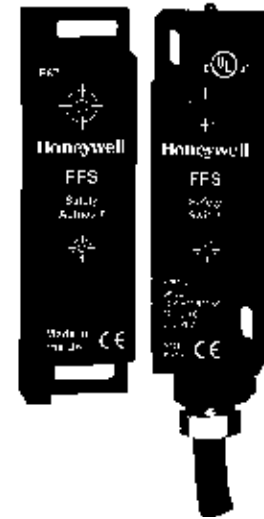


FFS Series

Electronic Standalone Non-Contact Safety Switch



DESCRIPTION

Honeywell FFS series are designed as tamper-proof, standalone safety switches that can often be used to switch relays, contacts, or safety relays directly. By removing the separate control unit, Honeywell has made it possible to use its electronic switching technology in smaller, simpler safety systems.

The FFS is often suitable for use on its own, for lower category safety systems, providing two volt-free outputs (2NC or 1NC/1NO). It can be used in conjunction with safety relays where a higher category of performance is required. For ease of operation, the fixed switch has a green LED, giving true indication of FFS safety switch contacts.

FEATURES

- Tamper-proof electronic switching
- IP67
- 7 mm to 10 mm [0.28 in to 0.4 in] operating distance
- Guard status indication
- CE, UL approvals

POTENTIAL APPLICATIONS

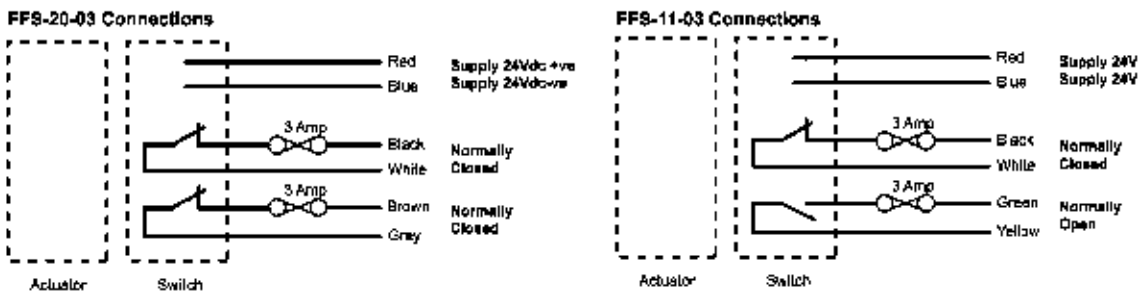
- Can forming and filling (aluminum, steel, and plastic)
- Pick and place packaging equipment
- Pick and place/assembly equipment
- Semicon equipment
- Plastic molding equipment
- Woodworking machinery
- Textile machinery
- Printing machinery

FFS Series

TECHNICAL SPECIFICATIONS

| Type | FFS-11-03 | FFS-20-03 | FFS-11-QD | FFS-20-QD |
|--------------------------------------|---|---|---|---|
| Contact arrangement | Max: 1NC safety and 1NO auxiliary | Max: 2NC safety | Max: 1NC safety and 1NO auxiliary | Max: 2NC safety |
| Safety contact rating | 230 Vac/2 A 30 Vdc/2 A | 230 Vac/2 A 30 Vdc/2 A | 230 Vac/2 A 30 Vdc/2 A | 230 Vac/2 A 30 Vdc/2 A |
| Safety contact operating distance | 7 mm [0.28 in] ON; 12 mm [0.47 in] OFF | 7 mm [0.28 in] ON; 12 mm [0.47 in] OFF | 7 mm [0.28 in] ON; 12 mm [0.47 in] OFF | 7 mm [0.28 in] ON; 12 mm [0.47 in] OFF |
| Safety contact close/drop/bounce | 3 ms/2.1 ms/0.7 ms | 3 ms/2.1 ms/0.7 ms | 3 ms/2.1 ms/0.7 ms | 3 ms/2.1 ms/0.7 ms |
| Auxiliary contact rating | 15 W/10 VA | | 15 W/10 VA | |
| Auxiliary contact operating distance | 7 mm [0.28 in] OFF; 12 mm [0.47 in] ON | | 7 mm [0.28 in] OFF; 12 mm [0.47 in] ON | |
| Auxiliary contact close/drop/bounce | 0.5 ms/0.3 ms/0.7 ms | | 0.5 ms/0.3 ms/0.7 ms | |
| Internal fuse | Not applicable | Not applicable | Not applicable | Not applicable |
| External fuse (customer supplied) | 3 A/230 Vac, 1 A/30 Vdc | 3 A/230 Vac, 1 A/30 Vdc | 3 A/230 Vac, 1 A/30 Vdc | 3 A/230 Vac, 1 A/30 Vdc |
| IP rating | IP67 | IP67 | IP67 | IP67 |
| Supply voltage | 24 Vdc | 24 Vdc | 24 Vdc | 24 Vdc |
| Vibration/shock | 50 Hz to 100 Hz/10 g | 50 Hz to 100 Hz/10 g | 50 Hz to 100 Hz/10 g | 50 Hz to 100 Hz/10 g |
| Operating temperature | -10 °C to 55 °C [14 °F to 131 °F] | -10 °C to 55 °C [14 °F to 131 °F] | -10 °C to 55 °C [14 °F to 131 °F] | -10 °C to 55 °C [14 °F to 131 °F] |
| Mounting and fixture | Target to target | Target to target | Target to target | Target to target |
| Construction | Blue ABS resin filled | Blue ABS resin filled | Blue ABS resin filled | Blue ABS resin filled |

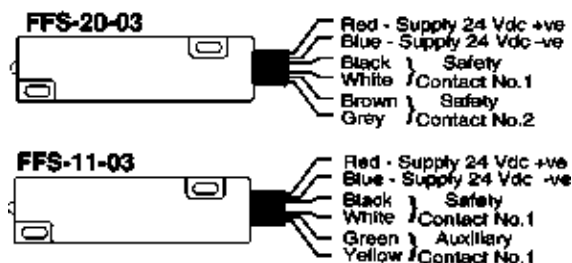
FFS CONTACTS



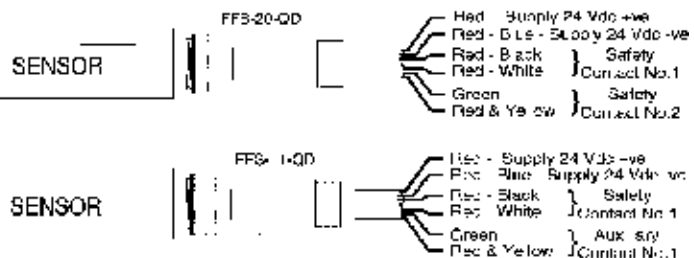
Contact configurations show under closed condition for guard device.

FFS CONNECTIONS

FFS PRE-WIRED CONNECTIONS

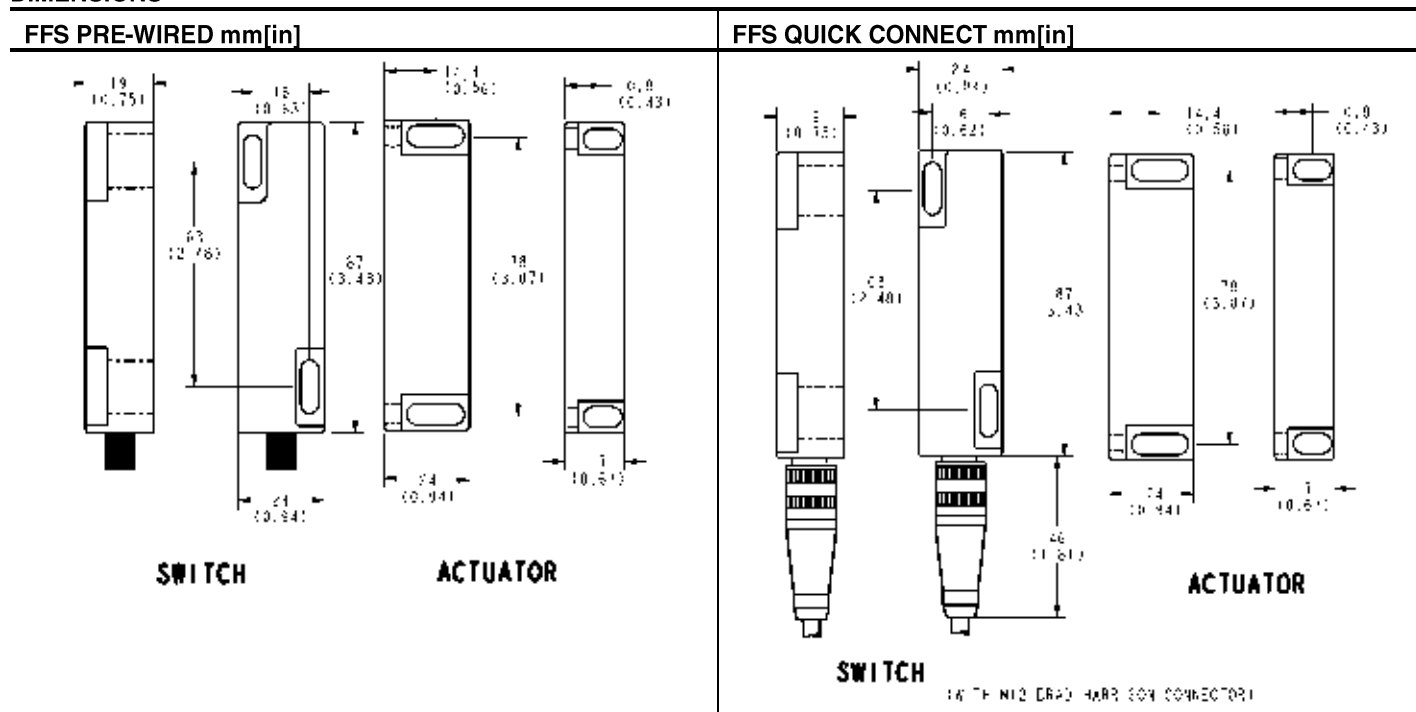


FFS QUICK CONNECT CONNECTIONS



Electronic Standalone Non-Contact Safety Switch

DIMENSIONS



ORDER GUIDE

| Catalog Listing | Description |
|-----------------|---|
| FFS-20-03 | Safety switch and actuator, 2NC, dc, 3 m pre-wired |
| FFS-11-03 | Safety switch and actuator, 1NC/1NO, dc, 3 m pre-wired |
| FFS-20-QD | Safety switch and actuator, 2NC, dc, M12 Brad Harrison connector, no cable |
| FFS-11-QD | Safety switch and actuator, 1NC/1NO, dc, M12 Brad Harrison connector, no cable |
| FFS-20-QD05 | Safety switch and actuator, 2NC, dc, 5 m cable, M12 Brad Harrison connector |
| FFS-11-QD05 | Safety switch and actuator, 1NC/1NO, dc, 5 m cable, M12 Brad Harrison connector |
| FFS-20-10 | Safety switch and actuator, 2NC, dc, 10 m pre-wired |
| FFS-11-10 | Safety switch and actuator, 1NC/1NO, dc, 10 m pre-wired |

WARNING

RISK TO LIFE OR PROPERTY

Never use this product for an application involving serious risk to life or property without ensuring that the system as a whole has been designed to address the risks, and that this product is properly rated and installed for the intended use within the overall system.

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.

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.

SALES AND SERVICE

Honeywell serves its customers through a worldwide network of sales offices, representatives and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact your local sales office or:

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Internet: www.honeywell.com/sensing

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