

## MICRO SWITCH Flame-Proof Limit Switches

GXS Series

**100448**

Issue 4

**Datasheet**



### FEATURES

- 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

### 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), 3 wire device, 1NC/1NO

### POTENTIAL APPLICATIONS

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

| Category | Flammable atmospheres  | Protection required | Requirements for equipment  |
|----------|--|---------------------|---|
| 2        | Medium risk of an explosive atmosphere occurring<br>Gas = Zone 1<br>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.<br>For example, 'd', 'e', 'p', etc. |
| 3        | Low risk of an explosive atmosphere occurring<br>Gas = Zone 2<br>Dust = Zone 22    | Normal              | Equipment for safe use in normal operation, typically (Ex n) equipment  |

### PORTFOLIO

The [GXS Series](#) is part of the MICRO SWITCH™ family of hazardous location limit switches.

Note 1: The product is certified flame-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](#)

# MICRO SWITCH Flame-Proof Limit Switches, GXS 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<br><div> <div>Ex</div> <div>II 2 G Ex d IIC T6, II 2 D Ex tD A21 IP66 T85°C</div> </div> KEMA 00 ATEX 2103 X; IEC Ex KEM10.0039X, NEPSI Ex<br>(X indicates special conditions for safe use, see certificates for details) |
| Electrical rating           | AC15, DC13<br>1NC/1NO change over contacts<br>Double insulated switch element<br>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><br>Black (BK) - common<br>Grey (GY) - NC<br>Brown (BN) - NO<br>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**

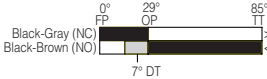
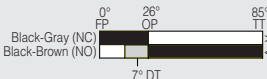
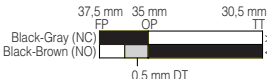
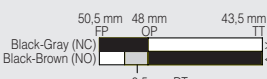
| Rating Code | Electrical Rating |
|-------------|-------------------|
| ac15 (Ue)   | 250 V, 4 A        |
| dc15 (Ue)   | 250 V, 0.15 A     |

**Figure 1. Product Nomenclature**

| <b>GXA<br/>or<br/>GXE</b>                              | <b>#</b>               | <b>1</b>                                 | <b>A</b>   | <b>A</b>                   | <b>3</b>   |
|--|------------------------|--|--|----------------------------|--|
| Switch Type  | Cable Length           | Circuitry                                | Actuator Type  | Side Lever Roller Material | Head Orientation   |
| <b>GXA</b> Series<br>Hazardous<br>Area<br>Limit Switch | <b>5</b> 5 meter cable | <b>1</b> Silver contacts,<br>snap action | <b>A1</b> Side rotary,<br>fixed roller lever                 | <b>A</b> Plastic           | Lever to front or<br>plunger parallel<br>to mtg surface    |
|  |                        |  | <b>A2</b> Side rotary,<br>adjustable<br>roller lever         | <b>B</b> Steel             | <b>3</b> Lever to right                                    |
|  |                        |  | <b>A4J</b> Side rotary,<br>adjustable 140 mm<br>aluminum rod |                            | <b>4</b> Lever to left                                     |
| <b>GXE</b> Series<br>Hazardous<br>Area<br>Limit Switch |                        |  | <b>B</b> Pin plunger   |                            | <b>5</b> Lever to rear                                     |
|  |                        |  | <b>C</b> Roller plunger                                      |                            | <b>6</b> Roller plunger<br>perpendicular to<br>mtg surface |
|  |                        |  | <b>D</b> Roller arm  |                            |  |

## MICRO SWITCH Flame-Proof Limit Switches, GX Series

Table 3. GXA/GXE Series Order Guide

| Catalog Listing | Description                                   | 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 [Ø0.75 in x 0.25 in] steel roller                          | 0,33 Nm [2.9 in lb]            |  | 0° 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 & Ø19 mm x 6,4 mm [Ø0.75 in x 0.25 in] steel roller | 0,33 Nm [2.9 in lb]            |  | 0° ref.           | 26°               | 26°              | 85°              | 7°                  |
| GXA51B          |   | Top pin plunger Ø10,0 mm [Ø0.39 in]   | 16 N [3.6 lb]                  |  | 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 [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]   |

# MICRO SWITCH Flame-Proof Limit Switches, GXS Series

Table 3. GXA/GXE Series Order Guide, continued

| Catalog Listing | Description                                   | Actuator Type   | Operate Force or Torque [max.] | Bar Chart | Free Position     | Operate Point     | Pretravel         | Total Travel     | Differential Travel |
|-----------------|---|---|--------------------------------|-----------|-------------------|-------------------|-------------------|------------------|---------------------|
| GXE51A1A        | Limit switch, EN50047 20 mm to 22 mm mounting | 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° 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° ref.           | 26°               | 26°               | 75°              | 8°                  |
| GXE51A2A        |   | 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° 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]           |           | 0° ref.           | 26°               | 26°               | 75°              | 8°                  |
| GXE51A4J        |   | Side rotary with adjustable aluminum rod 20 mm to 150 mm [0.8 in to 5.9 in] x Ø3,2 mm [0.13 in]                         | 0,25 Nm [2.21 in-lb]           |           | 0° ref.           | 26°               | 26°               | 75°              | 8°                  |
| GXE51B          |   | Top pin plunger Ø9,9 mm [0.39 in]   | 16 N [3.6 lb]                  |           | 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]                  |           | 31,0 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 [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]   |

# MICRO SWITCH Flame-Proof Limit Switches, GXS Series

## GXS SERIES DIMENSIONS

Note: GXA Side Rotary and GXE Plunger versions shown.

Figure 2. GXA Series Dimensions mm [in]

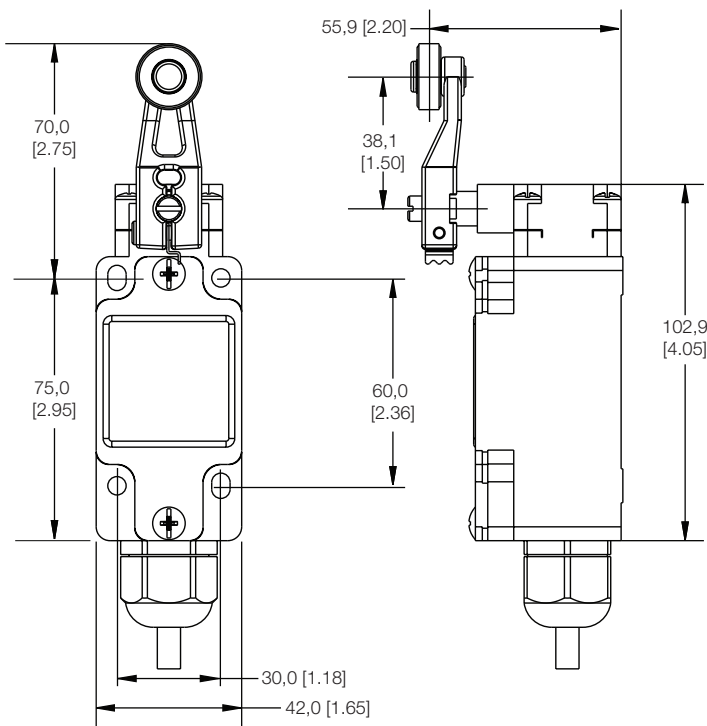


Figure 3. GXA Series Side Rotary Adjustable Dimensions

(refer to Figure 2 for additional measurements)

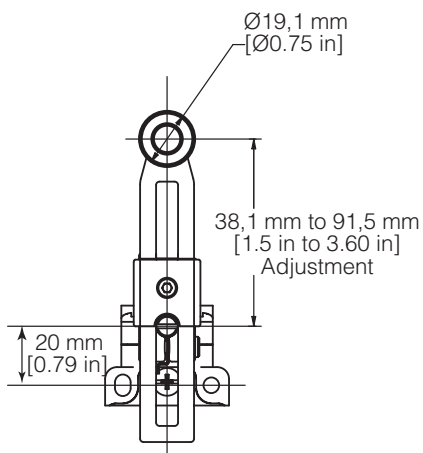


Figure 4. GXA Series Pin Plunger Dimensions

(refer to Figure 2 for additional measurements)

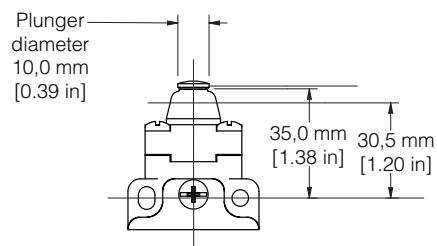
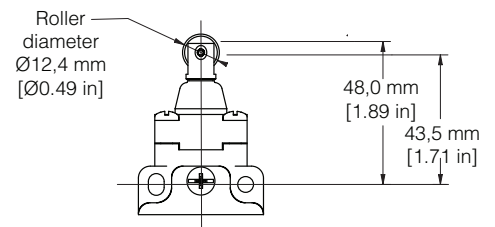


Figure 5. GXA Series Roller Plunger Dimensions

(refer to Figure 2 for additional measurements)

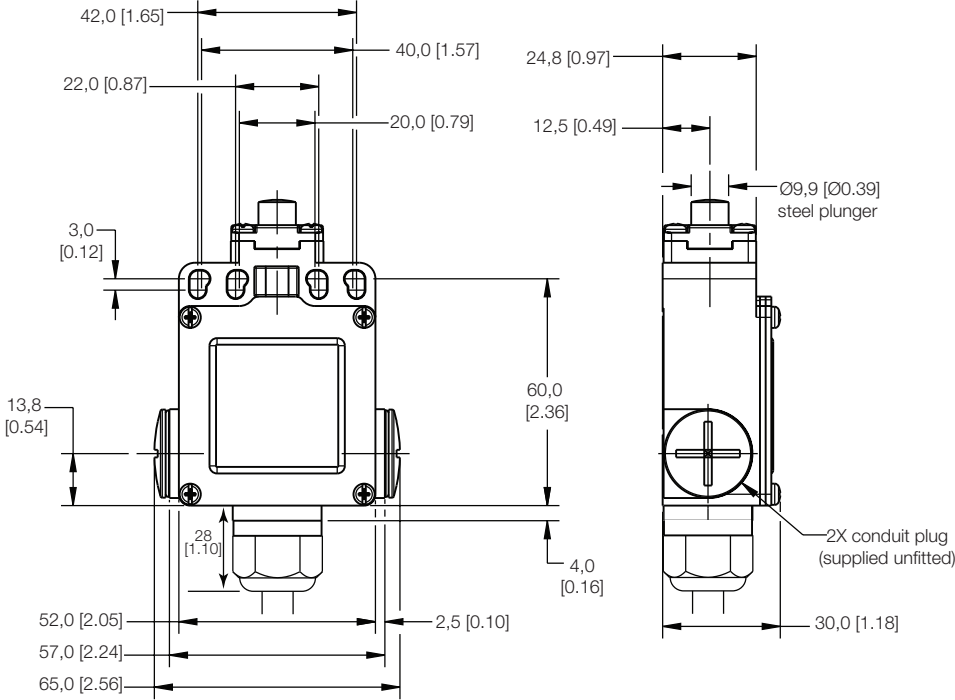


# MICRO SWITCH Flame-Proof Limit Switches, GXS Series

## GXS SERIES DIMENSIONS

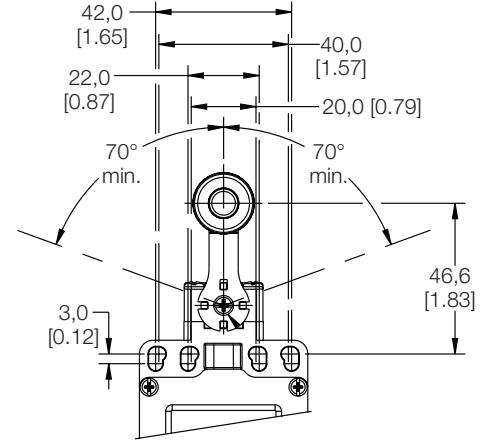
Note: GXA Side Rotary and GXE Plunger versions shown.

**Figure 6. GXE Series Dimensions mm [in]**



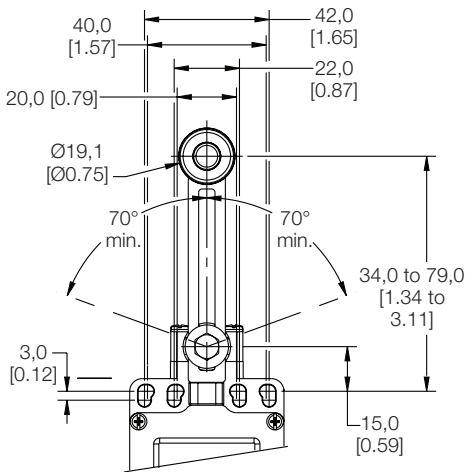
**Figure 7. GXE Series Side Rotary Dimensions mm [in]**

(refer to Figure 6 for additional measurements)



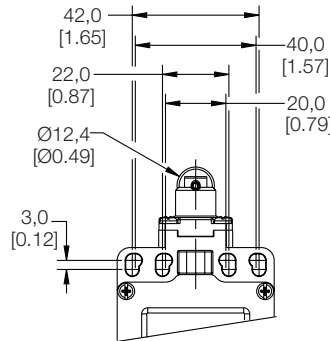
**Figure 8. GXE Series Side Rotary Adjustable Dimensions mm [in]**

(refer to Figure 6 for additional measurements)



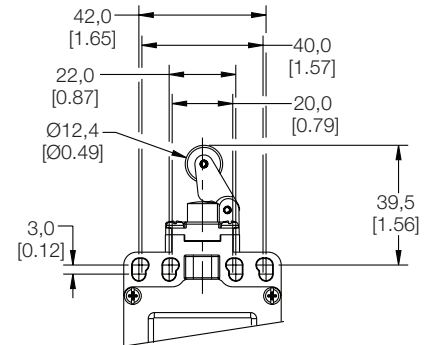
**Figure 9. GXE Series Roller Plunger Dimensions mm [in]**

(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](http://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

### For more information

Honeywell Sensing and Internet of Things services its customers through a worldwide network of sales offices and distributors. For application assistance, current specifications, pricing or the nearest Authorized Distributor, visit [sensing.honeywell.com](http://sensing.honeywell.com) or call:

|              |                     |
|--------------|---------------------|
| Asia Pacific | +65 6355-2828       |
| Europe       | +44 (0) 1698 481481 |
| USA/Canada   | +1-800-537-6945     |

### Honeywell Sensing and Internet of Things

9680 Old Bailes Road  
Fort Mill, SC 29707  
[www.honeywell.com](http://www.honeywell.com)

## **WARNING** **PERSONAL INJURY**

DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

**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.**

### Warranty/Remedy

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective.

**The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.