snap action or slow action
- Analog output available with side rotary actuator
- Mechanical life up to 15 million operations

#### **POTENTIAL APPLICATIONS**

- · Aerial lifts, boom lifts
- Automotive assembly lines and machining centers
- Agriculture equipment
- Conveyors
- Doors and apertures
- · Material handling
- Machine tools
- Railroad locomotives and railroad signaling equipment
- Transportation hubs
- Valves

### **DIFFERENTIATION**

- Side rotary actuator incorporates dual bearing design which prevents side loading during operation
- Removable contact block allows for ease of wiring
- Modular design of limit switch (heads/ actuators, bodies, and contact blocks) allows for rapid customization and delivery
- Optional 1 LED or 2 LED pilot lights in limit switch front cover to indicate voltage present to switch and/or switch actuated
- Specialty contact options, sequential (2-step style) action, and center neutral action



## **PORTFOLIO**

The GLA Limit Switch Series with standard or plug-in housings (EN50041 design,

with 30 mm x 60 mm mounting) complement the smaller GLC Series, GLD Series and GLE Series (EN50047 design, with 20 mm to 22 mm mounting). The GLA Series is part of the MICRO SWITCH Limit Switch Series that includes the HDLS Series (Heavy Duty Limit Switch) and General Purpose Limit Switch (LS) Series.

<sup>1</sup>CCC certification is not available on the GL Series Switches sold within Europe, Middle East, and Africa. Option for CCC certification in these regions is available upon request.



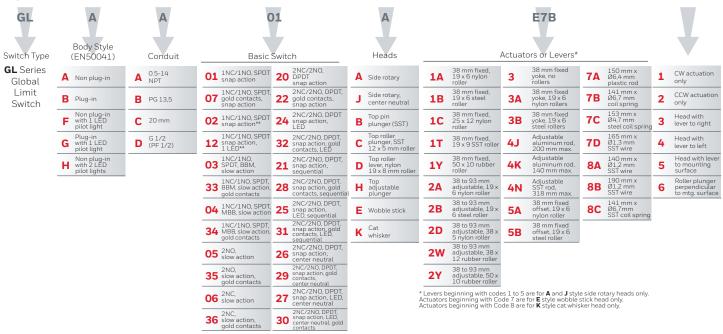
TABLE 1. SPECIFICATIONS	
Characteristic	Parameter
Description	EN50041 industrial grade limit switch, standard body or plug-in body with 30 mm x 60 mm mounting
Certifications	CE, CCC <sup>1</sup> , CSA, UL
Conforming to standards	IEC/EN 60947-5-1, EN45545-2 (GLA/GLF Series), EN 61373
Housing material	Electrostatic epoxy coated zinc
Actuators	Side rotary, top pin plunger, top adjustable plunger, top roller plunger, top roller lever, wobble stick (multi-directional) actuator, cat whisker (multi-directional) actuator
Termination	0.5-14 NPT; PG 13,5; M20; G 1/2 (PF 1/2); Deutsch style 4-pin connector; Micro-change connector; Mini-change connector; Pre-cabled
Contact options*	1NC/1NO, 2NC, 2NO, 2NC/2NO, 2NC/2NO sequential, 2NC/2NO center neutral
Contact type	Snap action, slow action break-before-make (BBM), slow action make-before-break (MBB), slow action
Contact material	Silver alloy (standard), gold-plated (low-energy applications)
Utilization category	ac15, A300/A600; dc13, Q300
Rated operational voltage (Ue)	240 Vac, 600 Vac, 250 Vdc
Rated operational current (le)	3 A, 1.2 A, 0.27 A
Thermal current (Ith)	10 A, 2.5 A
Rated insulation voltage (Ui)	300 V; 600 V
Rated impulse withstand voltage (Uimp)	2500 V
Short circuit protective device (SCPD), type, and rating	Class J fuse, rated 10A, 600 V
Pollution degree	3
Sealing	IP67; NEMA/UL 1, 4, 12, and 13
Operating temperature	-40 °C to 85 °C [-40 °C to 185 °F] side rotary actuator -25 °C to 85 °C [-13 °F to 185 °F] other actuators
Mechanical life	Up to 15 million operations
Vibration (actuator not fitted)	10 g conforming to IEC 68-2-6; railway application per IEC 61373 Class I Car B type
Shock (actuator not fitted)	50 g conforming to IEC 68-2-27; railway application per IEC 61373 Class I Car B type
Options	Standard limit switch with 1 LED pilot light (GLF Series) or 2 LED pilot lights (GLH Series) in front cover Plug-in limit switch with 1 LED pilot light (GLG Series) in front cover

<sup>\*</sup>Normally closed (NC) contacts are positive opening except for the center neutral limit switches

<sup>&</sup>lt;sup>1</sup>CCC certification is not available on the GL Series Switches sold within Europe, Middle East, and Africa. Option for CCC certification in these regions is available upon request.

	LECTRICAL	RATINGS										
	Electrical Rating											
ac	AC15	dc	DC12									
A600 Ue	AC15 le	Q300 Ue	DC13 le	Gold-plated								
(Volts)	(Amps)	(Volts)	(Amps)	contacts								
120	6	24	2.8									
240	3	125	0.55									
380	1.9	250	0.27	1 V 10 μA min.								
480	1.5			50 V 100 mA max.								
500	1.4											
600	1.2											

Figure 1. Product Nomenclature



\*\*NOTE: Basic switch codes 02 and 12 may only be used with body styles B and G.

36 Slow action, gold contacts

ABLE 3	. MICRO S	SWITCH GL	A SERIES SI	DE ROTA	RY OR	DER GUIDE			
								Catalog	Listing*
	Head and Lever Type	Contact Arrangement	Contact Type	Contact Material	Operating Torque max. Nm [in-lb]	Bar Chart (degrees)  ■ contact closed □ contact open	With LED Pilot Light/s	0.5-14 NPT Conduit	20 mm Conduit
		1NC/1NO	Snap action	Silver alloy	0,33 [2.9]	21-22	-	GLAA01A	GLAC01
		1NC/1NO	Snap action	Silver alloy	0,33 [2.9]	28° 55°** 75° min. 21-22	1 LED (yellow)	GLFA01A	-
		1NC/1NO	Snap action	Gold- plated	0,33 [2.9]	21-22 26° 55°** 75° min. 21-22 3-14 2° 51°** 26° 26° 26° 26° 26° 26° 26° 26° 26° 26°	-	GLAA07A	GLAC07
		1NC/1NO	Slow action, BBM	Silver alloy	0,33 [2.9]	21-22 26° ** 75° min. 13-14 38°	-	-	GLAC03
Honeywell more for the contract of the contrac	Side rotary, no lever	1NC/1NO	Slow action, MBB	Silver alloy	0,33 [2.9]	21-22 13-14 28° ** 75° min.	-	GLAA04A	-
		2NC	Slow action	Silver alloy	0,33 [2.9]	26° ** 75° min. 11-12 21-22	-	-	GLAC06
		2NC/2NO	Snap action	Silver alloy	0,33 [2.9]	11-12, 21-22 13-14, 23-24 12° Differential travel	-	GLAA20A	-
		2NC/2NO Center neutral	Snap action	Silver alloy	0,33 [2.9]	0° 16° 75° min. 11-12	-	GLAA26J	-
		2NC/2NO Center neutral	Snap action	Gold- plated	0,33 [2.9]	0° 16° 75° min. 1 11-12	-	GLAA29J	-
		1NC/1NO	Snap action	Silver alloy	0,33 [2.9]	21-22 26° 55°** 75° min. 21-22 3-14 2° Differential travel	-	GLAA01A1A	GLAC01
		1NC/1NO	Snap action	Gold- plated	0,33	21-22 26° 55°** 75° min. 21-22 3-14 3-14 3-14 3-12° Differential travel	2 LEDs (green & yellow)	GLHA07A1A	-
)		1NC/ 1NO	Slow action, BBM	Silver alloy	0,33 [2.9]	21-22 13-14 38°	_	GLAA03A1A	-
	Side rotary, fixed	2NC/2NO	Snap action	Silver alloy	0,33 [2.9]	26° 55°** 75° min. 11-12, 21-22	-	GLAA20A1A	GLAC20
Hongwell Solling	lever, nylon roller	2NC/2NO	Snap action	Silver alloy	0,33 [2.9]	26° 55°** 75° min. 11-12, 21-22 13-14, 23-24 12° Differential travel	2 LEDs (green & yellow)	-	GLHC24
		2NC/2NO Sequen- tial	Snap action	Silver	0,33 [2.9]	11-12 27° 42° 75° min. > 13-14 21-22 23-24	-	GLAA21A1A	-
		2NC/2NO Center neutral	Snap action	Silver alloy	0,33 [2.9]	0° 16° 75° min. † 11-12 13-14 ‡ 21-22 23-24 8° Differential travel 8° Differential travel	-	GLAA26J1A	-

<sup>\*</sup> Note: When conduit style G1/2 (PF1/2) is required, change the 4th digit in the catalog listing to the letter D. For example, GLAA01A1A would change to GLAD01A1A for G1/2 conduit. When conduit style PG13,5 is required, change the 4th digit in the cagalog listing to the letter B. For example, GLAA01A1A would change to GLAB01A1A for PG13,5 conduit.

<sup>\*\*</sup> Positive opening occurs.

<sup>&</sup>lt;sup>†</sup> Contacts 11-12, 13-14 operate in CCW direction. <sup>‡</sup> Contacts 21-22, 23-24 operate in CW direction.

TABLE 3	. MICRO	SWITCH GL	A SERIES SI	DE ROTA	RY OR	DER GUIDE															
	ı						1	Catalog	Listing*												
	Head and Lever Type	Contact Arrangement	Contact Type	Contact Material	Operating Torque max. Nm [in-lb]	Bar Chart (degrees) ■ contact closed □ contact open	With LED Pilot Light/s	0.5-14 NPT Conduit	20 mm Conduit												
		1NC/1NO	Snap action	Silver alloy	0,33 [2.9]	21-22	-	GLAA01A1B	GLAC01A1B												
		1NC/1NO	Snap action	Silver alloy	0,33 [2.9]	21-22   26° 55°** 75° min.   >	1 LED (yellow)	GLFA01A1B	-												
		1NC/1NO	Snap action	Silver alloy	0,33	21-22 13-14	2 LEDs (green & yellow)	GLHA01A1B	GLHC01A1B												
		1NC/1NO	Snap action	Gold- plated	0,33 [2.9]	21-22 13-14	-	GLAA07A1B	GLAC07A1B												
		1NC/1NO	Slow action, BBM	Silver alloy	0,33 [2.9]	21-22 13-14 38°	-	GLAA03A1B	-												
		1NC/1NO	Slow action, MBB	Silver alloy	0,33 [2.9]	21-22 13-14 26° ** 75° min.	-	GLAA04A1B	-												
		2NC	Slow action	Silver alloy	0,33 [2.9]	26° ** 75° min. 11-12 21-22	-	GLAA06A1B	GLAC06A1B												
	Side rotary,	2NC/2NO	Snap action	Silver alloy	0,33 [2.9]	26° 55°** 75° min. 11-12, 21-22 13-14, 23-24 12° Differential travel	-	GLAA20A1B	GLAC20A1B												
Honeywell & State of the State	fixed lever, steel roller	2NC/2NO	Snap action	Gold- plated	0,33 [2.9]	26° 55°** 75° min. 11-12, 21-22 13-14, 23-24 12° Differential travel	-	GLAA22A1B	-												
0	Tottel	2NC/2NO	Snap action	Silver alloy	0,33 [2.9]	11-12, 21-22 13-14, 23-24 12° Differential travel	1 LED (yellow)	GLFA24A1B	-												
														2NC/2NO	Snap action	Silver alloy	0,33 [2.9]	26° 55°* 75° min. 11-12, 21-22 13-14, 23-24 12° Differential travel	2 LEDs (green & yellow)	-	-
		2NC/2NO	Snap action	Gold- plated	0,33 [2.9]	11-12, 21-22 13-14, 23-24 12° Differential travel	2 LEDs (green & yellow)	GLHA32A1B	-												
		2NC/2NO Sequential	Snap action	Silver alloy	0,33 [2.9]	11-12 13-14 21-22 23-24 8° Differential travel	-	-	GLAC21A1B												
		2NC/2NO Center neutral	Snap action	Silver alloy	0,33 [2.9]	0° 16° 75° min. 13-14 12-122 23-24 8° Differential travel 8° Differential travel	-	GLAA26J1B	-												
		2NC/2NO Center neutral	Snap action	Gold- plated	0,33	0° 16° 75° min. † 11-12	-	GLAA29J1B	-												

<sup>\*</sup> Note: When conduit style G1/2 (PF1/2) is required, change the 4th digit in the catalog listing to the letter D. For example, GLAA01A1A would change to GLAA01A1A for G1/2 conduit. When conduit style PG13,5 is required, change the 4th digit in the cagalog listing to the letter B. For example, GLAA01A1A would change to GLAB01A1A for PG13,5 conduit.

<sup>\*\*</sup> Positive opening occurs.

<sup>&</sup>lt;sup>†</sup> Contacts 11-12, 13-14 operate in CCW direction. <sup>‡</sup> Contacts 21-22, 23-24 operate in CW direction.

TABLE 3	. MICRO	SWITCH GL	A SERIES SI	DE ROT	ARY O	RDER GUIDE, CONTINUED			
								Catalog	Listing*
	Head and Lever Type	Contact Arrangement	Contact Type	Contact Material	Operating Torque max. Nm [in-lb]	Bar Chart (degrees) ■ contact closed □ contact open	With LED Pilot Light/s	0.5-14 NPT Conduit	20 mm Conduit
		1NC/1NO	Snap ac- tion	Silver alloy	0,33 [2.9]	21-22 26° 55°** 75° min. > 13-14	-	GLAA01A2A	GLAC01A2
		1NC/1NO	Snap ac- tion	Gold- plated	0,33 [2.9]	21-22   26° 55°** 75° min.   >	-	GLAA07A2A	-
	Side rotary,	2NC	Slow action	Silver alloy	0,33 [2.9]	26° ** 75° min.	-	GLAA06A2A	-
	adjust- able lever,	2NC/2NO	Snap ac- tion	Silver alloy	0,33 [2.9]	11-12, 21-22 13-14, 23-24 26° 55°* 75° min. > <	_	GLAA20A2A	-
Honoyam U	nylon roller	2NC/2NO	Snap ac- tion	Gold- plated	0,33 [2.9]	26° 55°** 75° min. 11-12, 21-22 13-14, 23-24 12° Differential travel	-	GLAA22A2A	-
		2NC/2NO	Snap ac- tion	Silver alloy	0,33 [2.9]	11-12, 21-22 13-14, 23-24 12° Differential travel	1 LED (yellow)	GLFA24A2A	-
		2NC/2NO Center neutral	Snap ac- tion	Silver alloy	0,33	0° 16° 75° min. † 11-12 13-14 † 21-22 23-24  8° Differential travel 8° Differential travel	-	GLAA26J2A	-
		1NC/1NO	Snap ac- tion	Silver alloy	0,33 [2.9]	21-22 26° 55°** 75° min. > 13-14 12° Differential travel	-	GLAA01A2B	GLAC01A2I
		1NC/1NO	Snap ac- tion	Gold- plated	0,33	21-22 26° 55°** 75° min. > 13-14 12° Differential travel	-	GLAA07A2B	GLAC07A2I
		1NC/1NO	Snap ac- tion	Silver alloy	0,33 [2.9]	21-22 26° 55°** 75° min. > 13-14	1 LED (yellow)	GLFA01A2B	GLFC01A2E
10	Side rotary,	1NC/1NO	Slow ac- tion, BBM	Silver alloy	0,33 [2.9]	21-22 13-14 38°	-	GLAA03A2B	-
	adjust- able lever,	1NC/1NO	Slow ac- tion, BBM	Silver alloy	0,33 [2.9]	21-22 13-14 38°	1 LED (yellow)	GLFA03A2B	-
e de	steel roller	1NC/1NO	Slow ac- tion, BBM	Gold- plated	0,33 [2.9]	21-22 13-14 38°	1 LED (yellow)	GLFA33A2B	-
		2NC	Slow action	Silver alloy	0,33 [2.9]	26° ** 75° min. 11-12 21-22	-	-	GLAC06A2
		2NC/2NO	Snap ac- tion	Silver alloy	0,33 [2.9]	11-12, 21-22 13-14, 23-24 12° Differential travel	-	GLAA20A2B	GLAC20A2
		2NC/2NO Center neutral	Snap ac- tion	Silver alloy	0,33 [2.9]	0° 16° 75° min. † 11-12 13-14 ‡ 21-22 23-24 8° Differential travel 8° Differential travel	-	GLAA26J2B	-

<sup>\*</sup> Note: When conduit style G1/2 (PF1/2) is required, change the 4th digit in the catalog listing to the letter D. For example, GLAA01A1A would change to GLAA01A1A for G1/2 conduit. When conduit style PG13,5 is required, change the 4th digit in the cagalog listing to the letter B. For example, GLAA01A1A would change to GLAB01A1A for PG13,5 conduit.

<sup>\*\*</sup> Positive opening occurs. † Contacts 11-12, 13-14 operate in CCW direction. † Contacts 21-22, 23-24 operate in CW direction.

TABLE 3.	MICRO S	WITCH GL	A SERIES SIE	DE ROTA	ARY OF	DER GUIDE, CONTINUED			
		,	,			,		Catalog	Listing*
	Head and Lever Type	Contact Arrangement	Contact Type	Contact Material	Operating Torque max. Nm [in-lb]	Bar Chart (degrees) ■ contact closed □ contact open	With LED Pilot Light/s	0.5-14 NPT Conduit	20 mm Conduit
	Side rotary, adjust- able lever, Ø 50 mm rubber roller	1NC/1NO	Snap action	Silver alloy	0,33 [2.9]	21-22 13-14 26° 55°** 75° min. > 13-14 21° Differential travel	-	GLAA01A2Y	-
		1NC/1NO	Snap action	Silver alloy	0,33 [2.9]	21-22 26° 55°** 75°min. > 13-14 12° Differential travel	_	GLAA01A4J	GLAC01A4J
		1NC/1NO	Snap action	Silver alloy	0,33	21-22   26° 55°** 75° min.   >	1 LED (yellow)	-	GLFC01A4J
		1NC/1NO	Snap action	Silver alloy	0,33	21-22 26° 55°** 75° min. > 13-14 12° Differential travel	2 LEDs (green & yellow)	GLHA01A4J	-
		1NC/1NO	Slow action, BBM	Silver alloy	0,33	21-22 13-14 38°	-	GLAA03A4J	-
	Side	1NC/1NO	Slow action, MBB	Silver alloy	0,33 [2.9]	21-22 13-14 26°	_	GLAA04A4J	-
	rotary, adjust- able alu-	2NC/2NO	Snap action	Silver alloy	0,33	11-12, 21-22 13-14, 23-24 12° Differential travel	_	GLAA20A4J	-
	minum rod	2NC/2NO	Snap action	Gold- plated	0,33 [2.9]	11-12, 21-22 13-14, 23-24 12° Differential travel	_	GLAA22A4J	-
		2NC/2NO	Snap action	Silver alloy	0,33	11-12, 21-22 13-14, 23-24 12° Differential travel	1 LED (yellow)	GLFA24A4J	-
		2NC/2NO	Snap action	Gold- plated	0,33 [2.9]	26° 55°** 75° min. 11-12, 21-22 13-14, 23-24 12° Differential travel	1 LED (yellow)	-	GLFC32A4J
		2NC/2NO	Snap action	Silver alloy	0,33	26° 55° 75° min. 11-12, 21-22 13-14, 23-24 12° Differential travel	2 LEDs (green & yellow)	GLHA24A4J	-
		2NC/2NO Sequen- tial	Snap action	Silver alloy	0,33	27° 42° 75° min. 11-12 13-14 21-22 23-24 8° Differential travel 8° Differential travel	-	GLAA21A4J	-

<sup>\*</sup> Note: When conduit style G1/2 (PF1/2) is required, change the 4th digit in the catalog listing to the letter D. For example, GLAA01A1A would change to GLAD01A1A for G1/2 conduit. When conduit style PG13,5 is required, change the 4th digit in the cagalog listing to the letter B. For example, GLAA01A1A would change to GLAB01A1A for PG13,5 conduit.

<sup>\*\*</sup> Positive opening occurs.

TABLE 3.	MICRO S	WITCH GL	A SERIES SIE	DE ROTA	ARY OF	DER GUIDE, CONTINUED			
								Catalog Listing*	
	Head and Lever Type	Contact Arrangement	Contact Type	Contact Material	Operating Torque max. Nm [in-lb]	Bar Chart (degrees) ■ contact closed □ contact open	With LED Pilot Light/s	0.5-14 NPT Conduit	20 mm Conduit
	Side rotary, fixed	2NC	Slow action	Silver alloy	0,33	11-12 21-22	-	GLAA06A5A	-
American Grant	offset lever, nylon roller	2NC/2NO	Snap action	Silver alloy	0,33	26° 55°** 75° min. 11-12, 21-22 13-14, 23-24 12° Differential travel	-	GLAA20A5A	-

<sup>\*</sup> Note: When conduit style G1/2 (PF1/2) is required, change the 4th digit in the catalog listing to the letter D. For example, GLAA01A1A would change to GLAD01A1A for G1/2 conduit. When conduit style PG13,5 is required, change the 4th digit in the cagalog listing to the letter B. For example, GLAA01A1A would change to GLAB01A1A for PG13,5 conduit.

<sup>\*\*</sup> Positive opening occurs.

TABLE 4	. MICRO S	WITCH GL	A SERIES PL	UNGER	ORDE	R GUIDE																		
	,							Catalog	Listing*															
	Head Type	Contact Arrangement	Contact Type	Contact Material	Operating Force max. N [lb]	Bar Chart (millimeters) ■ contact closed □ contact open	With LED Pilot Light/s	0.5-14 NPT Conduit	20 mm Conduit															
		1NC/1NO	Snap action	Silver alloy	16 [3.6]	37.5 35 33** 30.5 21-22 13-14	-	GLAA01B	GLAC01B															
		1NC/1NO	Snap action	Silver alloy	16 [3.6]	37.5 35 33** 30.5 21-22 13-14	1 LED (yellow)	GLFA01B	GLFC01B															
		1NC/1NO	Snap action	Gold- plated	16 [3.6]	37.5 35 33** 30.5 21:22 13-14	-	-	GLAC07B															
		1NC/1NO	Slow action, BBM	Silver alloy	16 [3.6]	37.5 35** 30.5 21-22 13-14	-	GLAA03B	-															
Management of the control of the con	Top pin plunger	2NC/2NO	Snap action	Silver alloy	16 [3.6]	37.5 35 33** 30.5 11-12, 21-22 13-14, 23-24 0.9 Differential travel	-	GLAA20B	GLAC20B															
																	2NC/2NO	Snap action	Silver alloy	16 [3.6]	37.5 35 33** 30.5 11-12, 21-22 13-14, 23-24 0.9 Differential travel	1 LED (yellow)	GLFA24B	-
		2NC/2NO	Snap action	Gold- plated	16 [3.6]	37.5 35 33** 30.5 11-12, 21-22 13-14, 23-24 0.9 Differential travel	-	GLAA22B	GLAC22B															
		2NC/2NO	Snap action	Gold- plated	16 [3.6]	37.5 35 33.8 30.5 11.12	1 LED (yellow)	GLFA32B	-															

<sup>\*</sup> Note: When conduit style G1/2 (PF1/2) is required, change the 4th digit in the catalog listing to the letter D. For example, GLAA01A1A would change to GLAA01A1A for G1/2 conduit. When conduit style PG13,5 is required, change the 4th digit in the cagalog listing to the letter B. For example, GLAA01A1A would change to GLAB01A1A for PG13,5 conduit.

<sup>\*\*</sup> Positive opening occurs.

TABLE 5	. MICRO S	SWITCH GL	A SERIES RO	LLER P	PLUNG	ER ORDER GUIDE			
		1						Catalog	Listing*
	Head Type	Contact Arrangement	Contact Type	Contact Material	Operating Force max. N [lb]	Bar Chart (millimeters) ■ contact closed □ contact open	With LED Pilot Light/s	0.5-14 NPT Conduit	20 mm Conduit
		1NC/1NO	Snap action	Silver alloy	16 [3.6]	50.5 48 46** 43.5 21-22 13-14	-	GLAA01C	GLAC01C
		1NC/1NO	Snap action	Silver alloy	16 [3.6]	50.5 48 46** 43.5 21-22	1 LED (yellow)	GLFA01C	-
		1NC/1NO	Snap action	Silver alloy	16 [3.6]	21-22	2 LEDs (green & yellow)	GLHA01C	-
		1NC/1NO	Snap action	Gold- plated	16 [3.6]	50.5 48 46** 43.5 21-22 13-14	-	GLAA07C	GLAC07C
		1NC/1NO	Snap action	Gold- plated	16 [3.6]	50.5 48 46** 43.5 21-22	1 LED (yellow)	GLFA07C	-
		1NC/1NO	Slow action, BBM	Silver alloy	16 [3.6]	50.5 48** 43.5 21-22 13-14 47	_	GLAA03B	-
Honeywood	Top roller	1NC/1NO	Slow action, MBB	Silver alloy	16 [3.6]	50.5 47** 43.5 21-22 13-14 48	-	GLAA04B	-
	plunger	2NC	Slow action	Silver alloy	16 [3.6]	50.5 48** 43.5 11-12 > 21-22	-	GLAA06C	GLAC06C
		2NC/2NO	Snap action	Silver alloy	16 [3.6]	50.5 48 46** 43.5 11-12, 21-22	-	GLAA20C	GLAC20C
		2NC/2NO	Snap action	Gold- plated	16 [3.6]	50.5 48 46** 43.5 11-12, 21-22 13-14, 23-24	-	GLAA22C	-
		2NC/2NO	Snap action	Silver alloy	16 [3.6]	50.5 48 46** 43.5 11-12, 21-22 1 3-14, 23-24 0.9 Differential travel	1 LED (yellow)	GLFA24C	-
		2NC/2NO	Snap action	Gold- plated	16 [3.6]	50.5 48 46** 43.5 11-12, 21-22 13-14, 23-24 0.9 Differential travel	2 LEDs (green & yellow)	-	GLHC32C
		2NC/2NO Sequen- tial	Snap action	Silver alloy	16 [3.6]	11-12 4 43.5 11-12 3-14 21-22 3-24	-	GLAA21C	-

<sup>\*</sup> Note: When conduit style G1/2 (PF1/2) is required, change the 4th digit in the catalog listing to the letter D. For example, GLAA01A1A would change to GLAD01A1A for G1/2 conduit. When conduit style PG13,5 is required, change the 4th digit in the cagalog listing to the letter B. For example, GLAA01A1A would change to GLAB01A1A for PG13,5 conduit...

<sup>\*\*</sup> Positive opening occurs.

TABLE 6	. MICRO S	SWITCH GL	A SERIES W	OBBLE (	ORDER	GUIDE			
								Catalog	Listing*
	Head Type	Contact Arrangement	Contact Type	Contact Material	Operating Force max. N [lb]	Bar Chart (degrees) ■ contact closed □ contact open	With LED Pilot Light/s	0.5-14 NPT Conduit	20 mm Conduit
	Wobble stick, 150 mm plastic rod	1NC/1NO	Snap action	Silver alloy	0,2 [1.8]	21-22 13-14   18°   35°   > <   > <   > <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   >   <   <	_	GLAA01E7A	-
		1NC/1NO	Snap action	Silver alloy	0,2 [1.8]	18° 35° 21-22 13-14	-	GLAA01E7B	GLAC01E7B
		1NC/1NO	Snap action	Silver alloy	0,2 [1.8]	18° 35° 21-22 13-14 8° Differential travel	1 LED (yellow)	GLFA01E7B	GLFC01E7B
	Wobble	1NC/1NO	Snap action	Silver alloy	0,2 [1.8]	18° 35° 21-22 13-14	2 LEDs (green & yellow)	GLHA01E7B	-
	stick, 141 mm sst coil spring	1NC/1NO	Snap action	Gold- plated	0,2 [1.8]	18° 35° 21-22 13-14	-	-	GLAC07E7B
Homer and Company of the Company of	spring	1NC/1NO	Slow action, BBM	Silver alloy	0,2 [1.8]	18° 35° 21-22 13-14 25°	-	-	-
		2NC/2NO	Snap action	Silver alloy	0,2 [1.8]	18° 35° 11-12, 21-22 13-14, 23-24  8° Differential travel	-	GLAA20E7B	GLAC20E7B
		2NC/2NO	Snap action	Silver alloy	0,2 [1.8]	11-12, 21-22 13-14, 23-24 8° Differential travel	1 LED (yellow)	GLFA24E7B	-
	Wobble stick, 165 mm sst wire	1NC/1NO	Snap action	Silver alloy	0,2 [1.8]	21-22 13-14 8° Differential travel	_	GLAA01E7D	-

<sup>\*</sup> Note: When conduit style G1/2 (PF1/2) is required, change the 4th digit in the catalog listing to the letter D. For example, GLAA01A1A would change to GLAD01A1A for G1/2 conduit. When conduit style PG13,5 is required, change the 4th digit in the cagalog listing to the letter B. For example, GLAA01A1A would change to GLAB01A1A for PG13,5 conduit.

TABLE 6	. MICRO S	SWITCH GL	A SERIES W	OBBLE (	ORDER	GUIDE			
	1							Catalog	Listing*
	Head Type	Contact Arrangement	Contact Type	Contact Material	Operating Force max. N [lb]	Bar Chart (degrees) ■ contact closed □ contact open	With LED Pilot Light/s	0.5-14 NPT Conduit	20 mm Conduit
Harrison de Contraction de Contracti	Cat whisker, 140 mm sst wire	1NC/1NO	Snap action	Silver alloy	0,1 [0.9]	21-22 13-14	-	GLAA01K8A	-
	Cat whisker,	1NC/1NO	Snap action	Silver	0,1 [0.9]	21-22 13-14	-	GLAA01K8B	-
The state of the s	190 mm sst wire	2NC/2NO	Snap action	Silver alloy	0,1 [0.9]	11-12, 21-22 13-14, 23-24 8° Differential travel	-	GLAA20K8B	GLAC20K8B
	Cat whisker,	1NC/1NO	Snap action	Silver alloy	0,1 [0.9]	21-22 18° > 13-14 8° Differential travel	-	GLAA01K8C	-
0	141 mm sst coil spring	2NC/2NO	Snap action	Silver alloy	0,1 [0.9]	11-12, 21-22 13-14, 23-24 8° Differential travel	-	GLAA20K8C	-

<sup>\*</sup> Note: When conduit style G1/2 (PF1/2) is required, change the 4th digit in the catalog listing to the letter D. For example, GLAA01A1A would change to GLAD01A1A for G1/2 conduit. When conduit style PG13,5 is required, change the 4th digit in the cagalog listing to the letter B. For example, GLAA01A1A would change to GLAB01A1A for PG13,5 conduit.

TABLE I	· MICKO	- SWITCH GL	A JERIES IC	AP INOLI	er ee	VER ORDER GUIDE		Catalog	Listing*
	Head Type	Contact Arrangement	Contact Type	Contact Material	Operating Force max. N [lb]	Bar Chart (degrees) ■ contact closed □ contact open	With LED Pilot Light/s	0.5-14 NPT Conduit	20 mm Conduit
		1NC/1NO	Snap action	Silver alloy	9,5 [2.1]	65,2 61 56,9** 52 21-22	-	GLAA01D	GLAC01D
	Top roller lever	1NC/1NO	Snap action	Silver alloy	9,5 [2.1]	65,2 61 56,9** 52 21-22	1 LED (yellow)	GLFA01D	-
Honey well		roller	1NC/1NO	Slow action, MBB	Silver alloy	9,5 [2.1]	65,2 59,1** 52 21-22 13-14 61	-	GLAA04D
@		2NC/2NO	Snap action	Silver alloy	9,5 [2.1]	11-12, 21-22 13-14, 23-24 1,7 Differential travel	-	GLAA20D	GLAC20D
		2NC/2NO	Snap action	Gold- plated	9,5 [2.1]	65,2 61 56,9** 52 11-12,21-22 13-14, 23-24 > 1,7 Differential travel	-	GLAA22D	GLAC22D

<sup>\*</sup> Note: When conduit style G1/2 (PF1/2) is required, change the 4th digit in the catalog listing to the letter D. For example, GLAA01A1A would change to GLAB01A1A for G1/2 conduit. When conduit style PG13,5 is required, change the 4th digit in the cagalog listing to the letter B. For example, GLAA01A1A would change to GLAB01A1A for PG13,5 conduit.

<sup>\*\*</sup> Positive opening occurs.

TABLE 8. MICRO SWITCH GLB SERIES SIDE ROTARY ORDER GUIDE (PLUG-IN BODY)									
	1	1	1					Catalog	Listing*
	Head Type	Contact Arrangement	Contact Type	Contact Material	Operating Torque max. Nm [in-lb]	Bar Chart (degrees) ■ contact closed □ contact open	With LED Pilot Light/s	0.5-14 NPT Conduit	20 mm Conduit
	Side rotary, no lever	1NC/1NO	Snap ac- tion	Silver alloy	0,33	21-22 13-14 26° 55°** 75° min. > 120° 21° 21° 21° 21° 21° 21° 21° 21° 21° 21	-	GLBA02A	GLBC02A
	Side rotary, fixed lever, nylon roller	1NC/1NO	Snap ac- tion	Silver alloy	0,33	21-22 26° 55°** 75° min. > 13-14 2° Differential travel	-	GLBA02A1A	-
	Side rotary, fixed lever, steel roller	1NC/1NO	Snap ac- tion	Silver alloy	0,33	21-22 26° 55°** 75° min. > 13-14 2° Differential travel	-	GLBA02A1B	GLBC02A1B
		1NC/1NO	Snap ac- tion	Silver alloy	0,33 [2.9]	21-22 13-14 26° 55°** 75° min. > 12-22 13-14 27-22 28-	1 LED (yellow)	GLGA12A1B	GLGC12A1B
	Side rotary, adjust- able lever, nylon roller	1NC/1NO	Snap ac- tion	Silver	0,33	21-22 13-14 26° 55°** 75° min. > 12° Differential travel	-	GLBA02A2A	GLBC02A2A
	Side rotary, adjust-	1NC/1NO	Snap ac- tion	Silver alloy	0,33	21-22 13-14 26° 55°** 75° min. > 12° Differential travel	-	GLBA02A2B	GLBC02A2B
	able lever, steel roller	1NC/1NO	Snap ac- tion	Silver alloy	0,33 [2.9]	21-22 13-14 26° 55°** 75° min. > 12° Differential travel	1 LED (yellow)	GLGA12A2B	-
	Side rotary, adjust-	1NC/1NO	Snap ac- tion	Silver alloy	0,33	21-22 26° 55°** 75° min. > 12° Differential travel	_	GLBA02A4J	GLBC02A4J
	able alumi- num rod	1NC/1NO	Snap ac- tion	Silver alloy	0,33 [2.9]	21-22	1 LED (yellow)	GLGA12A4J	-

<sup>\*</sup> Note: When conduit style G1/2 (PF1/2) is required, change the 4th digit in the catalog listing to the letter D. For example, GLAA01A1A would change to GLAD01A1A for G1/2 conduit. When conduit style PG13,5 is required, change the 4th digit in the cagalog listing to the letter B. For example, GLAA01A1A would change to GLAB01A1A for PG13,5 conduit.

<sup>\*\*</sup> Positive opening occurs.

TABLE 9. MICRO SWITCH GLB SERIES TOP PLUNGER ORDER GUIDE (PLUG-IN BODY)									
								Catalog	Listing*
	Head Type	Contact Arrangement	Contact Type	Contact Mtl	Operating Force max. N [lb]	Bar Chart (degrees) ■ contact closed □ contact open	With LED Pilot Light/s	0.5-14 NPT Conduit	20 mm Conduit
<u></u>	Top pin	1NC/1NO	Snap action	Silver alloy	16 [3.6]	37.5 35 33** 30.5 21-22 13-14	-	GLBA02B	GLBC02B
Management (Control of Control of	plunger	1NC/1NO	Snap action	Silver alloy	16 [3.6]	37.5 35 33** 30.5 21-22 13-14	1 LED (yellow)	GLGA12B	GLGC12B
	Top roller plunger	1NC/1NO	Snap action	Silver alloy	16 [3.6]	37.5 35 33** 30.5 21.22 13-14	-	GLBA02C	GLBC02C
		1NC/1NO	Snap action	Silver alloy	16 [3.6]	37.5 35 33** 30.5 21-22 13-14	1 LED (yellow)	GLGA12C	-

TABLE 1	TABLE 10. MICRO SWITCH GLB SERIES TOP ROLLER LEVER ORDER GUIDE (PLUG-IN BODY)									
								Catalog	Listing*	
	Неаd Туре	Contact Arrangement	Contact Type	Contact Mtl	Operating Force max. N [lb]	Bar Chart (degrees) ■ contact closed □ contact open	With LED Pilot Light/s	0.5-14 NPT Conduit	20 mm Conduit	
	Top	1NC/1NO	Snap action	Silver alloy	9.5 [2.1]	11-12, 21-22	-	GLBA02D	GLBC02D	
	roller lever	1NC/1NO	Snap action	Silver alloy	9.5 [2.1]	11-12_21-22	1 LED (yellow)	GLGA12D	-	

<sup>\*</sup> Note: When conduit style G1/2 (PF1/2) is required, change the 4th digit in the catalog listing to the letter D. For example, GLA $\blacksquare$ 01A1A would change to GLA $\blacksquare$ 01A1A for G1/2 conduit. When conduit style PG13,5 is required, change the 4th digit in the cagalog listing to the letter B. For example, GLA $\blacksquare$ 01A1A would change to GLABO1A1A for PG13,5 conduit.

<sup>\*\*</sup> Positive opening occurs.

TABLE 11. MICRO SWITCH GLB SERIES WOBBLE ORDER GUIDE (PLUG-IN BODY)									Listing*
	Head Type	Contact Arrangement	Contact Type	Contact Mtl	Operating Force max. N [lb]	Bar Chart (degrees) ■ contact closed □ contact open	With LED Pilot Light/s	0.5-14 NPT Conduit	20 mm Conduit
	Wobble stick, 150 mm plastic rod	1NC/1NO	Snap ac- tion	Silver alloy	0,1 [0.9]	21-22 13-14 1 8° Differential travel	-	GLBA02E7A	-
	Wobble stick,	1NC/1NO	Snap ac- tion	Silver alloy	0,1 [0.9]	18° 35° 21-22	-	GLBA02E7B	GLBC02E7B
	141 mm coil spring	1NC/1NO	Snap ac- tion	Silver alloy	0,1 [0.9]	18° 35° 21-22 13-14	1 LED (yellow)	GLGA12E7B	-
	Cat Whis- ker, 190 mm sst wire	1NC/1NO	Snap ac- tion	Silver alloy	0,1 [0.9]	21-22 13-14 35° 21-22   2   2   2   2   2   2   2   2   2	-	GLBA02K8B	-
	Cat whisker, 141 mm sst coil spring	1NC/1NO	Snap ac- tion	Silver	0,1 [0.9]	21-22 13-14	-	GLBA02K8C	-

<sup>\*</sup> Note: When conduit style G1/2 (PF1/2) is required, change the 4th digit in the catalog listing to the letter D. For example, GLAA01A1A would change to GLAD01A1A for G1/2 conduit. When conduit style PG13,5 is required, change the 4th digit in the cagalog listing to the letter B. For example, GLAA01A1A would change to GLAB01A1A for PG13,5 conduit..

### **Product Dimensions: GLA Series**

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

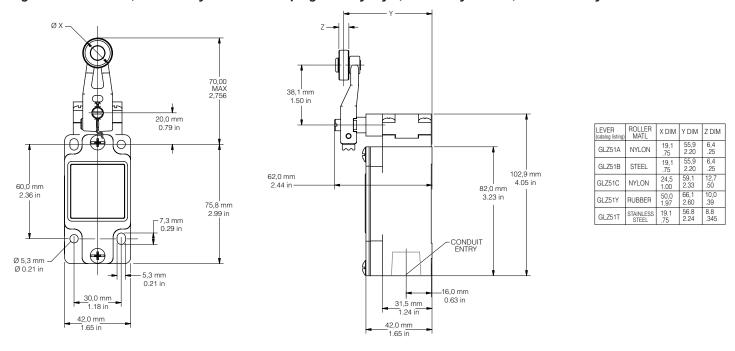


Figure 3. Fixed Lever, Side Rotary Switch - Plug-in Body Style, GLZ51 Style Lever, and GLB Body

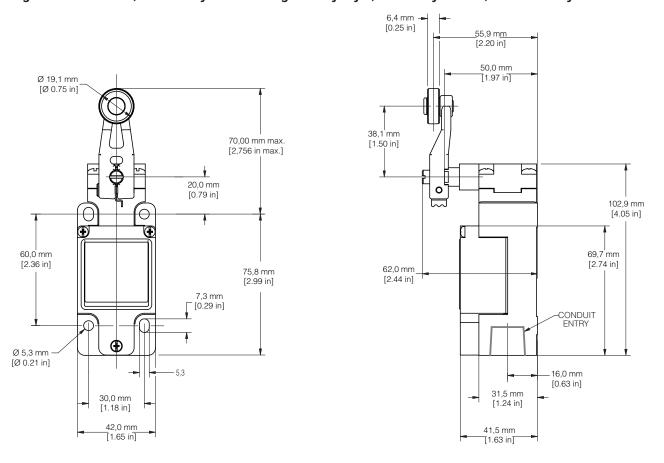
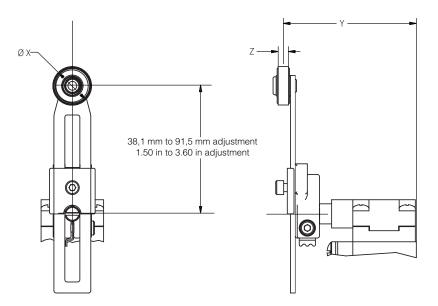


Figure 4. Adjustable Lever Dimensions, GLZ52



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

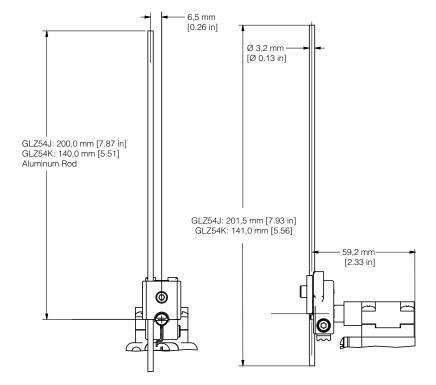
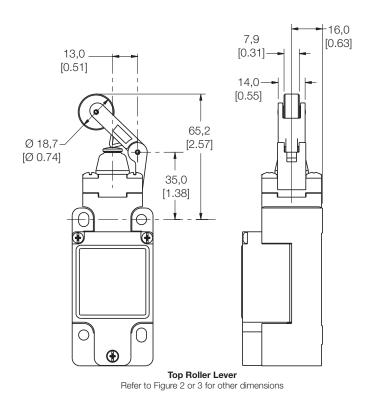


Figure 6. Pin Plunger Dimensions -16,0 Ø 10,0-[0.63][Ø 0.39] 37,5 [1.48]**( Top Pin Plunger** Refer to Figure 2 or 3 for other dimensions

Figure 7. Roller Plunger Dimensions -16,04,7 [0.63][0.19]Steel roller-Ø 12,4 [Ø 0.49] 50,5 [1.99]0

**Top Roller Plunger** Refer to Figure 2 or 3 for other dimensions

Figure 8. Roller Lever Dimensions



## Head Code: E • WOBBLE AND CAT WHISKER ACTUATOR DIMENSIONS

## Figure 9. Coil Actuator

Figure 10. Plastic Rod and Flexible Cable

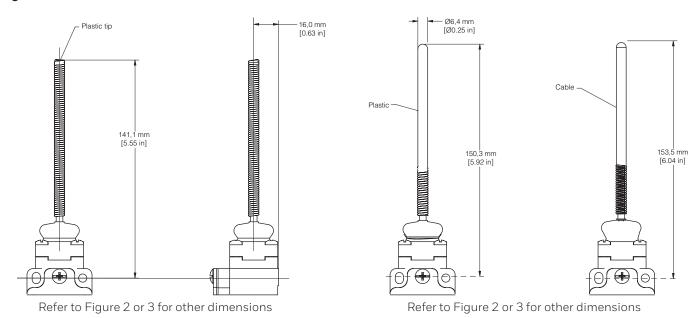
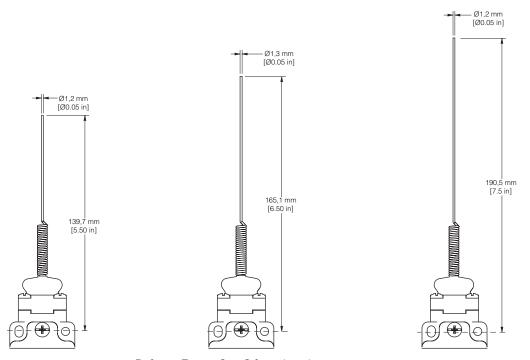


Figure 11. Cat Whisker Wobbles

## 5.5 inches (stainless steel)

# 6.5 inches (stainless steel)

## 7.5 inches (stainless steel)



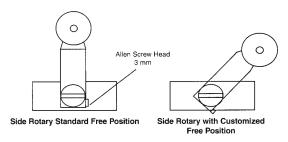
Refer to Figure 2 or 3 for other dimensions

#### APPLICATION INFORMATION

#### **Side Rotary Assemblies**

The side rotary assemblies incorporate a feature for adjusting the free position of the side rotary lever. The EN 50041 body style allows infinite adjustment and reclamp. See the following diagrams for details of the mechanism in each case.

Figure 12. Standard EN 50041 Body Style



There are two lever mounting options:

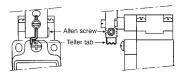
- 1. By fully seating the lever in one of the four 90° detent positions on the shaft hub which provides positive lever retention.
- 2. By mounting the lever on the serrated portion of the shaft (which enables the lever to be mounted in any position).

To change the rotary lever's free position:

- 1. Use a 3 mm hex Allen wrench to loosen the Allen screw, as shown in Figure 13, below.
- 2. Back off the lever 2 mm and move it to the desired free position.
- 3. Retighten the Allen screw.
- 4. Check to see if the free position is satisfactory for the application.
- 5. Repeat the adjustment procedure if necessary.

A teller tab located at the bottom of the lever (see diagram below) helps prevent lever slippage. It enables the installer to detect the correct tightening torque. When this tab cannot be moved, the Allen screw has been tightened properly.

Figure 13. Allen Screw and Teller Tab Location

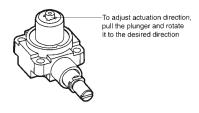


#### **EN 50041 Side Rotary Actuator Direction Adjustment**

As furnished, GLS rotary switches will operate when the lever is rotated from either the left or right. They can be field modified to operate in one direction only (Clockwise CW; Counter clockwise CCW) by following these steps:

- 1. Carefully remove the complete head assembly.
- 2. Turn the head assembly upside down as shown in Figure 14.
- 3. Pull the plunger mechanism out and rotate it through  $90^{\circ}$ increments until the alignment tab points to the desired function (CW, CCW, or CW and CCW).
- 4. Push plunger mechanism in.
- 5. Reassemble the head assembly and re-test the switch in its application.

#### Figure 14. Actuation Adjustment



#### REPLACEMENT INSTRUCTIONS

All levers for side rotary assemblies are available as replacment parts. All basics, except the plug-in, can be replaced. All EN 50041 heads can be replaced. The replacement procedures for these components are straightforward in nature.

#### **Side Rotary Levers**

Remove the lever from the product being replaced. On EN 50041 product this is achieved by loosening the Allen screw holding the lever on the shaft. Replace the lever and tighten the Allen screw or combination screw. Re-test the switch in its application.

#### Heads

All EN 50041 style switch heads can be removed and replaced.

- 1. Remove the head by unscrewing the four retaining screws on the head assembly.
- 2. Ensure replacement part is identical to one being removed.
- 3. Re-test the assembly and ensure correct operation.

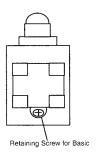
## **Basic Switches**

Non-plug-in

Basic switches can be removed and replaced by following this procedure:

- 1. Remove the cover from the body.
- 2. Before disconnecting the switch wiring, carefully note the wiring arrangement for your application, particularly the safety ground connection.
- 3. Remove the basic switch retaining screw.
- 4. Remove the basic switch and install the replacement basic
- 5. Use the retaining screw to install the new basic switch ensure that it is correctly seated in the switch body.
- 6. Wire the switch terminals as before.
- 7. Before replacing the cover ensure that the basic switch wires are not twisted or otherwise lifted from the basic switch (to prevent them from becoming trapped when the cover is replaced).
- 8. Test the switch in its application.

Figure 15. Retaining screw location



#### **Basic Switches**

Plug-in EN50041 body style

The switch enclosure portion of this two-piece body style plugs into a pre-wired terminal block mounted in the application. Replacement is accomplished by unplugging the old switch enclosure and plugging-in a new switch enclosure (basics are permanently staked in the switch enclosure).

#### **LED WIRING**

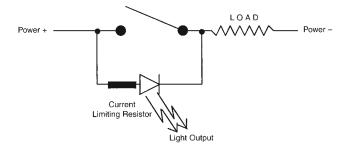
The GLF, GLG, and GLH versions of GLS (EN 50041) come complete with LED indicators. These indicators can be wired in a variety of ways. Operation can indicate switch free or switch operated depending on the wiring arrangement employed. The table below indicates the body styles and indicators offered.

Table 12. LED Series

Body	Function	Specification
GLF	1 LED	12 → 250 Vac and dc less than 1.5 mA draw
GLG	1 LED plug- in	12 → 250 Vac and dc less than 1.5 mA draw
GLH	2 LED	18 → 30 Vdc 7 mA typ. current draw

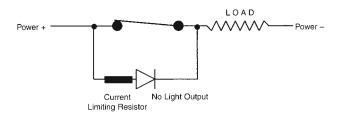
The following wiring diagrams show possible configurations that can be used for the LEDs. Combinations of these arrangements can be used where the dual LED versions of GLS are employed.

Figure 16. Wiring Diagram 1



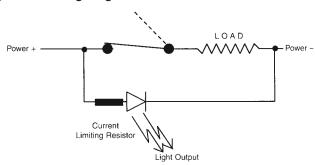
In Figure 16, Wiring Diagram 1, the basic switch contact is open. The current for the LED can flow through the LED (via the load) and the LED illuminates.

Figure 17. Wiring Diagram 2



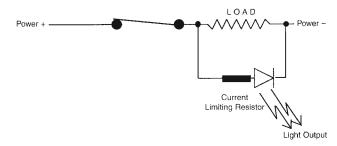
In Figure 17, Wiring Diagram 2, the basic switch contact is closed. The current for the LED cannot flow through the LED and the LED will not illuminate.

Figure 18. Wiring Diagram 3



In Figure 18, Wiring Diagram 3, regardless of the position of the basic switch, the current for the LED can flow through the LED and the LED will illuminate indicating power available.

Figure 19. Wiring Diagram 4



In Figure 19, Wiring Diagram 4, when the load is energized the LED will illuminate. The above examples suggest options with these versions of GLS. The LED pilot lights should be treated as "for indication only" devices.

While every effort is made to ensure that the above guidelines are accurate, no responsibility can be accepted for failure to apply good engineering practice to machinery design and use of Honeywell products. Never apply any of the procedures outlined above on live circuits. Ensure that testing of changes is carried out with no risk of injury during tests. These guidelines are produced to help our customers make the right choices in applying our Limit Switches to general applications. Contact your local Honeywell representative if you have any difficulties.

Catalog Listing	0.25] 0.25] 0.25] 0.25] 0.25] 0.25] 0.25] 0.25] 0.25]
GLZ51A Nylon 19,0 [0.75] 6,35 [0] GLZ51B Steel 19,0 [0.75] 6,35 [0] GLZ51C Nylon 25,4 [1.00] 12,7 [0] GLZ51E Bronze 19,0 [0.75] 6,35 [0] GLZ51T SST 19,0 [0.75] 9,5 [0.0] GLZ51Y Rubber 50,0 [1.97] 10,0 [0]  Adjustable length lever: 38,1 to 89,0 mm [1.5 to 3.5 in] radius  GLZ52A Nylon 19,0 [0.75] 6,35 [0] GLZ52B Steel 19,0 [0.75] 6,35 [0] GLZ52E Nylon 19,0 [0.75] 33,1 [1] GLZ52W Rubber 40.7 [1.60] 12,7 [0] GLZ52Y Rubber 50,0 [1.97] 10,0 [0]  Fixed length yoke lever; 38,1 mm [1.5in] radius  GLZ53 No rollers n/a n/a GLZ53B Steel 19,0 [0.75] 6,35 [0] GLZ53B Steel 19,0 [0.75] 6,35 [0] GLZ53B Steel 19,0 [0.75] 6,35 [0] GLZ53E Bronze 19,0 [0.75] 6,35 [0] Adjustable rod levers	2.25] 2.50] 3.8] 3.39] 2.25] 2.25] 2.25] 3.30]
GLZ51B Steel 19,0 [0.75] 6,35 [0] GLZ51C Nylon 25,4 [1.00] 12,7 [0] GLZ51E Bronze 19,0 [0.75] 6,35 [0] GLZ51T SST 19,0 [0.75] 9,5 [0. GLZ51Y Rubber 50,0 [1.97] 10,0 [0]  Adjustable length lever: 38,1 to 89,0 mm [1.5 to 3.5 in] radius  GLZ52A Nylon 19,0 [0.75] 6,35 [0] GLZ52B Steel 19,0 [0.75] 6,35 [0] GLZ52C Nylon 38,1 [1.50] 6,35 [0] GLZ52E Nylon 19,0 [0.75] 33,1 [1] GLZ52W Rubber 40.7 [1.60] 12,7 [0] GLZ52Y Rubber 50,0 [1.97] 10,0 [0]  Fixed length yoke lever; 38,1 mm [1.5in] radius  GLZ53 No rollers n/a n/a GLZ53B Steel 19,0 [0.75] 6,35 [0] GLZ53B Steel 19,0 [0.75] 6,35 [0] GLZ53E Bronze 19,0 [0.75] 6,35 [0] Adjustable rod levers	2.25] 2.50] 3.8] 3.39] 2.25] 2.25] 2.25] 3.30]
GLZ51C Nylon 25,4 [1.00] 12,7 [0] GLZ51E Bronze 19,0 [0.75] 6,35 [0] GLZ51T SST 19,0 [0.75] 9,5 [0.75] GLZ51Y Rubber 50,0 [1.97] 10,0 [0] Adjustable length lever: 38,1 to 89,0 mm [1.5 to 3.5 in] radius  GLZ52A Nylon 19,0 [0.75] 6,35 [0] GLZ52B Steel 19,0 [0.75] 6,35 [0] GLZ52E Nylon 38,1 [1.50] 6,35 [0] GLZ52E Nylon 19,0 [0.75] 33,1 [1] GLZ52W Rubber 40.7 [1.60] 12,7 [0] GLZ52Y Rubber 50,0 [1.97] 10,0 [0] Fixed length yoke lever; 38,1 mm [1.5in] radius  GLZ53 No rollers n/a n/a GLZ53B Steel 19,0 [0.75] 6,35 [0] GLZ53B Steel 19,0 [0.75] 6,35 [0] GLZ53E Bronze 19,0 [0.75] 6,35 [0] Adjustable rod levers	0.50] 0.25] 0.39] 0.25] 0.25] 0.25] 0.25] 0.30]
GLZ51E Bronze 19,0 [0.75] 6,35 [0.75] GLZ51T SST 19,0 [0.75] 9,5 [0.75] GLZ51Y Rubber 50,0 [1.97] 10,0 [0.75] Adjustable length lever:  38,1 to 89,0 mm [1.5 to 3.5 in] radius  GLZ52A Nylon 19,0 [0.75] 6,35 [0.75] GLZ52B Steel 19,0 [0.75] 6,35 [0.75] GLZ52D Nylon 38,1 [1.50] 6,35 [0.75] GLZ52E Nylon 19,0 [0.75] 33,1 [1.75] GLZ52Y Rubber 40.7 [1.60] 12,7 [0.75] GLZ52Y Rubber 50,0 [1.97] 10,0 [0.75] GLZ53 No rollers n/a n/a GLZ53 No rollers n/a n/a GLZ53B Steel 19,0 [0.75] 6,35 [0.75] GLZ53E Bronze 19,0 [0.75] 6,35 [0.75] G	0.25] 0.39] 0.25] 0.25] 0.25] 0.25] 0.30]
GLZ51T SST 19,0 [0.75] 9,5 [0.75] GLZ51Y Rubber 50,0 [1.97] 10,0 [0.75] Adjustable length lever: 38,1 to 89,0 mm [1.5 to 3.5 in] radius  GLZ52A Nylon 19,0 [0.75] 6,35 [0.75] GLZ52B Steel 19,0 [0.75] 6,35 [0.75] GLZ52D Nylon 38,1 [1.50] 6,35 [0.75] GLZ52E Nylon 19,0 [0.75] 33,1 [1.75] GLZ52W Rubber 40.7 [1.60] 12,7 [0.75] GLZ52Y Rubber 50,0 [1.97] 10,0 [0.75] GLZ53 No rollers n/a n/a GLZ53 No rollers n/a n/a GLZ53B Steel 19,0 [0.75] 6,35 [0.75] GLZ53B Steel 19,0 [0.75] 6,35 [0.75] GLZ53E Bronze 19,0 [0.75] GLZ53E Bronze 19,0 [0.75] 6,35 [0.75] GLZ53E Bronze 19,0 [0.75] GLZ53E Bronze 19,0 [0.75] 6,35 [0.75] GLZ53E Bronze 19,0 [0.75] 6	38] .39] .25] .25] .25] .30]
GLZ51Y Rubber 50,0 [1.97] 10,0 [0]  Adjustable length lever: 38,1 to 89,0 mm [1.5 to 3.5 in] radius  GLZ52A Nylon 19,0 [0.75] 6,35 [0] GLZ52B Steel 19,0 [0.75] 6,35 [0] GLZ52D Nylon 38,1 [1.50] 6,35 [0] GLZ52E Nylon 19,0 [0.75] 33,1 [1] GLZ52W Rubber 40.7 [1.60] 12,7 [0] GLZ52Y Rubber 50,0 [1.97] 10,0 [0]  Fixed length yoke lever; 38,1 mm [1.5in] radius  GLZ53 No rollers n/a n/a GLZ53A Nylon 19,0 [0.75] 6,35 [0] GLZ53B Steel 19,0 [0.75] 6,35 [0] GLZ53E Bronze 19,0 [0.75] 6,35 [0]  Adjustable rod levers	0.25] 0.25] 0.25] 0.25] 0.25] 0.30]
38,1 to 89,0 mm [1.5 to 3.5 in] radius  GLZ52A Nylon 19,0 [0.75] 6,35 [0]  GLZ52B Steel 19,0 [0.75] 6,35 [0]  GLZ52D Nylon 38,1 [1.50] 6,35 [0]  GLZ52E Nylon 19,0 [0.75] 33,1 [1]  GLZ52W Rubber 40.7 [1.60] 12,7 [0]  GLZ52Y Rubber 50,0 [1.97] 10,0 [0]  Fixed length yoke lever; 38,1 mm [1.5in] radius  GLZ53 No rollers n/a n/a  GLZ53A Nylon 19,0 [0.75] 6,35 [0]  GLZ53B Steel 19,0 [0.75] 6,35 [0]  GLZ53E Bronze 19,0 [0.75] 6,35 [0]  Adjustable rod levers	0.25] 0.25] 0.30]
GLZ52B Steel 19,0 [0.75] 6,35 [0] GLZ52D Nylon 38,1 [1.50] 6,35 [0] GLZ52E Nylon 19,0 [0.75] 33,1 [1] GLZ52W Rubber 40.7 [1.60] 12,7 [0] GLZ52Y Rubber 50,0 [1.97] 10,0 [0]  Fixed length yoke lever; 38,1 mm [1.5in] radius GLZ53 No rollers n/a n/a GLZ53A Nylon 19,0 [0.75] 6,35 [0] GLZ53B Steel 19,0 [0.75] 6,35 [0] GLZ53E Bronze 19,0 [0.75] 6,35 [0] Adjustable rod levers	0.25] 0.25] 0.30]
GLZ52D Nylon 38,1 [1.50] 6,35 [0] GLZ52E Nylon 19,0 [0.75] 33,1 [1] GLZ52W Rubber 40.7 [1.60] 12,7 [0] GLZ52Y Rubber 50,0 [1.97] 10,0 [0]  Fixed length yoke lever; 38,1 mm [1.5in] radius GLZ53 No rollers n/a n/a GLZ53A Nylon 19,0 [0.75] 6,35 [0] GLZ53B Steel 19,0 [0.75] 6,35 [0] GLZ53E Bronze 19,0 [0.75] 6,35 [0]  Adjustable rod levers	
GLZ52E Nylon 19,0 [0.75] 33,1 [1 GLZ52W Rubber 40.7 [1.60] 12,7 [0] GLZ52Y Rubber 50,0 [1.97] 10,0 [0] Fixed length yoke lever; 38,1 mm [1.5in] radius GLZ53 No rollers n/a n/a GLZ53A Nylon 19,0 [0.75] 6,35 [0] GLZ53B Steel 19,0 [0.75] 6,35 [0] GLZ53E Bronze 19,0 [0.75] 6,35 [0] Adjustable rod levers	.30]
GLZ52W Rubber 40.7 [1.60] 12,7 [0] GLZ52Y Rubber 50,0 [1.97] 10,0 [0]  Fixed length yoke lever; 38,1 mm [1.5in] radius  GLZ53 No rollers n/a n/a  GLZ53A Nylon 19,0 [0.75] 6,35 [0]  GLZ53B Steel 19,0 [0.75] 6,35 [0]  GLZ53E Bronze 19,0 [0.75] 6,35 [0]  Adjustable rod levers	.50]
GLZ52Y Rubber 50,0 [1.97] 10,0 [0]  Fixed length yoke lever; 38,1 mm [1.5in] radius  GLZ53 No rollers n/a n/a  GLZ53A Nylon 19,0 [0.75] 6,35 [0]  GLZ53B Steel 19,0 [0.75] 6,35 [0]  GLZ53E Bronze 19,0 [0.75] 6,35 [0]  Adjustable rod levers	
Fixed length yoke lever; 38,1 mm [1.5in] radius  GLZ53 No rollers n/a n/a  GLZ53A Nylon 19,0 [0.75] 6,35 [0  GLZ53B Steel 19,0 [0.75] 6,35 [0  GLZ53E Bronze 19,0 [0.75] 6,35 [0  Adjustable rod levers	.39]
GLZ53 No rollers n/a n/a GLZ53A Nylon 19,0 [0.75] 6,35 [0 GLZ53B Steel 19,0 [0.75] 6,35 [0 GLZ53E Bronze 19,0 [0.75] 6,35 [0 Adjustable rod levers	
GLZ53A Nylon 19,0 [0.75] 6,35 [0 GLZ53B Steel 19,0 [0.75] 6,35 [0 GLZ53E Bronze 19,0 [0.75] 6,35 [0 Adjustable rod levers	
GLZ53B Steel 19,0 [0.75] 6,35 [0 GLZ53E Bronze 19,0 [0.75] 6,35 [0 Adjustable rod levers	1
GLZ53E Bronze 19,0 [0.75] 6,35 [0 Adjustable rod levers	
Adjustable rod levers	
	.25]
GLZ54 Hub only n/a n/a	
	l
Alum. rod GLZ54J 200 mm [0.125 in] n/a	1
Alum. rod GLZ54K 140 mm [5.51 in] 3,17 mm [0.125 in]	i
SST rod GLZ54N 318 mm [0.125 in] n/a	1
Fixed length offset lever; 38,1 mm [1.5 in] radius	
GLZ55A Nylon 19,0 [0.75] 6,35 [0	.25]
GLZ55B Steel 19,0 [0.75] 6,35 [0	.25]
GLZ55E Bronze 19,0 [0.75] 6,35 [0	.25]
Fixed length spring rod	
Delrin rod, GLZ68 305 mm 6,35 [0.25] n/a [12.0 in]	

REPLACEMENT PARTS	- BASIC	SWITC	HES
Basic Switch Code	GLA Body	GLF Body (1 LED)	GLH Body (2 LEDs)
<b>01;</b> 1NC/1NO, snap action	GLZ301	GLZ301	GLZ301
<b>03;</b> 1NC/1NO, slow action BBM	GLZ303	GLZ303	GLZ303
<b>04;</b> 1NC/1NO, slow action MBB	GLZ304	GLZ304	GLZ304
<b>06;</b> 2NC, Slow action	GLZ306	GLZ306	GLZ306
<b>07;</b> 1NC/1NO, snap action, gold contacts	GLZ307	GLZ307	GLZ307
20; 2NC/2NO, snap action	GLZ320	_	_
<b>21;</b> 2NC/2NO, snap action, sequence	GLZ321	-	-
<b>22;</b> 2NC/2NO, snap action, gold contacts	GLZ322	-	-
<b>24;</b> 2NC/2NO, snap action, use with LED body	-	GLZ324	GLZ324
<b>26;</b> 2NC/2NO, snap action, center neutral	GLZ326	-	-
<b>32;</b> 2NC/2NO, snap action, gold-plated contacts, use with LED body	-	GLZ332	GLZ332
<b>33;</b> 1NC/1NO, slow action BBM, gold-plated contacts	GLZ333	GLZ333	GLZ333
<b>34;</b> 1NC/1NO, slow action, MBB, gold plated contacts	GLZ334	GLZ334	GLZ334
<b>36;</b> 2NC, slow action, gold-plated contacts	GLZ336	GLZ336	GLZ336

REPLACEMENT PARTS - HEADS									
Head type	GLA	GLB	GLF	GLG	GLH				
<b>A;</b> Side rotary, less lever	GLZ1AA	GLZ1AA	GLZ1AA	GLZ1AA	GLZ1AA				
<b>B;</b> Top pin plunger	GLZ1AB	GLZ1AB	GLZ1AB	GLZ1AB	GLZ1AB				
C; Top roller plunger	GLZ1AC	GLZ1AC	GLZ1AC	GLZ1AC	GLZ1AC				
<b>D;</b> Top roller lever	GLZ1AD	GLZ1AD	GLZ1AD	GLZ1AD	GLZ1AD				
<b>E7A;</b> Wobble plastic rod, 150 mm	GLZ1AE7A	GLZ1AE7A	GLZ1AE7A	GLZ1AE7A	GLZ1AE7A				
<b>E7B;</b> Wobble sst coil spring, 141 mm	GLZ1AE7B	GLZ1AE7B	GLZ1AE7B	GLZ1AE7B	GLZ1AE7B				
<b>E7D;</b> Wobble sst wire, 165 mm	GLZ1AE7D	GLZ1AE7D	GLZ1AE7D	GLZ1AE7D	GLZ1AE7D				
K8A; Cat whisker, 140 mm sst wire	GLZ1AK8A	GLZ1AK8A	GLZ1AK8A	GLZ1AK8A	GLZ1AK8A				
<b>K8B;</b> Cat whisker, 190 mm sst wire	GLZ1AK8B	GLZ1AK8B	GLZ1AK8B	GLZ1AK8B	GLZ1AK8B				
<b>K8C;</b> Cat whisker, sst coil spring	GLZ1AK8C	GLZ1AK8C	GLZ1AK8C	GLZ1AK8C	GLZ1AK8C				

#### **ADDITIONAL MATERIALS**

The following associated literature is available at sps.honeywell.com/ast:

- Product range guide
- Product application-specific information
- Sensors and switches in front loaders
- Sensors and switches in mobile cranes
- Sensors and switches in oil rig applications

## FOR MORE INFORMATION

Honeywell Advanced Sensing Technologies services its customers through a worldwide network of sales offices and distributors. For application assistance, current specifications, pricing, or the nearest Authorized Distributor, visit sps.honeywell.com/ast or call:

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# **△ WARNING**IMPROPER INSTALLATION

- 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.

# **⚠ WARNING**MISUSE OF DOCUMENTATION

- The information presented in this product sheet is for reference only.
   Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

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