

MICRO SWITCH Global Miniature Limit Switches

GLC | GLD | GLE Series

107147

Issue 18

Datasheet



DESCRIPTION

Honeywell MICRO SWITCH GLS miniature limit switch family offers a wide range of products for global solutions. These durable and reliable limit switches are suitable for many industrial applications, agriculture equipment, transportation equipment, and other applications requiring an environmentally sealed (IP and NEMA) switch.

The compact housings are often ideal for equipment where space is at a premium. The extensive product range is available in three different housing types; metal housing, plastic housing or a three conduit metal housing which are mounting compatible to EN50047. A wide range of actuators, contact blocks, and conduit/connectivity options enhance the product offering.

In today's demanding age of logic-level controls, electromechanical switches are frequently used to interface with PLCs and other logic level devices. GLS limit switches offer an option for gold-plated contacts for the standard switch. This option promotes the switch reliability for logic-level applications.

VALUE TO CUSTOMERS

- Meets EN50047 mounting standards and EN/IEC electrical standards for world-wide use
- Large existing install base and channel allows for quick delivery worldwide
- Wide range of actuators and circuitry options in same footprint
- Certified for global use with CCC¹, CSA, CE, and UL acceptance

DIFFERENTIATION

- Modular design of limit switch (heads/actuators, bodies, and contact blocks) allows for rapid customization and delivery
- Removable contact block for wiring ease
- Galvanically isolated contacts for controlling two separate circuits

FEATURES

- Designed to EN50047 standard
- Metal housing or double-insulated plastic housing for indoor and outdoor applications
- Wide range of actuator heads and levers
- Heads can be positioned at 90° increments for design flexibility. Side rotary actuator heads can be factory set for CW, CCW, or CW and CCW actuation
- Certified for global applications: CE, UL, CSA, CCC¹
- Conforms to CE, EN50047, IEC/EN 60947-5-1; CSA C22.2 #14; UL 508; CCC¹ GB14048.5, EN45545-2 (GLC/GLE)
- Sealed to IP66 and NEMA/UL 1, 4, 12, and 13
- -40 °C [-40 °F] standard construction for side rotary and plunger actuated switches suitable for many severe outdoor environments
- Dual bearing design on side rotary actuators reduces side loading and enhances mechanical life
- Variety of NC and NO double-break snap-action or slow-action contact options
- Silver contacts for power switching or gold-plated contacts for low energy loads
- Normally closed contacts are positive opening \odot , and conform to EN/IEC 60947-5-1-3 to provide forced opening of the normally closed contact. Each contact throw is electrically isolated to accept different voltages (Form Zb contacts). Double pole double throw (2NC/2NO) contact option require same polarity for each pole. (Form Za for each pole)
- Contact blocks are available as snap action or slow action
- Mechanical life up to 10 million operations

POTENTIAL APPLICATIONS

- Passenger elevators
- Commercial appliances
- Escalators/moving stairs
- Scissor/platform lifts
- Material handling
- Machine tool equipment
- Off-road equipment

PORTFOLIO

The GLC Series, GLD Series, and GLE Series are a segment of Honeywell's global limit switch offering. The global limit switch products also include the GLA Series, the GLL Series, the NGC Series, and SZL-VL series. In addition to the global limit switch series, Honeywell provides a comprehensive line of medium duty industrial limit switches (CE Series, E6/V6 Series, LS Series) and heavy-duty [HDLS Series \(Heavy Duty Limit Switch\)](#).

¹CCC 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.

MICRO SWITCH Global Miniature Limit Switches, GLC | GLD | GLE Series

Table 1. Specifications

Characteristic	Parameter
Housing material	GLC Series and GLE Series: Electrostatic epoxy coated zinc GLD Series: High-strength glass re-enforced thermoplastic
Actuators	Side rotary, top pin plunger, top roller plunger, top roller lever, top wobble actuator
Termination	0.5-14 NPT, PG 13,5, 20 mm, PF 1/2, Deutsch style 4-pin connector other cable/connector options available, contact the Honeywell Representative
Contact options*	GLC metal housing and GLD plastic housing: 1NC/1NO, 2NC, 2NO GLE metal housing, 1NC/1NO, 2NC, 2NO, 2NC/2NO
Contact type	snap-action, slow-action break-before-make (BBM), slow-action make-before-break (MBB), slow action
Contact material	silver (standard), gold plated (low-energy applications)
Thermal current (I _{th})	10 A
Rated insulation voltage	300 V
Rated impulse voltage	2.5 kV
Sealing	NEMA 1, 4, 12, 13; IP66
Operating temperature	-40 °C to 85 °C [-40 °F to 185 °F]
Mechanical life	Up to 10 million cycles
Pollution code	3
Max. actuation frequency	250 operations/minute; 100 operations/minute (wobbles)
Shock	50 g per IEC 60068-2-27
Vibration	10 g per IEC 60068-2-6
Approvals	CE, UL, CSA and CCC ¹
Conforming to standards	CE, EN50047, IEC/EN 60947-5-1; CSA C22.2 #14; UL 508; CCC ₁ , GB14048.5; EN45545-2 (GLC/GLE)

*All normally closed contacts are positive opening (→).

The two contact elements are Zb (electrically separated) except the 2NC/2NO contacts requires same polarity each pole (Za).

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Table 2. Electrical Rating

IEC 60947-5-1 (EN60947-5-1) AC 15, A300; DC 13, Q300

Silver Contacts								Gold Contacts
ac				dc				1 V 10 µA min. 50 V 100 mA max.
A300 U _e	AC15 I _e	VA		Q300 U _e	DC13 I _e	VA		
Volts	Amps	Make	Break	Volts	Amps	Make	Break	
120	6	7200	720	125	0.55	69	69	
240	3	7200	720	250	0.27	69	69	

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Figure 1. Product Nomenclature

GL Switch Type	C Body	A Conduit	01 Basic Switch	A1A Head/Actuator	L Modification Codes For Actuator types beginning with A*
GLS Series Global Limit Switch	C Metal, miniature	A 1/2-14 NPT	01 SPDT snap action	A1A Side rotary, fixed, 19 mm x 6 mm nylon roller	E7B Wobble, coil spring
	D Plastic, miniature	B PG 13,5	03 SPDT, BBM slow acting	A1B Side rotary, fixed, 19 mm x 6 mm steel roller	F^Δ Adj. top roller lever, Ø27,3 mm x 5 mm roller
	E Metal, three conduit	C 20 mm	04 SPDT, MBB slow acting	A2A Side rotary, adjust., 19 mm x 6 mm nylon roller	K8A Cat whisker, 140 mm
			05 DPST, 2NO slow acting	A2B Side rotary, adjust., 19 mm x 6 mm steel roller	K8B Cat whisker, 190 mm
			06 DPST, 2NC slow acting	A4J Side rotary, adjust., 140 mm aluminum rod	K8D Cat whisker, 165 mm
			07 SPDT, snap action, gold cont.	A4L Side rotary, adjust., 200 mm aluminum rod	A1 Side rotary, fixed, no roller
			24 DPDT, snap action, Body E	A5A Side rotary, offset, 19 mm x 6 mm nylon roller	A2 Side rotary, adjustable, no roller
			32 DPDT, snap action, gold cont. Body E	A5B Side rotary, offset, 19 mm x 6 mm steel roller	A1Y Side rotary, fixed, 50 mm x 10 mm rubber roller
			33 SPDT, BBM slow acting, gold contacts	A9A Side rotary, conveyor lever	A2Y Side rotary, adj., 50 mm x 10 mm rubber roller
			34 SPDT, MBB slow acting, gold contacts	B Top pin plunger	^Δ Available with D style body (plastic) only.
			35 DPST, 2NO slow acting, gold contacts	C Top roller plunger	
			36 DPST, 2NC slow acting, gold contacts	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.
					for Actuator/Type C
					6 Roller perpendicular to mtg. surf.
					for Actuator/Type D
					4 Lever to right, hinge to left

NOTE: not all combinations of model codes are available. Please contact your Honeywell provider/representative for assistance.

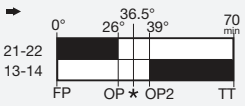
*For Type A modification codes, more than one code may be permissible. For example, GLCA01A1B-13 is a side rotary, lever-actuated switch, GLCA01A1B, adjusted for clockwise actuation only. The operating shaft is to the right side of the switch when viewing the switch from the front (label side).

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MICRO SWITCH™ GLC SERIES ORDER GUIDE/RECOMMENDED LISTINGS


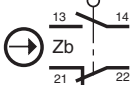
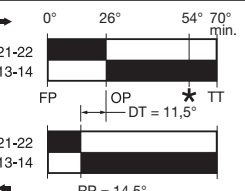
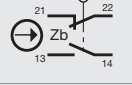
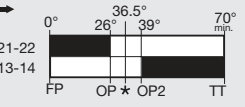
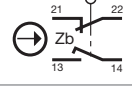
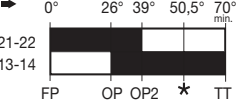
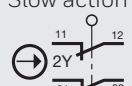
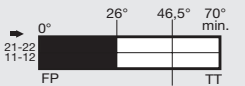
For listings not shown, contact your Honeywell representative.

Table 3. Side Rotary, Plastic Roller

	Contacts	Contact Type	Contact Mtl	Conduit	Oper. Torque	Bar Chart ¹	Listing
	1NC/1NO	Snap action 	Silver	0.5-14 NPT	0,12 Nm max. [1.1 in-lb max.]		GLCA01A1A
			Silver	PG 13,5			GLCB01A1A
			Silver	20 mm			GLCC01A1A
			Gold plated	20 mm			GLCC07A1A
	1NC/1NO	BBM, slow action 	Silver	0.5-14 NPT	0,11 Nm max. [1.0 in-lb max.]		GLCA03A1A
	2 NO	Slow action 	Silver	0.5-14 NPT	0,11 Nm max. [1.0 in-lb max.]		GLCA05A1A


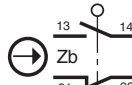
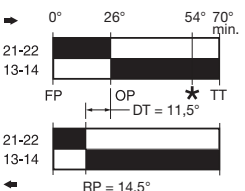
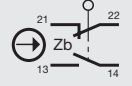
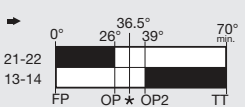
¹Contact closed ■; Contact open □. *Positive opening occurs.

Table 4. Side Rotary, Metal Roller

	Contacts	Contact Type	Contact Mtl	Conduit	Oper. Torque	Bar Chart ¹	Listing
	1NC/1NO	Snap action 	Silver	0.5-14 NPT	0,12 Nm max. [1.1 in-lb max.]		GLCA01A1B
			Silver	PG 13,5			GLCB01A1B
			Silver	20 mm			GLCC01A1B
			Gold plated	PG 13,5			GLCB07A1B
			Gold plated	20 mm			GLCC07A1B
	1NC/1NO	BBM, slow action 	Silver	0.5-14 NPT	0,11 Nm max. [1.0 in-lb max.]		GLCA03A1B
				PG 13,5			GLCB03A1B
	1NC/1NO	MBB, slow action 	Silver	0.5-14 NPT	0,11 Nm max. [1.0 in-lb max.]		GLCA04A1B
				PG 13,5			GLCB04A1B
	2 NC	Slow action 	Silver	PG 13,5	0,11 Nm max. [1.0 in-lb max.]		GLCB06A1B

¹Contact closed ■; Contact open □. *Positive opening occurs.


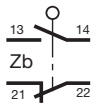
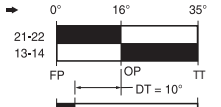

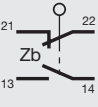
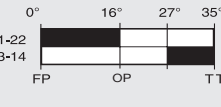
Table 5. Side Rotary Adjustable, Plastic Roller

	Contacts	Contact Type	Contact Mtl	Conduit	Oper. Torque	Bar Chart ¹	Listing
	1NC/1NO	Snap action 	Silver	0.5-14 NPT	0,12 Nm max. [1.1 in-lb max.]		GLCA01A2A
			Silver	PG 13,5			GLCB01A2A
			BBM, slow action 	Silver	PG 13,5	0,11 Nm max. [1.0 in-lb max.]	

¹Contact closed ■; Contact open □. *Positive opening occurs.

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Table 15. Cat Whisker Wobble, 190 mm

	Contacts	Contact Type	Contact Mtl	Conduit	Oper. Force	Bar Chart ¹	Listing
	1NC/1NO	Snap action 	Silver	0.5-14 NPT	0,9 N max. [0.19 lb] max.		GLCA01K8B
				PG 13,5			
	1NC/1NO	BBM, slow action 	Silver	0.5-14 NPT	0,7 N max. [0.16 lb] max.		GLCA03K8B

¹Contact closed ■ Contact open □

Figure 1. GLC Side Rotary • A1, A1A, A1B, and A1Y

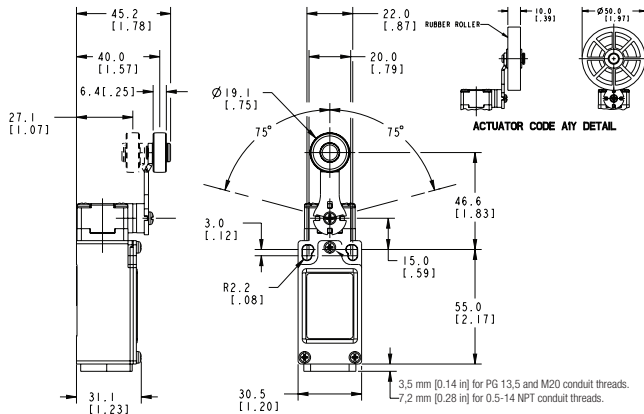


Figure 2. GLC Side Rotary • A2, A2A, A2B, and A2Y

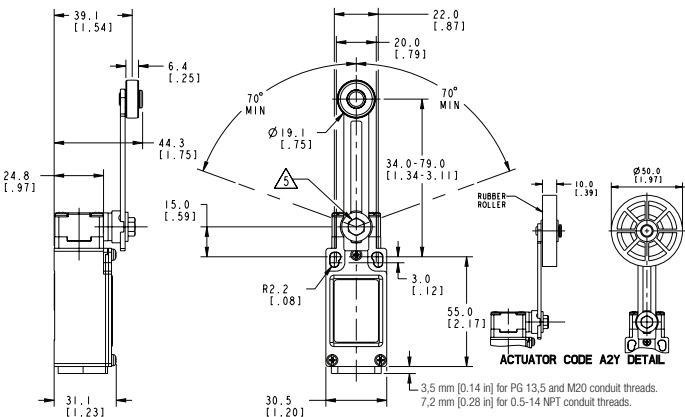


Figure 3. GLC Side Rotary Rod • A4J (140 mm) & A4L (200 mm)

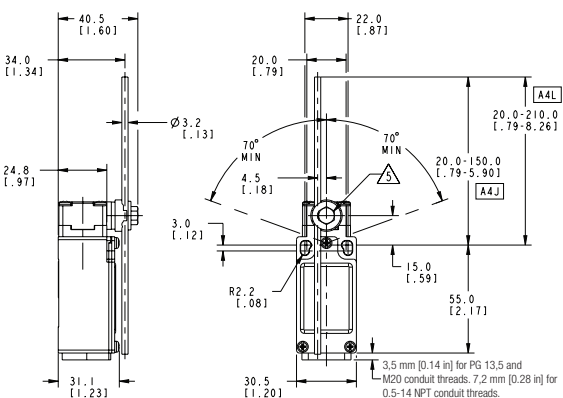


Figure 4. GLC Side Rotary • A5A and A5B

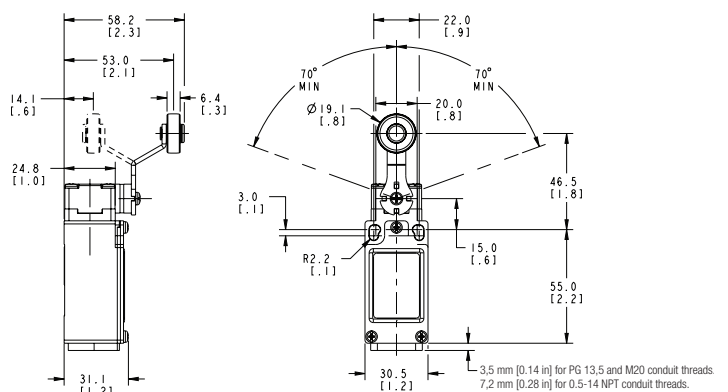


Figure 5. GLC Side Rotary • A9A

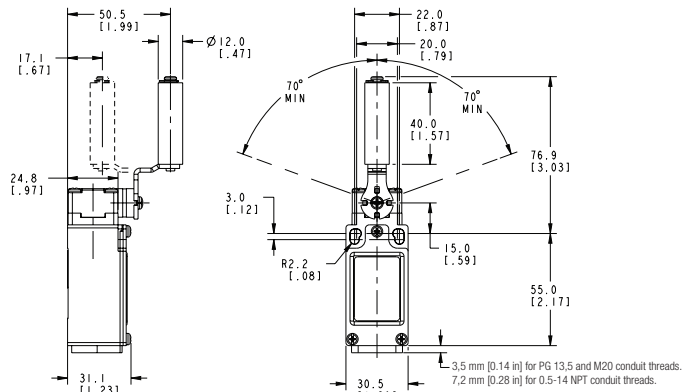
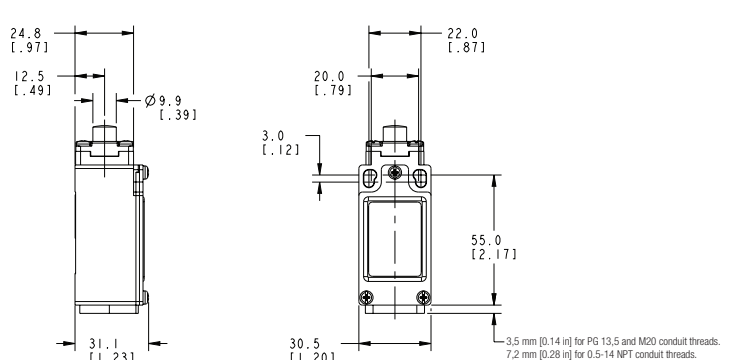


Figure 6. GLC Top Pin Plunger



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Figure 7. GLC Top Roller Plunger

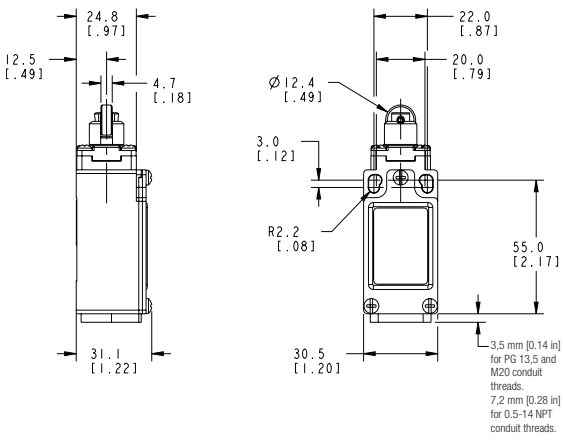


Figure 9. GLC Wobble • E7B

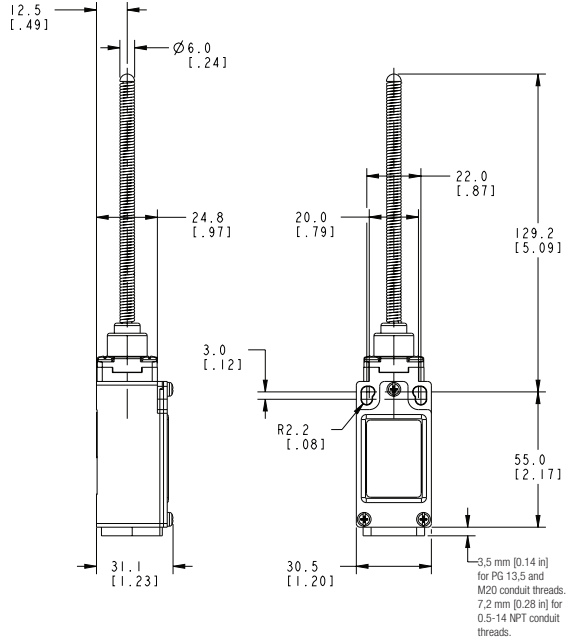


Figure 8. GLC Top Roller Arm

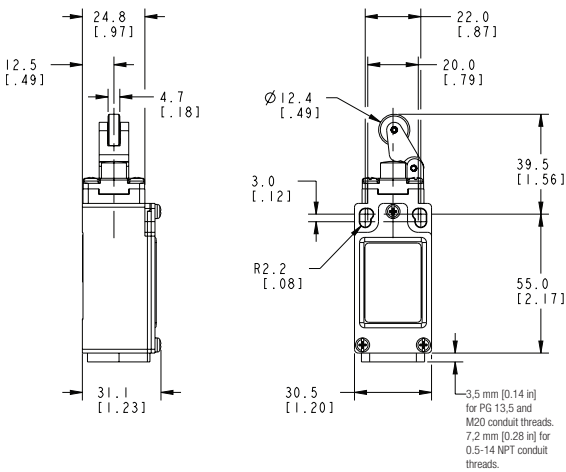


Figure 10. GLC Wobble • K8A/K8B

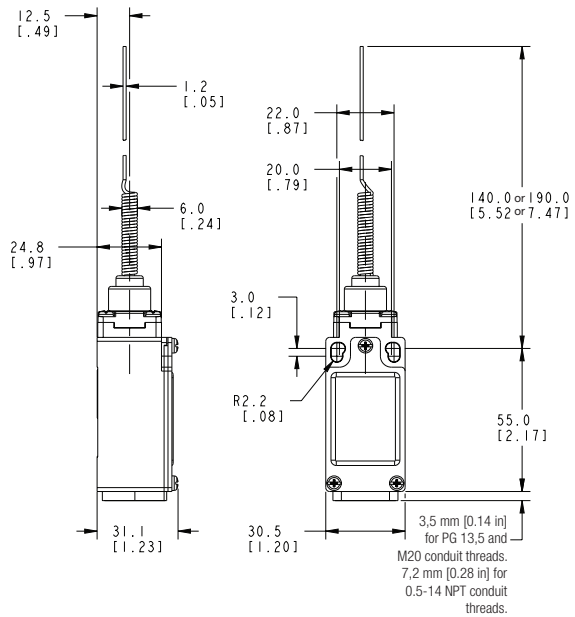


Figure 11. GLC Conduit

