

# GFS810

## ABB Ability™ System 800xA® hardware selector



Select I/O is an Ethernet networked, single channel granular I/O system for the ABB Ability™ System 800xA automation platform. Select I/O helps decouple project tasks, minimizes the impact of late changes, and supports standardization of I/O cabinetry ensuring automation projects are delivered on time and under budget. A Signal Conditioning Module (SCM) performs the necessary signal conditioning and powering of the connected field device for one I/O channel.

The GFS810 provides ground fault detection for signals with field supply sources from external power injection.

### Features and benefits

- Ground fault detection for signals with field supply sourced from external power injection.
- Measuring of resistance to ground to provide it as an analog value to the application.
- Can be used with all GIO module types (GIS810 and GIS880).
- Galvanic isolation.

#### Diagnostics:

- Line break supervision of ground connection.
- Internal self-test.
- Test option for ground fault detection function (through external button).
- LED indicators on the SCM indicate the operational state of the module.

#### General info

|                      |                               |
|----------------------|-------------------------------|
| Article number       | 3BSE093005R1                  |
| Type                 | Ground Fault Detection Module |
| Number of channels   | 1                             |
| Signal specification | 0...1 Mohm                    |
| HART                 | N/A                           |
| SOE                  | N/A                           |
| Redundancy           | No                            |
| Hot swap             | Yes                           |
| High integrity       | No                            |
| Intrinsic safety     | No                            |
| Mechanics            | Select I/O                    |

| <b>Detailed data</b>                     |  |
|--|--|
| Supported field devices                  | -  |
| Isolation                                | Galvanic isolation to system.<br>Routine tested at factory with 3060 VDC.                |
| Field power                              | -  |
| Accuracy                                 | ±15 %  |
| Diagnostics                              | Internal hardware supervision<br>Communication supervision<br>Internal power supervision |
| Calibration                              | Factory calibration  |
| Power dissipation                        | 0.4 W  |
| Installation in Hazardous Area/Locations | Yes/Yes (on IPA)   |
| IS barrier                               | No   |
| Field Input Robustness                   | ±35 V between all terminals  |
| Input voltage range                      | 19.2...30 V  |

| <b>Environment and certification</b> |   |
|--------------------------------------|---|
| Temperature, Operating               | -40 °C (-40 °F) to +70 °C (158 °F)  |
| Temperature, Storage                 | -40 °C (-40 °F) to +85 °C (185 °F)  |
| Pollution degree                     | Pollution Degree 2 acc. to IEC 60664-1  |
| Relative humidity                    | 5 to 95 %, non-condensation   |
| Altitude                             | -1000 to 5000 m (restrictions apply)  |
| Mechanical operating conditions      | IEC 61131-2   |
| EMC                                  | IEC/EN 61000-6-4, IEC/EN 61000-6-2  |
| Overvoltage categories               | Category II acc. to IEC 60664-1   |
| Protection class                     | IP20 acc. to IEC 60529  |
| CE-marking                           | Yes   |
| UKCA                                 | Yes   |
| Electrical Safety                    | IEC/EN 61010-1<br>UL 61010-1<br>CSA-C22.2 No. 61010-1-12<br>IEC/EN 61010-2-201<br>UL 61010-2-201<br>CSA C22.2 No. 61010-2-201 |
| Marine certification                 | N/A   |
| Corrosive atmosphere                 | G3  |
| RoHS compliance                      | EU RoHS, UAE RoHS, CN RoHS  |
| WEEE compliance                      | EU  |
| Hazardous Area ATEX                  | II 3G Ex ec IIC T4 Gc<br>II 3G Ex ic ec IIC T4 Gc   |
| Hazardous Area IECEx                 | Available on IPA:<br>II 3G Ex ec IIC T4 Gc<br>II 3G Ex ic ec IIC T4 Gc  |
| Hazardous Location US/CAN            | Available on IPA: cULus<br>CL I, ZN 2, AEx ec IIC T4 Gc, Ex ec IIC T4 Gc X<br>CL I, DIV 2, Groups A-D T4                      |
| Hazardous Area CCC                   | No  |

| <b>Dimensions</b>       |         |
|-------------------------|---------|
| Width                   | 77.9 mm |
| Depth                   | 108 mm  |
| Height                  | 9.8 mm  |
| Weight (including base) | 76 g    |

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