



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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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

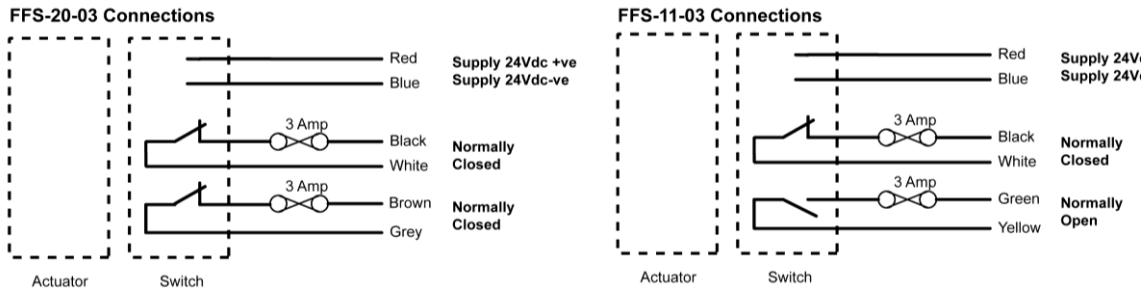
- Can forming and filling (aluminum, steel, and plastic)
- Pick and place packaging equipment
- Pick and place/assembly equipment
- Semicon equipment
- Plastic molding equipment
- Woodworking machinery
- Textile machinery
- Printing machinery

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

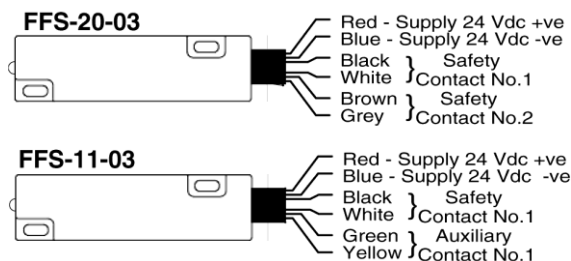
FFS CONTACTS



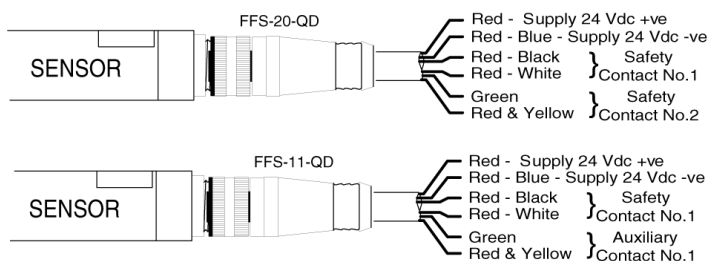
Contact configurations show under closed condition for guard device.

FFS CONNECTIONS

FFS PRE-WIRED CONNECTIONS



FFS QUICK CONNECT CONNECTIONS



Electronic Standalone Non-Contact Safety Switch

DIMENSIONS

FFS PRE-WIRED mm[in]	FFS QUICK CONNECT mm[in]
<p>SWITCH</p> <p>ACTUATOR</p>	<p>SWITCH</p> <p>ACTUATOR</p> <p>(WITH M12 BRAD HARRISON CONNECTOR)</p>

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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