

Installation Instructions for the MICRO SWITCH Global Limit Switches (GLS MIN-DIN Series)
Instrucciones de instalación para los MICRO SWITCH interruptores límite global (serie GLS MIN-DIN)
Einbauanweisungen für den MICRO SWITCH Global Endschalter (Serie GLS MIN-DIN)
Instructions d'installation du MICRO SWITCH fin de course mondiales (série GLS MIN-DIN)
Istruzioni per l'installazione del MICRO SWITCH finecorsa globali (Serie GLS MIN-DIN)
Instruções de Instalação para o MICRO SWITCH de limite global (Série GLS MIN-DIN)
MICRO SWITCH 全球限位开关 (GLS MIN-DIN 系列) 安装指南

**⚠ 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.

MOUNT, WIRE, AND SEAL THE SWITCH

**⚠ WARNING
IMPROPER OPERATION**

- 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 8 to 12 for specific travel distances for each switch code and specifications
 - Page 5 for proper application of limit switches
 - Page 13 to 18 for switch mounting dimensions
2. Perform adjustments (if desired):
 - Head orientation (Figure 1, page 5)
 - Actuation direction (Figure 2, page 5)
 - Side rotary switches with 36 drive lever positions (Figure 3, page 5):
3. Mount switch at top corners of switch using two M4 or #8 screws. For GLD products torque screws to 2,7 Nm to 3,4 Nm [24 in-lb to 30 in-lb]. For GLC & GLE products torque screws to 3,1 Nm to 3,7 Nm [27 in-lb to 33 in-lb].
4. Remove screws on cover plate.
5. Connect stranded wire (0,75 mm² to 2,3 mm², 18-14 AWG) or solid wire (0,75 mm² to 1,5 mm², 18-16 AWG) to contact block 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].
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].

Installation Instructions for MICRO SWITCH GLS Min-Din Limit Switches

ISSUE 11 81521

⚠ ADVERTENCIA INSTALACIÓN INCORRECTA

- Consulte las normas de seguridad y sus requisitos al realizar el diseño del enlace de control de una máquina, la interfaz, y los elementos de control que afecten a la seguridad.
- Siga estrictamente todas las instrucciones para la instalación.
El incumplimiento de estas recomendaciones puede ocasionar lesiones graves o peligro de muerte.

MONTAJE, CABLEADO Y SELLADO DEL INTERRUPTOR

⚠ ADVERTENCIA FUNCIONAMIENTO INCORRECTO

- Asegúrese que el actuador del interruptor tenga la suficiente carrera para que se produzca la apertura positiva de los contactos normalmente cerrados (NC)..

El incumplimiento de estas recomendaciones puede ocasionar lesiones graves o peligro de muerte.

- Consulte:
 - Página 5 para obtener información sobre ajustes
 - Páginas 8 a 12 para obtener las distancias específicas de carrera para cada código de interruptor y especificaciones
 - Página 5 para obtener información sobre la aplicación correcta de los interruptores de final de carrera
 - Página 13 a 18 para obtener las dimensiones de montaje del interruptor
- Realice ajustes (si lo desea):
 - Orientación del cabezal (Figura 1, página 5)
 - Dirección del accionamiento (Figura 2, página 5)
 - Interruptores de rotación lateral con 36 posiciones de la palanca de impulsión (Figura 3, página 5):
- Monte el interruptor colocando dos tornillos M4 o N.º 8 en sus ángulos superiores. Para los productos GLD, ajuste los tornillos empleando un torque de 2,7 Nm a 3,4 Nm [de 24 in-lb a 30 in-lb]. Para los productos GLC y GLE, ajuste los tornillos empleando un torque de 3,1 Nm a 3,7 Nm [de 27 in-lb a 33 in-lb].
- Retire los tornillos de la tapa.
- Conecte cable trenzado (de 0,75 mm² a 2,3 mm², 18-14 AWG) o sólido (de 0,75 mm² a 1,5 mm², 18-16 AWG) en los terminales del bloque de contactos (utilice cable de 90 °C cuando la temperatura ambiente es mayor de 75 °C). Ajuste los tornillos empleando un torque de 0,8 Nm a 1,0 Nm [de 7 in-lb a 9 in-lb].
- Selle la entrada del conducto según las instrucciones incluidas en PK 80112.
- Vuelva a montar la tapa y ajuste empleando un torque de 0,5 Nm [4,4 in-lb].

⚠ WARNUNG UNSACHGEMÄSSER EINBAU

- Beraten Sie sich mit den zuständigen Sicherheitsbehörden beim Entwurf von Verbindungen zu Maschinensteuerungen, Schnittstellen und sämtlichen Steuerelementen, welche die Sicherheit betreffen.
- Halten Sie sich genau an die Einbau-Anweisungen.

Das Nichtbeachten dieser Anweisungen könnte zum Tod oder zu schweren Verletzungen führen.

SCHALTER MONTIEREN, ANSCHLIESSEN UND ABDICHTEN

⚠ WARNUNG UNSACHGEMÄSSER BETRIEB

- Sicherstellen, daß der Betätigter genügend Laufweg hat, um die Öffnerkontakte (NC) zwangszu öffnen.

Das Nichtbeachten dieser Anweisungen könnte zum Tod oder zu schweren Verletzungen führen.

- Weitere Informationen:
 - Einstellungen auf Seite 5
 - Spezifische Laufwege für jeden Schaltercode und Spezifikationen auf Seiten 8 bis 12
 - Sachgemäße Anwendung von Positionsschaltern auf Seite 5
 - Schaltermontage-Abmessungen auf Seiten 13 bis 18
- Einstellungen vornehmen (falls gewünscht):
 - Ausrichtung des Kopfes (Abbildung 1, Seite 5)
 - Betätigungsrichtung (Abbildung 2, Seite 5)
 - Schalter mit seitlichem Schwenkhebel mit 36 Antriebshebelpositionen (Abbildung 3, Seite 5):
- Den Schalter an den oberen Ecken mit Hilfe von zwei M4-Schrauben oder Schrauben Nr. 8 montieren. Für GLD-Produkte Schrauben auf 2,7 Nm bis 3,4 Nm [24 in-lb bis 30 in-lb] anziehen. Für GLC & GLE-Produkte Schrauben auf 3,1 Nm bis 3,7 Nm [27 in-lb bis 33 in-lb] anziehen.
- Die Schrauben auf der Deckplatte entfernen.
- Den Litzendraht (0,75 mm² ... 2,3 mm², 18 ... 14 AWG) oder Draht (0,75 mm² ... 1,5 mm², 18 ... 16 AWG) an die Sicherheitskontaktblock-Klemmleisten anschließen (wärmebeständige Aderleitung 90 °C verwenden, wenn die Umgebungstemperatur über 75 °C liegt). Klemmenleistenschrauben auf 0,8 Nm bis 1,0 Nm [7 in-lb bis 9 in-lb] anziehen.
- Die Kabeleinführung entsprechend den Anweisungen in PK 80112 versiegeln.
- Bringen Sie die Abdeckplatte wieder an, und schrauben Sie diese mit einem Anzugsmoment von 0,5 Nm [4,4 in-lb] fest.

Installation Instructions for MICRO SWITCH GLS Min-Din Limit Switches

ISSUE 11 81521

⚠ AVERTISSEMENT INSTALLATION INCORRECTE

- Faites appel à des empreintes locaux de sécurité et prenez en compte leurs exigences lorsque vous concevez une liaison de commande ou interface de machine, ou tout autre dispositif de commande mettant en jeu la sécurité.
- Respectez scrupuleusement l'ensemble des instructions d'installation.

L'inobservation de ces instructions peut entraîner la mort ou de graves blessures.

MONTEZ, CABLEZ ET ETANCHEIFIEZ L'INTERRUPTEUR

⚠ AVERTISSEMENT MAUVAIS FONCTIONNEMENT

- Veillez à ce que l'actionneur de l'interrupteur parcourt une course suffisante afin de permettre une ouverture positive des contacts normalement fermés (NF).

L'inobservation de ces instructions peut entraîner la mort ou de graves blessures.

- Consultez :
 - la page 5 pour les réglages.
 - les pages 8 à 12 pour connaître les longueurs de courses pour chaque code d'interrupteur et les caractéristiques techniques.
 - la page 5 pour une utilisation correcte des interrupteurs de fin de course.
 - les pages 13 à 18 pour les cotes de montage de l'interrupteur.
- Effectuez les réglages (le cas échéant) :
 - Orientation de la tête (figure 1, page 5)
 - Sens de commutation (figure 2, page 5)
 - Interrupteurs à rotation latérale avec 36 positions de leviers (figure 3, page 5) :
- Montez l'interrupteur en vissant deux vis M4 ou n° 8 sur sa partie supérieure. Pour les produits GLD, exercez sur les vis un couple de 2,7 Nm à 3,4 Nm [24 in-lb à 30 in-lb]. Pour les produits GLC et GLE, exercez sur les vis un couple de 3,1 Nm à 3,7 Nm [27 in-lb à 33 in-lb].
- Retirez les vis du couvercle.
- Connectez du fil souple (0,75 mm² à 2,3 mm², 18 à 14 AWG) ou rigide (0,75 mm² à 1,5 mm², 18 à 16 AWG) aux bornes du bloc de contacts (utilisez du fil 90 °C lorsque la température ambiante est supérieure à 75 °C). Exercez sur les vis des bornes de l'interrupteur un couple de 0,8 Nm à 1,0 Nm [7 in-lb à 9 in-lb].
- Réalisez l'étanchéité de l'ouverture du conduit conformément aux instructions données en PK 80112.
- Replacez le couvercle et serrez les vis avec un couple de 0,5 Nm [4,4 in-lb].

⚠ ATTENZIONE INSTALLAZIONE SCORRETTA

- Consultare gli enti locali in materia di antinfestistica e le rispettive normative nel momento in cui ci si avvia alla progettazione di un qualsiasi collegamento controllo macchina, o di un'interfaccia, o di tutti gli elementi di controllo che possano influire sulla sicurezza.
- Attenersi rigorosamente a tutte le istruzioni relative all'installazione.

L'inosservanza di tali istruzioni può essere causa di gravi lesioni, con conseguenze addirittura fatali.

MONTARE, CABLARE E SIGILLARE L'INTERRUTTORE

⚠ ATTENZIONE FUNZIONAMENTO SCORRETTO

- Accertarsi che la corsa dell'attuatore dell'interruttore sia sufficiente a consentire l'apertura forzata dei contatti normalmente chiusi (NC).

L'inosservanza di tali istruzioni può essere causa di gravi lesioni, con conseguenze addirittura fatali.

- Consultare:
 - Pagina 5, per le regolazioni
 - Pagine da 8 a 12, per gli specifici valori relativi a ciascun codice di interruttore e per i dati tecnici
 - Pagina 5, per il corretto uso degli interruttori finecorsa
 - Pagine da 13 a 18, per le dimensioni di montaggio dell'interruttore
- Eseguire le regolazioni (in base alle esigenze):
 - Orientamento testa (Figura 1, pagina 5)
 - Direzione di azionamento (Figura 2, pagina 5)
 - Interruttori a rotazione laterale con leve di azionamento a 36 posizioni (Figura 3, pagina 5):
- Montare l'interruttore negli angoli superiori dell'interruttore mediante due viti M4 o #8. Per i prodotti GLD, serrare le viti con una coppia compresa tra 2,7 Nm e 3,4 Nm [da 24 in-lb a 30 in-lb]. Per i prodotti GLC e GLE, serrare le viti con una coppia compresa tra 3,1 Nm e 3,7 Nm [da 27 in-lb a 33 in-lb].
- Rimuovere le viti dalla piastra di copertura.
- Collegare cavi flessibili (da 0,75 mm² a 2,3 mm², 18-14 AWG) o cavi rigidi (da 0,75 mm² a 1,5 mm², 18-16 AWG) ai morsetti dei connettori (se la temperatura ambiente supera i 75 °C, utilizzare cavi che hanno una temperatura di esercizio pari a 90 °C). Serrare le viti dei morsetti con una coppia compresa tra 0,8 Nm e 1,0 Nm [da 7 in-lb a 9 in-lb].
- Sigillare l'apertura pressacavo in base alle istruzioni riportate in PK 80112.
- Rimontare il coperchio e serrare le viti con una coppia di 0,5 Nm [4,4 in-lb].

Installation Instructions for MICRO SWITCH GLS Min-Din Limit Switches

ISSUE 11 81521

⚠ 警告 安装不当

- 设计机器控制链接、接口以及所有影响安全的控制元件时，请咨询当地安全机构，了解相关要求。
 - 严格遵守安装指南。
- 如果不遵守以上说明，则有可能造成死亡或重伤。

开关的安装、接线和密封

⚠ 警告 操作不当

- 确保开关驱动器有足够的移动行程，能让常闭 (NC) 触点正极开启。
- 如果不遵守以上说明，则有可能造成死亡或重伤。

- 请参阅：
 - 第 5 页，了解如何进行调节
 - 第 8 至 12 页，了解各开关编码对应的具体移动行程和规格
 - 第 5 页，了解限位开关的正确应用
 - 第 13 至 18 页，了解开关的安装尺寸
- 根据需要进行调节：
 - 操作头方向（第 5 页“图 1”）
 - 动作方向（第 5 页“图 2”）
 - 侧旋转开关，带 36 个驱动杆位置（第 5 页“图 3”）：
- 用 M4 或 #8 螺钉安装开关顶部的各角。对于 GLD 产品，向螺钉施加 2.7 - 3.4 Nm [24 - 30 in-lb] 的扭动力。对于 GLC 和 GLE 产品，向螺钉施加 3.1 - 3.7 Nm [27 - 33 in-lb] 的扭动力。
- 拆下盖板上的螺钉。
- 将绞合线（0.75 mm² 至 2.3 mm², 18-14 AWG）或单股线（0.75 mm² 至 1.5 mm², 18-16 AWG）连接至接触块端子（环境温度超过 75 °C 时，使用 90 °C 的线）。向开关端子螺钉施加 0.8 - 1.0 Nm [7 - 9 in-lb] 的扭动力。
- 按照 PK 80112 中的说明密封导线孔。
- 重新装上盖板，向盖板上的螺钉施加 0.5 Nm [4.4 in-lb] 的扭动力。

Installation Instructions for MICRO SWITCH GLS Min-Din Limit Switches

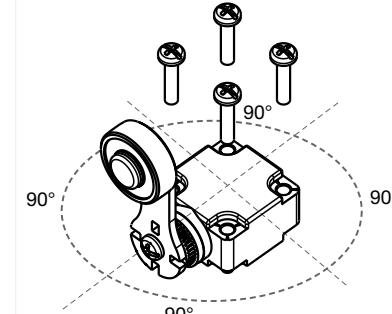
ISSUE 11 81521

FIELD ADJUSTABLE HEAD FIELD VERSTELLBAREM KOPF CAMPO TESTA REGOLABILE

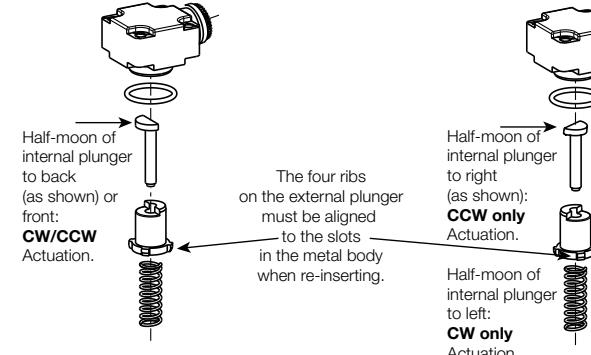
CAMPO DE CABEZA AJUSTABLE TÊTE DE CHAMP RÉGLABLE CABEÇA CAMPO AJUSTÁVE

现场可调节操作头

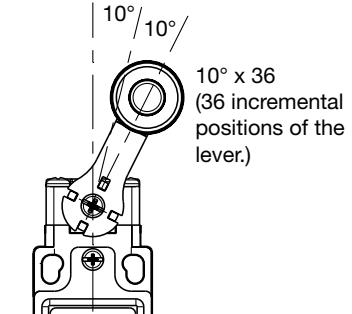
1.



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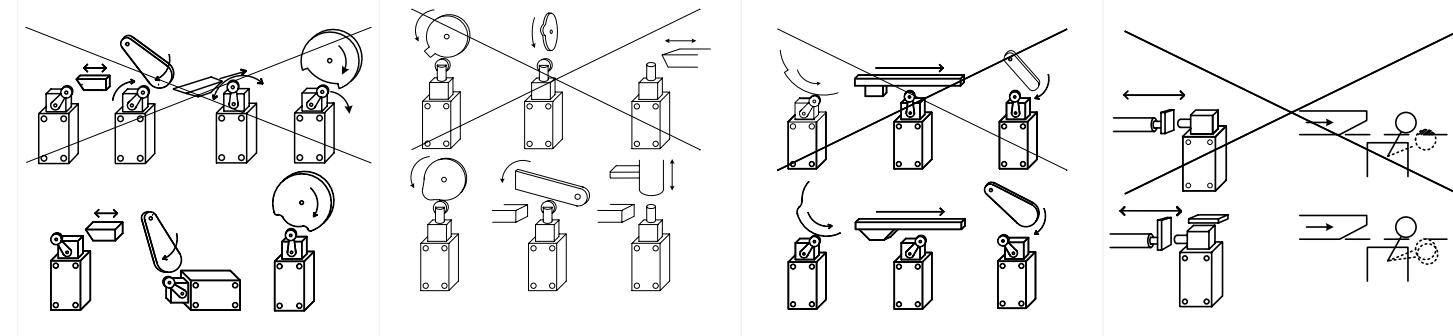
3.



OPERATION REQUIREMENTS ANFORDERUNGEN AN DEN BETRIEB REQUISITI PER L'ESERCIZIO

REQUISITOS DE FUNCIONAMIENTO EXIGENCIAS DE FONCTIONNEMENT REQUISITOS DE OPERAÇÃO

操作要求



TERMS BEDINGUNGEN TARIFFE

CONDICIONES TERMES CONDIÇÕES

术语

Contact Closed	Contacto cerrado	Kontakt geschlossen	Contact fermé	Contatto chiuso	Contato Fechado	触点已闭合
Contact Open	Contacto abierto	Kontakt offen	Contact ouvert	Contatto aperto	Contato Aberto	触点已开启
Differential Travel	Carrera diferencial	Differenzwinkel	Course différentielle	Corsa differenziale	Percorso Diferencial	差动行程
Free Position	Posición libre	Freistellung	Position libre	Posizione libera	Posição Livre	自由位置
Operating Position 1	Posición de funcionamiento 1	Schaltpunkt 1	Position de commutation 1	Posizione di funzionamento 1	Posição de Operação 1	工作位置 1
Positive Opening 1 to IEC 947-5-1	Apertura positiva 1 según IEC 947-5-1	Zwangsoffnung 1 gemäß IEC 947-5-1	Ouverture positive 1 selon CEI 947-5-1	Apertura forzata 1 Conforme alla norma IEC 947-5-1	Abertura Positiva 1 para IEC 947-5-1	正极开启 1 至 IEC 947-5-1
Differential Travel 1	Carrera diferencial 1	Differenzweg 1	Course différentielle 1	Corsa differenziale 1	Percorso Diferencial 1	差动行程 1
Over Travel	Sobrecarrera	Nachlaufweg	Surcourse	Oltre corsa	Sobrepercurso	超程
Maximum Operating Force	Fuerza de funcionamiento máxima	Maximale Betätigungs Kraft	Force de commutation maximum	Forza massima di intervento	Força Máxima de Operação	最大操纵力
Maximum Disconnect Force	Fuerza de desconexión máxima	Maximale Öffnungskraft	Force de déconnection maximum	Forza massima di scollegamento	Força Máxima de Desconexão	最大切断力

Installation Instructions for MICRO SWITCH GLS Min-Din Limit Switches

ISSUE 11 81521

Designation and Utilization Category		Rated Operational Current Ie (A) at Rated Operational Voltage Ue (V)					
		24 V	120 V	240 V	380 V	480 V	600 V
ac15	A300	—	6 A	3 A	—	—	—
ac15	A600	—	6 A	3 A	1.9 A	1.5 A	1.2 A
dc13	Q300	2.8 A	0.55 A	0.27 A	—	—	—
Rated thermal current (Ith)		10 A					
Sealing		GLC/GLE: IP66; NEMA 1, 4, 12, 13 GLD: IP67; NEMA 1, 4X, 12, 13 (4X indoor use only)					
Rated impulse withstand (Uimp)		2500 V					
Pollution degree		3					
Rated insulation voltage (Ui)		300 V, 600 V					
Operating temperature range		-40 °C to 85 °C [-40 °F to 185 °F]					
Short-circuit protective device (type/maximum rating)		Class J fuse (10 A/600 V)					
Expected mechanical life		up to 10,000,000 operations					
Conditional short-circuit current		1000 A					
Electrical rating for gold-plated contacts		10 µA to 100 mA, 1 Vac/Vdc to 50 Vac/Vdc					

- Low Voltage Directive 2006/95/EC
- Machinery Directive 2006/42/EC only as directives relate to the components being used in a safety function
- IEC/EN 60947-5-1

Designation and utilization category	Categoría de designación y utilización	Bezeichnung und Verwendungskategorie
Rated operational current Ie (A) at rated operational voltage Ue (V)	Corriente operativa nominal Ie (A) a voltaje operativo nominal Ue (V)	Nominaler Betriebsstrom Ie (A) bei nominaler Betriebsspannung Ue (V)
Rated thermal current (Ith)	Corriente térmica nominal (Ith)	Nominaler thermischer Strom (Ith)
Rated impulse withstand (Uimp)	Resistencia de impulso nominal (Uimp)	Nominale Impulsspannung (Uimp)
Rated insulation voltage (Ui)	Voltaje de aislamiento nominal (Ui)	Nominale Isolationsspannung (Ui)
Short-circuit protective device (type/maximum rating)	Dispositivo de protección contra cortocircuito (tipo/valor nominal)	Kurzschluß-Schutzeinrichtung (Typ/Maximalleistung)
Conditional short-circuit current	Corriente condicional de cortocircuito	Bedingter Kurzschlußstrom
Electrical rating for gold-plated contacts	Clasificación eléctrica para contactos bañados en oro	Schaltvermögen von vergoldeten Kontakten
Sealing	Sellado	Schutzart
Pollution degree	Nivel de contaminación	Emissionsgrad
Operating temperature range	Límites de temperatura de funcionamiento	Betriebstemperaturbereich
Expected mechanical life	Vida mecánica esperada	Erwartete mechanische Lebensdauer
Operations	Operaciones	Schaltspiele
Complies with:	Cumple con:	Entspricht:
• Low Voltage Directive 2006/95/EC	• Directiva de bajo voltaje 2006/95/EEC	• Niederspannungs-Richtlinie 2006/95/EG
• Machinery Directive 2006/42/EC only as the directives relate to the components being used in a safety function.	• Directiva de maquinarias 2006/42/EEC solo en lo que se refiere a componentes que se utilizan en una función de seguridad.	• Maschinen-Richtlinie 2006/42/EG, soweit sich diese auf die Komponenten bezieht, die als Sicherungsvorrichtungen verwendet werden.
Désignation et catégorie d'utilisation	Denominazione e categoria d'impiego	Categoria de designação e utilização
Courant de fonctionnement nominal Ie (A) à la tension de fonctionnement nominale Ue(V)	Corrente nominale di esercizio Ie (A) alla tensione nominale di esercizio Ue (V)	Corrente operacional nominal Ie (A) na tensão operacional nominal Ue (V)
Courant thermique nominal (Ith)	Corrente termica nominale (Ith)	Corrente térmica nominal (Ith)
Tension nominale de tenue au choc (Uimp)	Resistenza agli impulsi nominale (Uimp)	Resistência nominal ao impulso (Uimp)
Tension d'isolement nominale (Ui)	Tensione di isolamento nominale (Ui)	Tensão de isolamento nominal (Ui)
Dispositif de protection contre les courts-circuits (type/valeur nominale maximum)	Dispositivo di protezione per cortocircuito (valore nominale tipico/massimo)	Dispositivo protetor contra curto-circuito (tipo/nominal máxima)
Courant de court-circuit conditionnel	Corrente di cortocircuito condizionale	Corrente condicional de curto-circuito
Caractéristiques électriques de contacts plaqués or	Classificatione elettrica per contatti placcati oro	Classificações elétricas para contatos banhados a ouro
Etanchéité	Grado di protezione	Vedação
Indice de pollution	Grado di inquinamento	Grau de poluição
Gamme de températures de fonctionnement	Temperature di esercizio	Faixa de temperaturas de operação
Durée mécanique prévue	Durata meccanica prevista	Vida mecânica esperada
Utilisation	Operazioni	Operações
Conforme à:	Conforme con:	Em conformidade com:
• Directive Basse tension 2006/95/CEE	• Direttiva Bassa tensione 2006/95/CEE	• Diretiva de baixa tensão 2006/95/EEC
• Directive Machine 2006/42/EEC limitée à ce qui concerne les composants utilisés dans une fonction de sécurité.	• Direttiva macchine 2006/42/CEE solo nella misura in cui la direttiva fa riferimento ai componenti da utilizzare con funzioni di sicurezza.	• Diretiva de maquinário 2006/42/EEC somente no que se refere aos componentes usados em função de segurança.

Installation Instructions for MICRO SWITCH GLS Min-Din Limit Switches

ISSUE 11 81521

Figure 4. Reading Operating Specifications

Catalog listing	Contact block diagram	Nominal travels and related terminals		Operating force max.	Disconnect force max.	Operating degrees max.	Operating degrees min.	Max. operating frequency ops/min.
		Contact Closed	Contact Open					
GL**01A GL**07A	SNAP-ACTION CONTACTS SINGLE POLE 	21-22 13-14	20° 56°**	>	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]
↑ 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 NOMENCLATURE

GL	Switch Type	C	Body	A	Conduit	01	Basic Switch	A1A	Head/Actuator	L	Modification Codes
GLS Series	Global Limit Switch	C	Metal, MIN-DIN	A	1/2-14 NPT	01	SPDT snap action	A1A	Side rotary, fixed, 19 x 6 nylon roller	E7A	Wobble, plastic stick
		D	Plastic, MIN-DIN	B	PG 13.5	03	SPDT, BBM slow acting	A1B	Side rotary, fixed, 19 x 6 steel roller	E7B	Wobble, coil
		E	Metal, Pancake	C	20 mm	04	SPDT, MBB slow acting	A2A	Side rotary, adjust., 19 x 6 nylon roller	E7D	Lever to right
						05	DPST, 2NO slow acting	A2B	Side rotary, adjust., 19 x 6 steel roller	F	Adj. top roller lever, Ø27,3 x 5 POM roller
						06	DPST, 2NC slow acting	A4J	Side rotary, adjust., 140 mm aluminum rod	K8A	Cat whisker, 140 mm
						07	SPDT, snap action, gold cont.	A4L	Side rotary, adjust., 200 mm aluminum rod	K8B	Cat whisker, 190 mm
						24	DPDT, snap action, Body E	A5A	Side rotary, offset, 19 x 6 nylon roller	K8C	Wobble, cat whisker
						32	DPDT, snap action, gold cont. Body E	A5B	Side rotary, offset, 19 x 6 steel roller	A1	Side rotary, fixed, no roller
						33	SPDT, BBM slow acting, gold contacts	A9A	Side rotary, conveyor lever	A2	Side rotary, adjustable, no roller
						34	SPDT, MBB slow acting, gold contacts	B	Top pin plunger	A1Y	Side rotary, fixed, 50 x 10 rubber roller
						35	DPST, 2NO slow acting, gold contacts	C	Top roller plunger	A2Y	Side rotary, adj., 50 x 10 rubber roller
						36	DPST, 2NC slow acting, gold contacts	D	Top roller lever		for Actuator/Material C
										6	Roller perpendicular to mtg. surf.
											for Actuator/Material D
										6	Lever to right, hinge to left

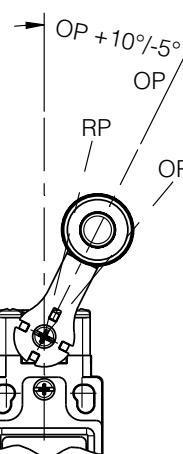
NOTE: not all combinations of model code are available.
Please contact your Honeywell provider/representative for assistance.

Installation Instructions for MICRO SWITCH GLS Min-Din Limit Switches

ISSUE 11 81521

Figure 5. Head Code: A
Side Rotary Angular Operating Characteristics

- Notes:
- Free position, operate point, over travel and pre-travel all to EN 50047
 - Operating characteristics apply to counter clockwise (CCW) and clock wise (CW) actuation
 - Refer to page 6 for instructions on how to read operating characteristics and specifications
 - Contact block terminal designation to EN 50013
 - **Tightening torque GLC/GLD: 0,5 Nm [4.4 in-lb] max.**
 - **Tightening torque GLE: 0,339 Nm [3 in-lb] max.**

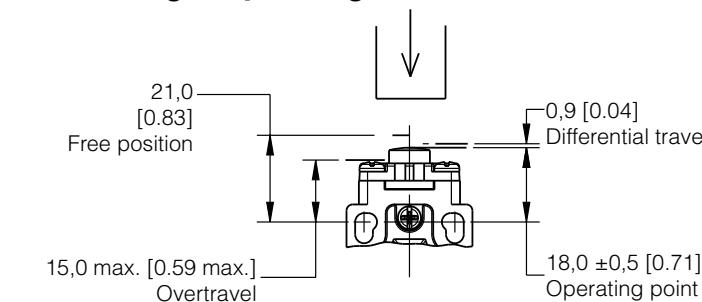


Catalog listing	Contact block diagram	Nominal travels and related terminals		Operating torque max.	Disconnect torque max.	Operating degrees max.	Operating degrees min.	Operating velocity min.	Operating velocity max.	Max. operate frequency ops/min
		Contact Closed	Contact Open							
GL**01A GL**07A	Snap action 			0,120 Nm [1.1 in-lb]	0,140 Nm [1.3 in-lb]	360°	10°	2,0 mm/s	200 mm/s	250
GL**03A GL**33A	BBM, slow action 			0,110 Nm [1.0 in-lb]	0,160 Nm [1.5 in-lb]	360°	10°	2,0 mm/s	200 mm/s	250
GL**04A GL**34A	MBB, slow action 			0,110 Nm [1.0 in-lb]	0,170 Nm [1.6 in-lb]	360°	10°	2,0 mm/s	200 mm/s	250
GL**05A GL**35A	2 NO, slow action 			0,110 Nm [1.0 in-lb]	0,150 Nm [1.4 in-lb]	360°	10°	2,0 mm/s	200 mm/s	250
GL**06A GL**36A	2 NC, slow action 			0,110 Nm [1.0 in-lb]	0,150 Nm [1.4 in-lb]	360°	10°	2,0 mm/s	200 mm/s	250
GLE*24A GLE*32A	2 NC/2 NO, snap action 			0,165 Nm [1.6 in-lb]	0,165 Nm [1.6 in-lb]		10°	2,0 mm/s	200 mm/s	250

Installation Instructions for MICRO SWITCH GLS Min-Din Limit Switches

ISSUE 11 81521

Figure 6. Head Code: B
Pin Plunger Operating Characteristics



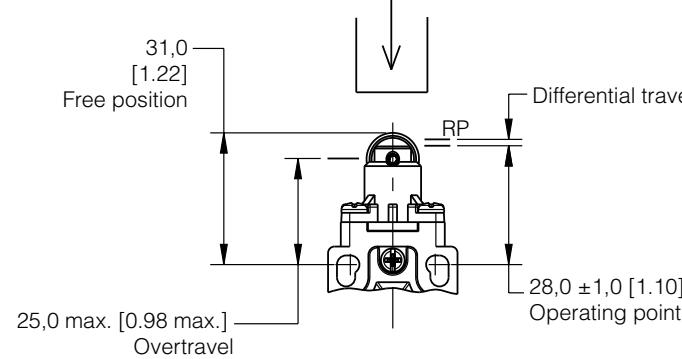
- Notes:
- Free position, operate point, over travel and pretravel all to EN 50047
 - Refer to page 6 for instructions on how to read operating characteristics and specifications
 - Contact block terminal designation to EN 50013

Catalog listing	Contact block diagram	Nominal travels and related terminals		Operating force max.	Disconnect force max.	Operating velocity max.	Max. operate frequency ops/min
		Contact Closed	Contact Open				
GL**01B GL**07B	Snap action 			16 N [3.6 lb]	23 N [5.2 lb]	100 mm/S [3.9 in/S]	1,0 mm/S [0.04 in/S] 250
GL**03B GL**33B	BBM, slow action 			14 N [3.2 lb]	24 N [5.4 lb]	100 mm/S [3.9 in/S]	1,0 mm/S [0.04 in/S] 250
GL**04B GL**34B	MBB, slow action 			16 N [3.6 lb]	27 N [6.1 lb]	100 mm/S [3.9 in/S]	1,0 mm/S [0.04 in/S] 250
GL**05B GL**35B	2 NO, slow action 			13 N [2.9 lb]	23 N [5.2 lb]	100 mm/S [3.9 in/S]	1,0 mm/S [0.04 in/S] 250
GL**06B GL**36B	2 NC, slow action 			13 N [2.9 lb]	23 N [5.2 lb]	100 mm/S [3.9 in/S]	1,0 mm/S [0.04 in/S] 250
GLE*24B GLE*32B	2 NC/2 NO, snap action 			13 N [2.9 lb]	24 N [5.4 lb]	100 mm/S [3.9 in/S]	1,0 mm/S [0.04 in/S] 250

Installation Instructions for MICRO SWITCH GLS Min-Din Limit Switches

ISSUE 11 81521

Figure 7. Head Code: C
Roller Plunger Operating Characteristics



Notes:

- Free position, operate point, overtravel, and pretravel all to EN 50047
- Refer to page 6 for instructions on how to read operating characteristics and specifications
- Contact block terminal designation to EN 50013

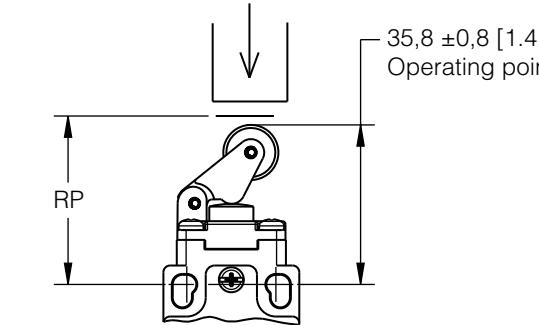
Catalog listing		Contact block dia-gram	Nominal travels and related terminals		Operating force max. Disconnect force, max.	Operating velocity, max.	operating velocity, min.	Max. operate frequency ops/min
Part No.	Description		Contact Closed	Contact Open				
GL*#04C GLE*34C	Snap action		16 N [3.6 lb]	14 N [3.2 lb]	16 N [3.6 lb]	100 mm/S [3.9 in/S]	1.0 mm/S [0.04 in/S]	250
	BBM, slow action		27 N [6.1 lb]	24 N [5.4 lb]	23 N [5.2 lb]	100 mm/S [3.9 in/S]	1.0 mm/S [0.04 in/S]	250
GL*#03C GL*#33C	MBB, slow action		16 N [3.6 lb]	14 N [3.2 lb]	16 N [3.6 lb]	100 mm/S [3.9 in/S]	1.0 mm/S [0.04 in/S]	250

Catalog listing		Contact block dia-gram	Nominal travels and related terminals		Operating force max. Disconnect force, max.	Operating velocity, max.	operating velocity, min.	Max. operate frequency ops/min
Part No.	Description		Contact Closed	Contact Open				
GLE*24C GLE*32C	2 NC, slow action		13 N [2.9 lb]	13 N [2.9 lb]	13 N [2.9 lb]	100 mm/S [3.9 in/S]	1.0 mm/S [0.04 in/S]	250
GL*#06C GL*#36C	2 NC/2 NO, snap action		24 N [5.49 lb]	23 N [5.2 lb]	23 N [5.2 lb]	100 mm/S [3.9 in/S]	1.0 mm/S [0.04 in/S]	250
GL**05C GL**35C	2 NO, slow action		31 mm [1.22]	27 mm [1.06]	31 mm [1.22]	100 mm/S [3.9 in/S]	1.0 mm/S [0.04 in/S]	250

Installation Instructions for MICRO SWITCH GLS Min-Din Limit Switches

ISSUE 11 81521

Figure 8. Head Code: D
Top Roller Lever Operating Characteristics



Notes:

- Free position, operate point, overtravel, and pretravel all to EN 50047
- Refer to page 6 for instructions on how to read operating characteristics and specifications
- Contact block terminal designation to EN 50013

Catalog listing		Contact block dia-gram	Nominal travels and related terminals		Operating force max. Disconnect force, max.	Operating velocity, max.	operating velocity, min.	Max. operate frequency ops/min
Part No.	Description		Contact Closed	Contact Open				
GL*#04D GLE*34D	Snap action		13 N [2.9 lb]	13 N [2.9 lb]	10 N [2.2 lb]	100 mm/s	1.0 mm/s	250
GL*#03D GL*#33D	BBM, slow action		24 N [5.49 lb]	23 N [5.2 lb]	16 N [3.6 lb]	100 mm/s	1.0 mm/s	250
GL**01D GL**30D GL**07D	MBB, slow action		35.8 mm [1.41]	34.2 mm [1.34]	9 N [2.0 lb]	100 mm/s	1.0 mm/s	250
GLE*24D GLE*32D	2 NC/2 NO, snap action		35.8 mm [1.41]	34.2 mm [1.34]	10 N [2.2 lb]	100 mm/s	1.0 mm/s	250
GL*#06D GL*#36D GL**05D GL**35D	2 NC, slow action		34.2 mm [1.34]	33.1 mm [1.29]	8 N [1.8 lb]	100 mm/s	1.0 mm/s	250
GL**06D GL**36D	2 NC, slow action		35.8 mm [1.41]	34.5 mm [1.36]	8 N [1.8 lb]	100 mm/s	1.0 mm/s	250

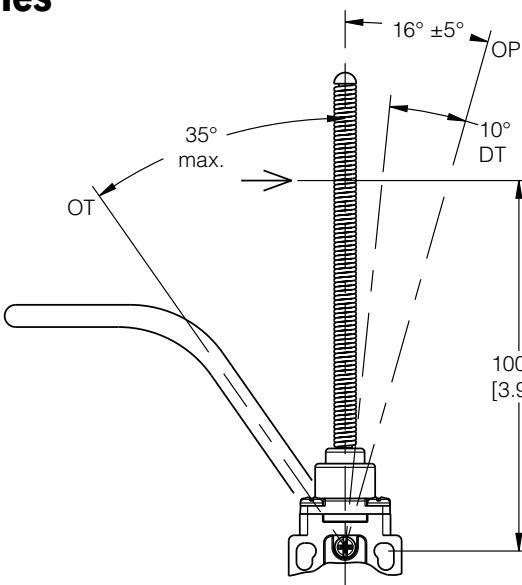
Installation Instructions for MICRO SWITCH GLS Min-Din Limit Switches

ISSUE 11 81521

Figure 9. Head Code: K
Wobble Stick Angular Actuation Operating Characteristics

Notes:

- Free position, operate point, over travel and pre-travel all to EN 50047
- Refer to page 6 for instructions on how to read operating characteristics and specifications
- Contact block terminal designation to EN 50013



Catalog listing	Contact block diagram	Nominal travels and related terminals		Operating torque max.	Operating degrees, max.	Operating velocity, min.	Operating velocity, max.	Max. operate frequency ops/min	
		Contact Closed	Contact Open						
GL**01K GL**07K	Snap action 	0° 16° 35° 21-22 13-14 FP OT max. RP=6°	16° ±5° OP DT=10°	1.3 N [0.29 lb]	360°	10°	13 rad/s	0.13 rad/s	100
GL**03K GL**33K	BBM, slow action 	0° 16° 27° 35° 21-22 13-14 FP OP OT max.	16° ±5° OP DT=10°	1.1 N [0.25 lb]	360°	10°	13 rad/s	0.13 rad/s	100
GL**04K GL**34K	MBB, slow action 	0° 16° 27° 35° 21-22 13-14 FP OP OT max.	16° ±5° OP DT=10°	1.2 N [0.27 lb]	360°	10°	13 rad/s	0.13 rad/s	100
GL**05K GL**35K	2 NO, slow action 	0° 27° 35° 13-14 23-24 FP OP OT max.	16° ±5° OP DT=10°	1.1 N [0.25 lb]	360°	10°	13 rad/s	0.13 rad/s	100
GL**06K GL**36K	2 NC, slow action 	0° 16° 35° 11-12 21-22 FP OP OT max.	16° ±5° OP DT=10°	1.1 N [0.25 lb]	360°	10°	13 rad/s	0.13 rad/s	100
GLE*24K GLE*32K	2 NC/2 NO, snap action 	0° 16° 35° 11-12 13-14 21-22 23-24 FP OP OT max. RP=9°	16° ±5° OP DT=7° OT max. RP=9°	1.1 N [0.25 lb]	360°	10°	13 rad/s	0.13 rad/s	100

Installation Instructions for MICRO SWITCH GLS Min-Din Limit Switches

ISSUE 11 81521

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

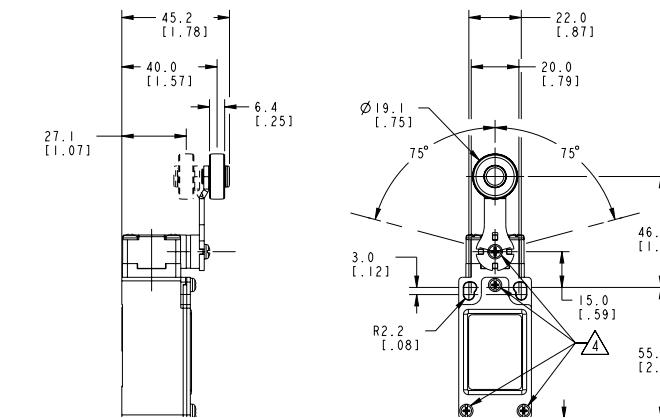


Figure 2. GLC Side Rotary • A2, A2A, A2B, and A2Y

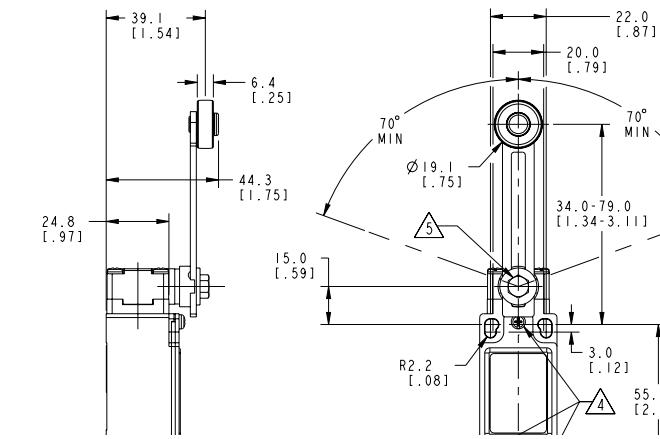


Figure 3. GLC Side Rotary Rod • A4J (140 mm) & A4L (200 mm)

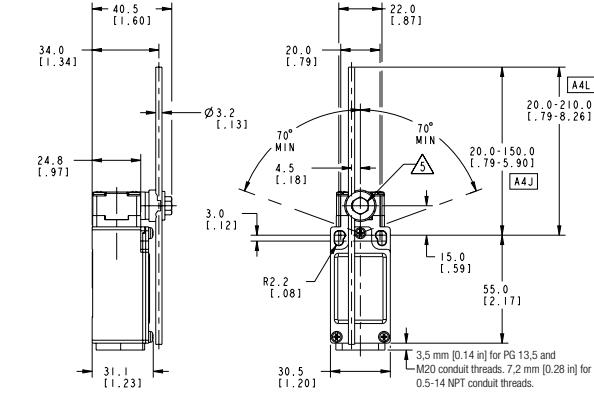


Figure 4. GLC Side Rotary • A5A and A5B

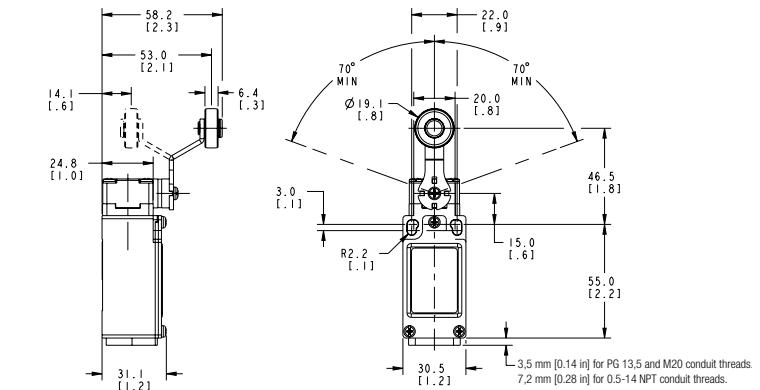


Figure 5. GLC Side Rotary • A9A

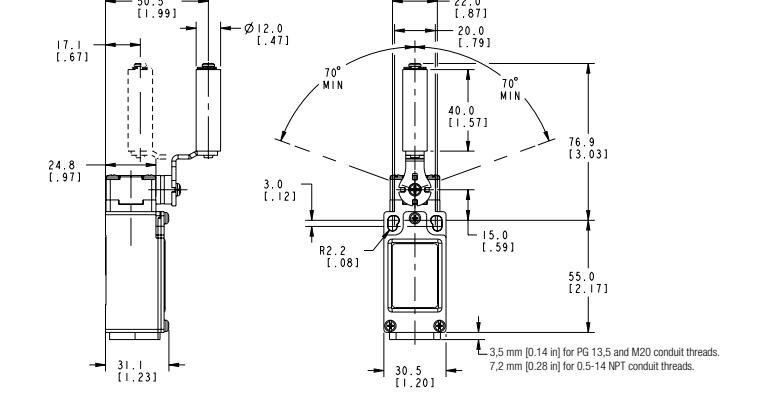
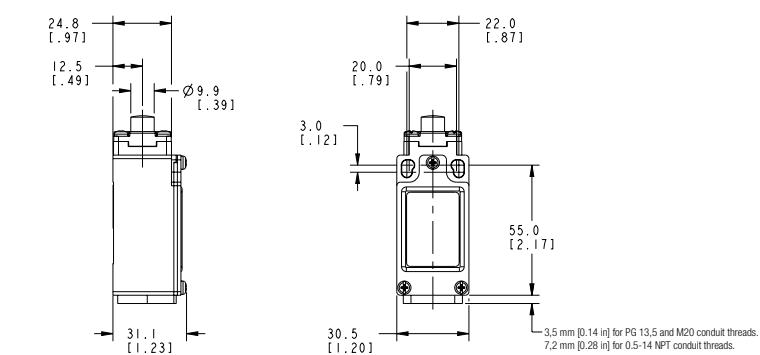


Figure 6. GLC Top Pin Plunger



Installation Instructions for MICRO SWITCH GLS Min-Din Limit Switches

ISSUE 11 81521

Figure 7. GLC Top Roller Plunger

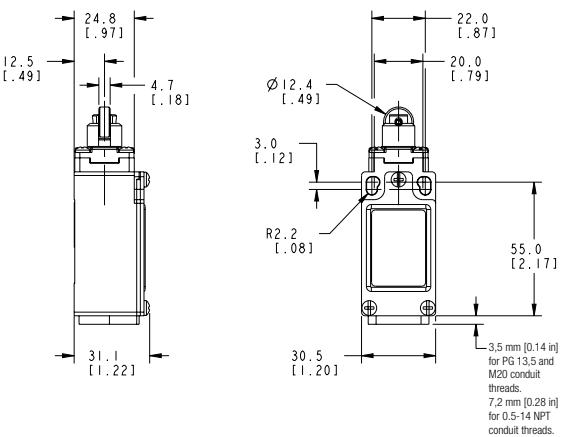


Figure 8. GLC Top Roller Arm

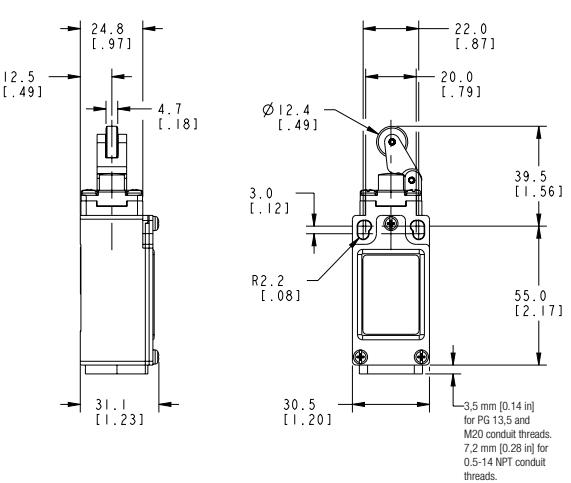


Figure 9. GLC Wobble • E7B

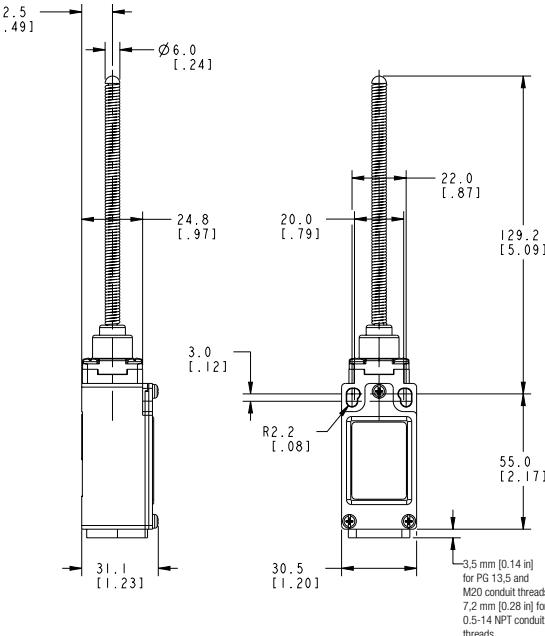


Figure 10. GLC Wobble • K8A/K8B

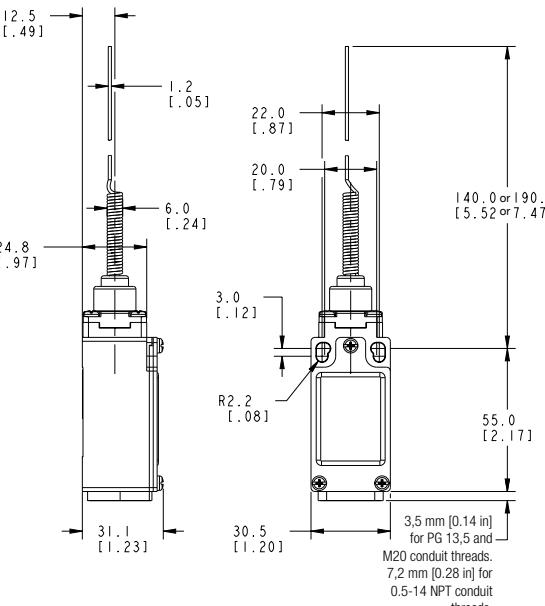
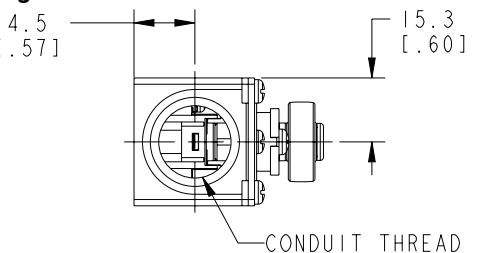


Figure 11. GLC Conduit



Installation Instructions for MICRO SWITCH GLS Min-Din Limit Switches

ISSUE 11 81521

Figure 12. GLD Side Rotary • A1, A1A, A1B, and A1Y

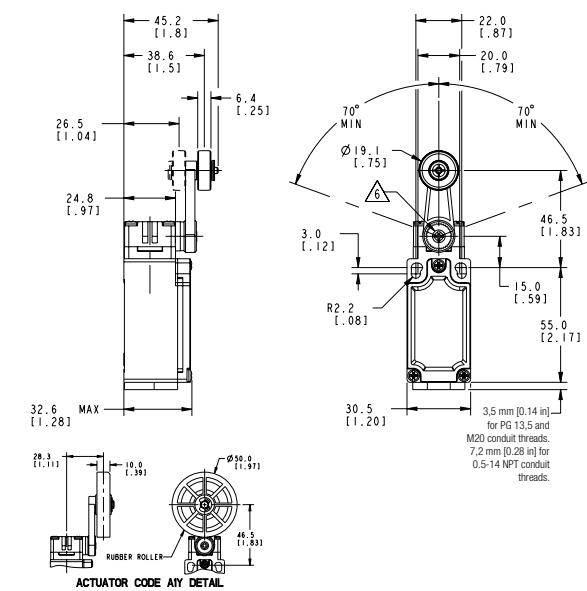


Figure 13. GLD Side Rotary • A2, A2A, A2B, and A2Y

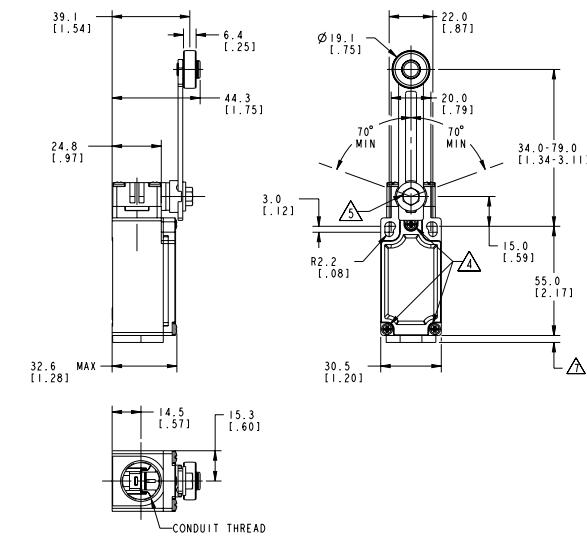


Figure 14. GLD Side Rotary Rod • A4J (140 mm) & A4L (200 mm)

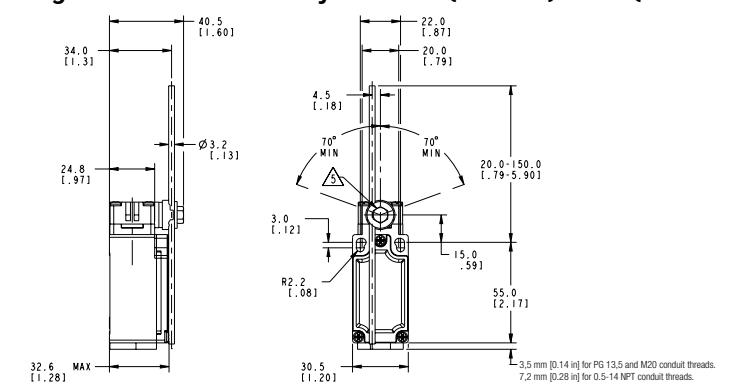


Figure 15. GLD Side Rotary • A5A and A5B

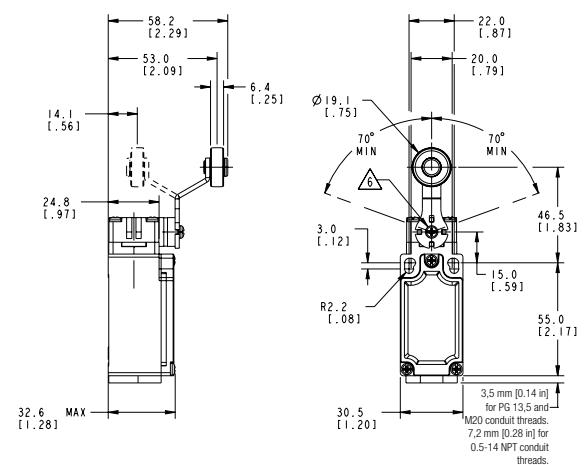


Figure 16. GLD Side Rotary • A9A

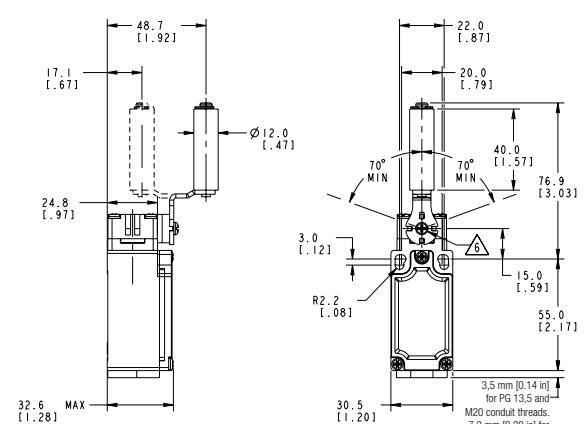
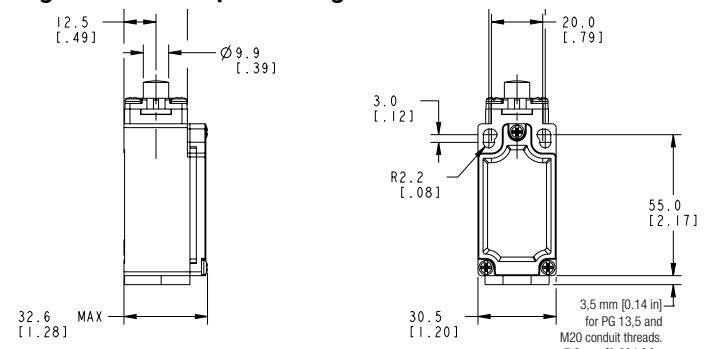


Figure 17. GLD Top Pin Plunger



Installation Instructions for MICRO SWITCH GLS Min-Din Limit Switches

ISSUE 11 81521

Figure 18. GLD Top Roller Plunger

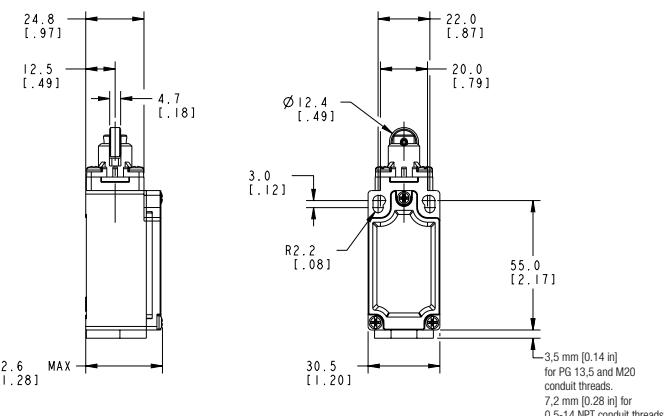


Figure 19. GLD Top Roller Arm

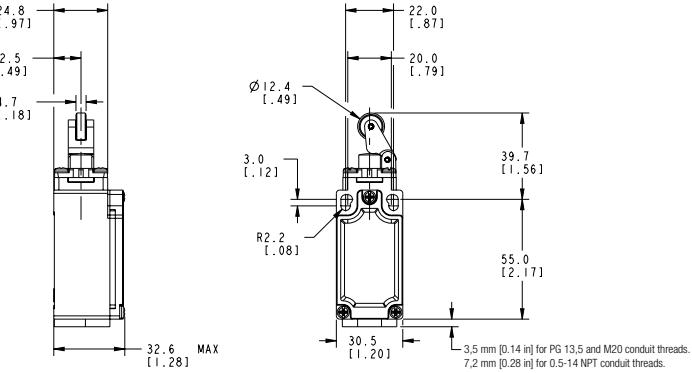


Figure 20. GLD Wobble • E7B

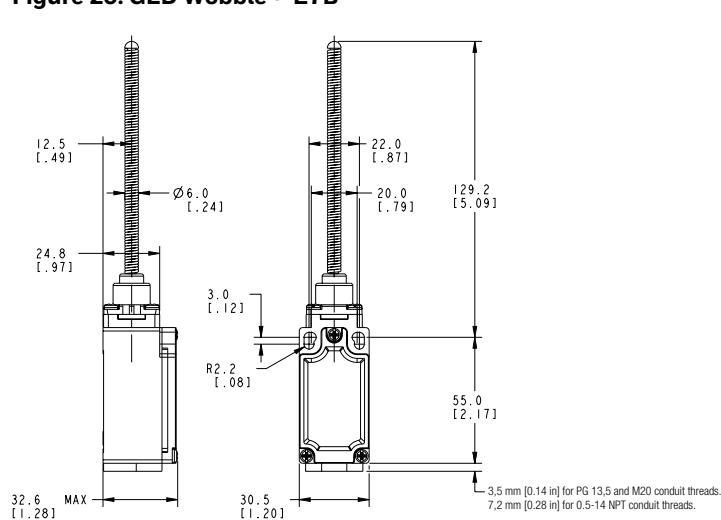


Figure 21. GLD Wobble • K8A/K8B

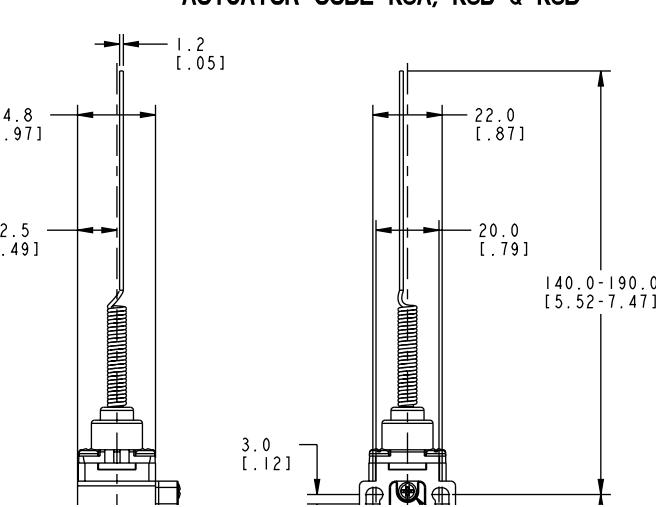
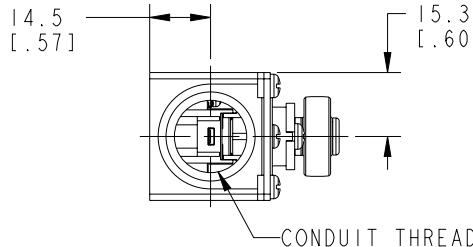


Figure 22. GLD Conduit



Installation Instructions for MICRO SWITCH GLS Min-Din Limit Switches

ISSUE 11 81521

Figure 23. GLE Side Rotary • A1, A1A, A1B, and A1Y

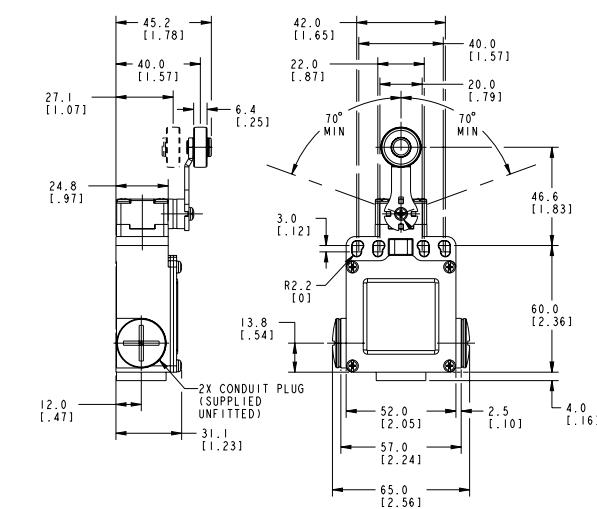


Figure 24. GLE Side Rotary • A2, A2A, A2B, and A2Y

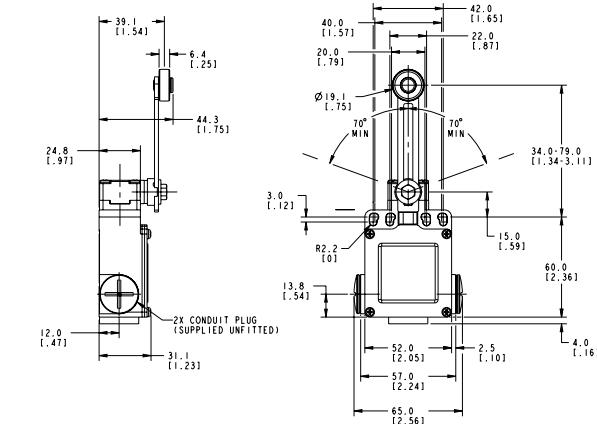


Figure 25. GLE Side Rotary • A4J and A4L

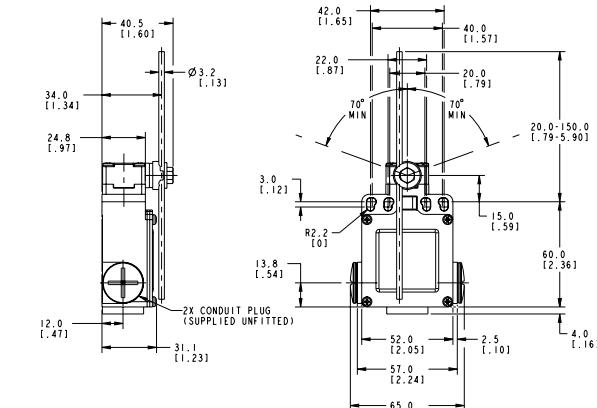


Figure 26. GLE Side Rotary • A5A and A5B

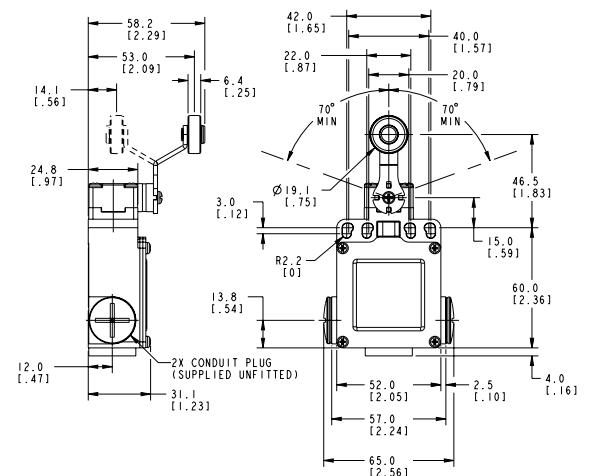


Figure 27. GLE Side Rotary • A9A

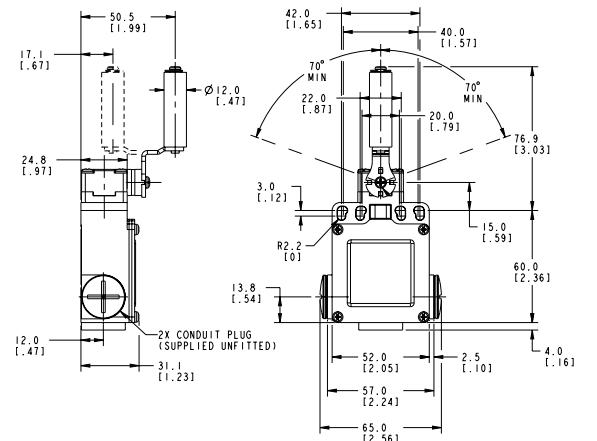
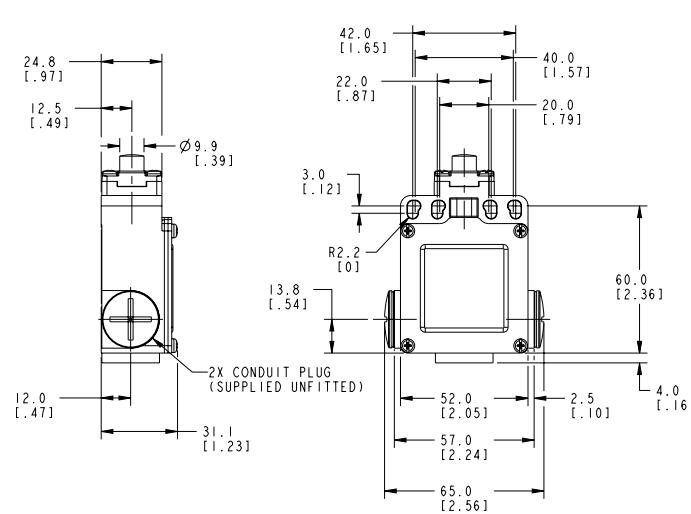


Figure 28. GLE Top Pin Plunger



Installation Instructions for MICRO SWITCH GLS Min-Din Limit Switches

ISSUE 11 81521

Figure 29. GLE Top Roller Plunger

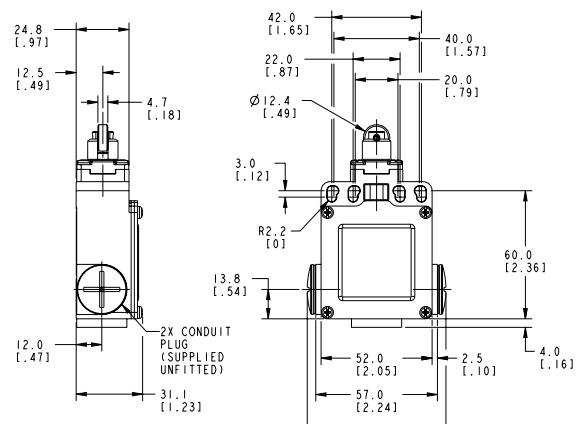


Figure 30. GLE Top Roller Arm

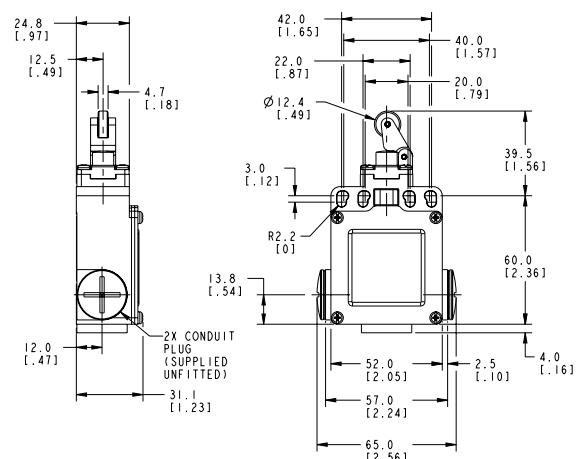


Figure 31. GLE Wobble • E7B

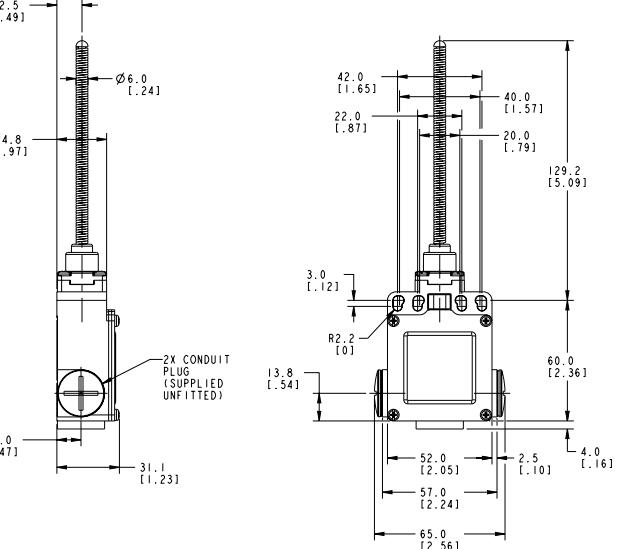


Figure 32. GLE Wobble • K8A

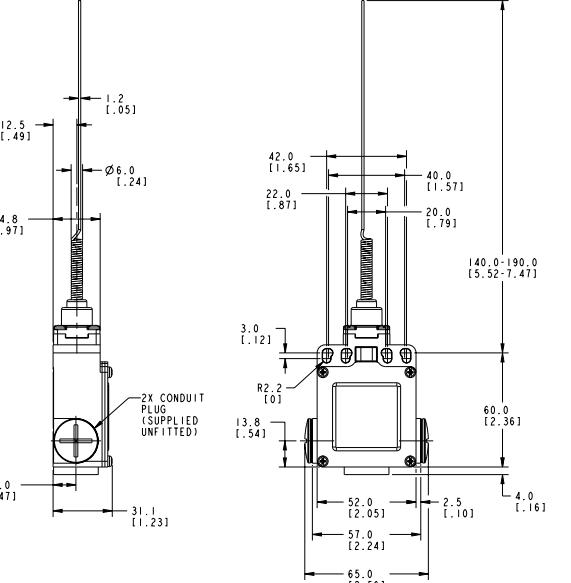
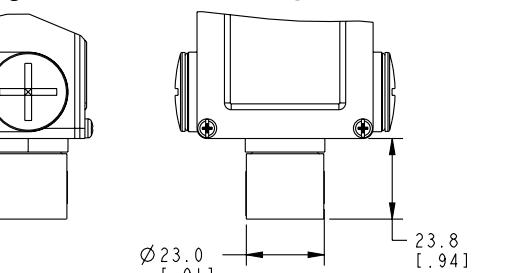


Figure 33. GLE Conduit Adapter for 0.5-14 NPT



Installation Instructions for MICRO SWITCH GLS Min-Din Limit Switches

ISSUE 11 81521

WARRANTY/REMEDY

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GARANTIE UND HAFTUNGSANSPRÜCHE

Honeywell garantiert für seine hergestellten Produkte fehlerfreies Material und Qualitätsarbeit. Es gilt die durch Honeywell schriftlich mitgeteilte Standard-Produktgarantie von Honeywell. Informationen zu Garantiedetails finden Sie auf Ihrer Auftragsbestätigung bzw. erhalten Sie von Ihrer örtlichen Niederlassung. Wenn Produkte mit Garantie innerhalb der Garantiefrist an Honeywell zurückgesendet werden, ersetzt oder repariert Honeywell die als fehlerhaft angesehenen Teile nach eigenem Ermessen kostenfrei. **Das Vorangegangene gilt als einzige Entschädigung des Käufers und ersetzt alle anderen ausdrücklichen oder stillschweigenden Garantien, einschließlich Qualitäts- und Sachmängelhaftung. In keinem Fall haftet Honeywell für mittelbare, indirekte oder SonderSchäden.**

Obwohl Honeywell persönliche und schriftliche Anwendungshilfe sowie Informationen über die Honeywell Website bietet, ist es die Entscheidung des Kunden, ob das Produkt sich für die entsprechende Anwendung eignet.

Änderungen der technischen Daten ohne Vorankündigung sind vorbehalten. Die hier gegebenen Informationen sind nach unserem Wissen zum Zeitpunkt der Drucklegung korrekt. Wir übernehmen dennoch keinerlei Verantwortung für deren Verwendung.

GARANTIE/RECOURS

Honeywell garantit que les articles de sa fabrication sont exempts de défauts de pièces et main d'œuvre. La garantie standard sur les produits Honeywell est d'application sauf indication contraire écrite et approuvée par Honeywell. Veuillez vous reporter au récépissé de votre commande ou consulter votre bureau de vente local pour obtenir des détails spécifiques sur la garantie. Si les articles garantis sont retournés à Honeywell pendant la période de couverture, Honeywell réparera ou remplacera, à sa discrétion, gratuitement ceux qui auront été trouvés défectueux. **Ce qui précède constitue le seul recours de l'acheteur et se substitue à toutes autres garanties, explicites ou implicites, y compris celles relatives à la commercialisation ou la compatibilité avec une application particulière. Honeywell ne peut être en aucun cas tenu responsable de tout dommage indirect, spécial ou accessoire.**

Bien que nous fournissons une assistance aux applications par le biais de notre bibliographie et le site Web Honeywell, il appartient au client de déterminer l'aptitude du produit pour son application.

Les caractéristiques techniques peuvent changer sans préavis. Les informations que nous diffusons sont réputées précises et fiables au moment de leur impression. Nous n'assumons cependant aucune responsabilité pour leur usage.

CLAUSULA DE GARANTÍA

Honeywell garantiza que todos los productos que fabrica están libres de defectos de mano de obra o materiales. La garantía del producto estándar de Honeywell se aplica a menos que Honeywell haya acordado lo contrario por escrito; consulte a su confirmación de orden o a su oficina de ventas local para detalles específicos de garantía. Si se devuelven productos con garantía a Honeywell durante el período de cobertura, Honeywell los reparará o reemplazará, de manera opcional, si determina que están defectuosos. **Esta cláusula de garantía sustituye a cualquier otra garantía, ya sea explícita o implícita. En ningún caso Honeywell será responsable por daños consecuentes, especiales o indirectos.**

Aunque Honeywell ofrece asistencia personal para las aplicaciones por medio de sus publicaciones y páginas web, es el cliente quien debe determinar la idoneidad del producto en la aplicación.

Las especificaciones pueden cambiar sin previo aviso. La información suministrada es considerada correcta y fiable en el momento de esta impresión. No obstante, no asumimos la responsabilidad por su uso.

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A Honeywell garante seus produtos contra defeitos de material e de fabricação. A garantia padrão de produto da Honeywell se aplica a menos que haja um acordo diferente por escrito com a Honeywell; consulte a sua confirmação de encomenda ou consulte o escritório de vendas local para obter detalhes específicos da garantia. Quando produtos dentro do período de cobertura da garantia forem devolvidos à Honeywell, esta se compromete a reparar ou substituir, de acordo com a opção da empresa, por um novo aqueles produtos que considerar defeituosos. **O acima estipulado é a única solução oferecida ao comprador e substitui quaisquer outras garantias, expressas ou implícitas, inclusive garantias de comercialibilidade e adequação a um fim específico. Em hipótese alguma a Honeywell deve ser responsável por danos consequenciais, especiais ou indiretos.**

Embora a Honeywell proporcione assistência pessoal, através de literatura e de seu site na web, cabe ao cliente determinar qual produto é mais adequado à sua aplicação.

Installation Instructions for MICRO SWITCH GLS Min-Din Limit Switches

ISSUE 11

81521

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