# **GXS SERIES**

#### MICRO SWITCH Flame-Proof Limit Switches



#### **DESCRIPTION**

The GXS Series flame-proof limit switches are designed specifically for use in hazardous applications. The GXS enclosure is epoxy sealed and has an environmental protection of IP66 as per IEC/EN 60529. The entire GXS Series complies with the European Directive on Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres (94/9/EC) commonly referred to as the ATEX Directive.

#### **VALUE TO CUSTOMERS**

- Flameproof protection
- Meets product design and quality systems requirements of ATEX 94/9/EC
- Standard European mounting of 30 mm x 60 mm (GXA Series) or 20 mm to 22 mm (GXE Series)
- Suitable for difficult operating environments
- Fast and easy to install
- Epoxy-sealed cable and basic switch in a limit switch body
- External earth connection not required
- Change over (SPDT), three-wire device, 1NC/1NO

#### **POTENTIAL APPLICATIONS**

- Hazardous areas Category 2 (Zones 1 & 21) or Category 3 (Zones 2 & 22)
- Petrochemical
- Material handling
- Valves

Category Category	Flammable atmospheres	Protection required	Requirements for equipment
2	Medium risk of an explosive atmosphere occurring Gas = Zone 1 Dust = Zone 21	High	Equipment is capable of operating safely under a single fault condition (ib) or alternatively, one or more types of protection is used. For example, 'd', 'e', 'p', etc.
3	Low risk of an explosive atmosphere occurring Gas = Zone 2 Dust = Zone 22	Normal	Equipment for safe use in normal operation, typically (Ex n) equipment





- II 2 G Ex d IIC T6, II 2 D Ex tD A21 IP66 T85°C
- KEMA 00 ATEX 2103 X, IEC Ex KEM 10.0039X
- Conforms to EN60079-0, EN60079-1, EN61241-0, EN61241-1
- CE marked
- EN50041 mounting compatible (GXA Series)
- EN50047 mounting compatible (GXE Series)
- Rugged zinc die-cast housing with epoxy coating
- Pre-wired. 5 m of cable
- Bottom exit cable ONLY
- Double insulated switch element with snap-action basic switch



Proof only with the pre-wired 5 m cable. The cable on its own does not carry any hazardous area certifications.

Note 2: The GXS Series is part of the MICRO SWITCH family of hazardous location limit switches and has design and form factor similar to the GLA/GLE Series limit switches. To view these series, please click: GLA Series, GLE Series



TABLE 1. SPECIFICATIONS	
Characteristic	Parameter
Mechanical life	up to 2 million operations
Degree of protection	IP66, EN 60529
Operating temperature @ 3 A	-20 °C to 75 °C [-4 °F to 167 °F]
Operating temperature @ 4 A	-20 °C to 60 °C [-4 °F to 140 °F]
Standards/approvals	EN60079-0, EN60079-1, EN61241-0, EN61241-1  LUC II 2 G Ex d IIC T6, II 2 D Ex tD A21 IP66 T85°C  KEMA 00 ATEX 2103 X; IEC Ex KEM10.0039X  (X indicates special conditions for safe use, see certificates for details)
Electrical rating	AC15, DC13 1NC/1NO change over contacts Double insulated switch element No internal or external earth connection
Contact material	silver
Cable/body	Harmonised Cenelec cable, HO5VV-F, 3-core x 0,75 mm <sup>2</sup> Black (BK) - common Grey (GY) - NC Brown (BN) - NO Epoxy-sealed cable and body
Shock	50 g, IEC 60068-2-27
Vibration	10 g, IEC 60068-2-6

TABLE 2. UL AND CSA ELECTRICAL RATINGS							
Rating Code	Electrical Rating						
ac15 (Ue)	250 V, 4 A						
dc15 (Ue)	250 V 0.15 A						

**Figure 1. Product Nomenclature** 

GXA or GXE Switch Type	# Cable Length	<b>1</b> Circuitry	<b>A</b> Actuator Type	A Side Lever Roller Material	Head Orientation
<b>GXA</b> Series Hazardous _	5 5 meter cable	Silver contacts, snap action	A1 Side rotary, fixed roller lever	A Plastic	Lever to front or plunger parallel to mtg surface
Area Limit Switch			Side rotary, adjustable roller lever	<b>B</b> Steel	3 Lever to right
<b>GXE</b> Series			A4J Side rotary, adjustable 140 mm aluminum rod		4 Lever to left
Hazardous Area			B Pin plunger		<b>5</b> Lever to rear
Limit Switch			C Roller plunger		Roller plunger perpendicular to mtg surface
			<b>D</b> Roller arm		

TABLE 3. GXA/GXE SERIES ORDER GUIDE										
Catalog Listing	Descrip- tion	Actuator Type	Operate Force or Torque [max.]	Bar Chart	Free Position	Operate Point	Pretravel	Total Travel	Differential Travel	
GXA51A1B	Limit switch, EN50041, 30 mm x 60 mm mounting	Side rotary with fixed 38,1 mm [1.50 in] lever & Ø19 mm x 6,4 mm [ $\emptyset$ 0.75 in x 0.25 in] steel roller	0,33 Nm [2.9 in lb]	0° 29° 85° FP OP TT > Slack-Gray (NC)	O° ref.	29°	29°	85°	7°	
GXA51A2B			Side rotary with adjustable 38,1 mm to 91,5 mm [1.5 in to 3.6 in] lever & $\emptyset$ 19 mm x 6,4 mm [ $\emptyset$ 0.75 in x 0.25 in] steel roller	0,33 Nm [2.9 in lb]	0° 26° 85° PP OP TT Black-Gray (NC) Black-Brown (NO) 7° DT	O° ref.	26°	26°	85°	7°
GXA51B		Top pin plunger Ø10,0 mm [Ø0.39 in]	16 N [3.6 lb]	37.5 mm 35 mm OP TT OP T	37,5 mm [1.48 in]	35,0 mm [1.38 in]	2,5 mm [0.10 in]	7,0 mm [0.28 in]	0,5 mm [0.020 in]	
GXA51C		Top roller plunger Ø12,4 mm x 4,7 mm [Ø0.49 in x 0.19 in] steel roller	16 N [3.6 lb]	50,5 mm 48 mm 43,5 mm Black-Gray (NC) Black-Brown (NO) 0,5 mm DT	50,5 mm [1.99 in]	48,0 mm [1.89 in]	2,5 mm [0.10 in]	7,0 mm [0.28 in]	0,5 mm [0.020 in]	

TABLE 3. GX	(A/GXE SEF	RIES ORDER GUIDE							
Catalog Listing	Descrip- tion	Actuator Type	Operate Force or Torque [max.]	Bar Chart	Free Position	Operate Point	Pretravel	Total Travel	Differential Travel
GXE51A1A		Side rotary with fixed 46,5 mm [1.83 in] lever & Ø19 mm x 6,0 mm [Ø0.75 in x 0.24 in] nylon roller	0,25 Nm [2.21 in-lb]	0° 26° 75° P	0° ref.	26°	26°	75°	8°
GXE51A1B		Side rotary with fixed 46,5 mm [1.83 in] lever & Ø19 mm x 6,0 mm [Ø0.75 in x 0.24 in] steel roller	0,25 Nm [2.21 in-lb]	0° 26° 75° PP OP TI STANDARD S	0° ref.	26°	26°	75°	8°
GXE51A2A	Limit switch, EN50047	Side rotary with adjustable 34 mm to 79 mm [1.3 in to 3.1 in] lever & Ø19 mm x 6,0 mm [Ø0.75 in x 0.24 in] nylon roller	0,25 Nm [2.21 in-lb]	0° 26° 75° P OP TT Black-Gray (NC) Black-Brown (NO) 8° DT	O° ref.	26°	26°	75°	8°
GXE51A2B		Side rotary with adjustable 3 mm to 79 mm [1.3 in to 3.1 in] lever & Ø19 mm x 6,0 mm [Ø0.75 in x 0.24 in] steel roller	0,25 Nm [2.21 in-lb]	O° 26° 75°	O° ref.	26°	26°	75°	8°
GXE51A4J	20 mm to 22 mm mounting	Side rotary with adjustable aluminum rod 20 mm to 150 mm [0.8 in to $5.9$ in] x $\emptyset 3,2$ mm [0.13 in]	0,25 Nm [2.21 in-lb]	0° 26° 75° FP OP TI STANDARD S	0° ref.	26°	26°	75°	8°
GXE51B		Top pin plunger Ø9,9 mm [0.39 in]	16 N [3.6 lb]	21 mm 19 mm 15 mm FP OP TT Black-Brown (NO)	21,0 mm [0.83 in]	19,0 mm [0.75 in]	2,0 mm [0.080 in]	6,0 mm [0.24 in]	0,5 mm [0.020 in]
GXE51C		Top roller plunger Ø12,4 mm x 4,7 mm [Ø0.49 in x 0.19 in] steel roller	16 N [3.6 lb]	31 mm 29 mm 25 mm Black-Gray (NC) Black-Brown (NO) 0,5 mm DT	31,0 mm [1.22 in]	29,0 mm [1.14 in]	2,0 mm [0.080 in]	6,0 mm [0.24 in]	0,5 mm [0.020 in]
GXE51D		Top roller lever Ø12,4 mm x 4,7 mm [Ø0.49 x 0.19 in] steel roller	16 N [3.6 lb]	39,3 mm 37,3 mm 31	39,3 mm [1.55 in]	37,3 mm [1.47 in]	2,0 mm [0.080 in]	8,3 mm [0.33 in]	0,7 mm [0.030 in]

#### **GXS SERIES DIMENSIONS**

Note: GXA Side Rotary and GXE Plunger versions shown.

Figure 2. GXA Series Dimensions mm [in]

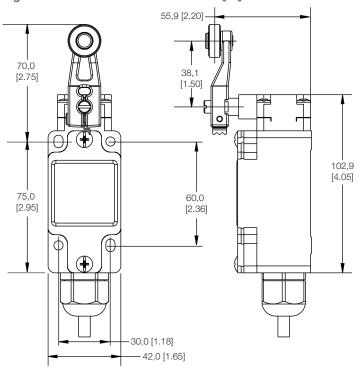


Figure 3. GXA Series Side Rotary **Adjustable Dimensions** 

(refer to Figure 2 for additional measurements)

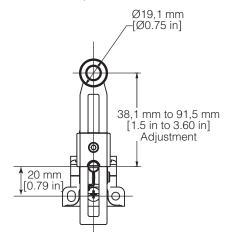
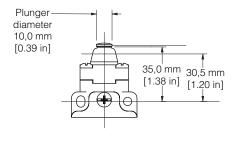


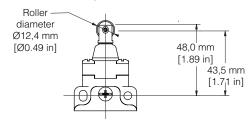
Figure 4. GXA Series Pin Plunger **Dimensions** 

(refer to Figure 2 for additional measurements)



#### Figure 5. GXA Series Roller Plunger **Dimensions**

(refer to Figure 2 for additional measurements)



#### **GXS SERIES DIMENSIONS**

Note: GXA Side Rotary and GXE Plunger versions shown.

Figure 6. GXE Series Dimensions mm [in]

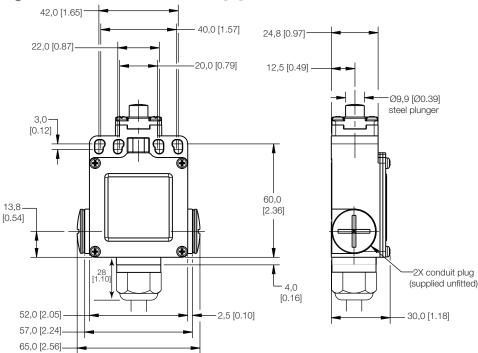


Figure 7. GXE Series Side Rotary Dimensions mm [in]

(refer to Figure 6 for additional measurements)

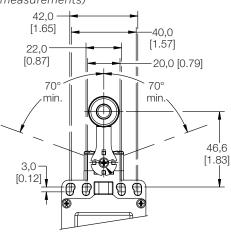


Figure 8. GXE Series Side Rotary Adjustable Dimensions mm [in] (refer to Figure 6 for additional

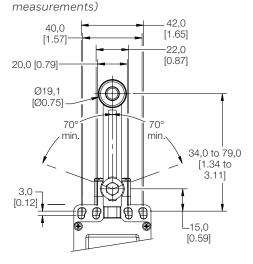


Figure 9. GXE Series Roller Plunger Dimensions mm [in]

(refer to Figure 6 for additional measurements)

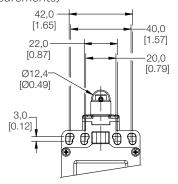
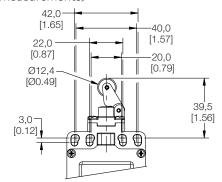


Figure 10. GXE Series Roller Lever Dimensions mm [in]

(refer to Figure 6 for additional measurements)



#### **ADDITIONAL MATERIALS**

The following associated literature is available at sensing.honeywell.com:

- Product range guide
- Product application-specific information
  - Guide to Hazardous Location
     Approvals: MICRO SWITCH
     Hazardous Area Limit Switches
  - MICRO SWITCH Hazardous Area Limit Switches brochure

#### Warranty/Remedy

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

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