

AIS885

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 AIS885 is an Analog Input Signal Conditioning Module (16 bit) for use in High Integrity applications (certified for SIL3) supporting 2/3/4-wire devices (1.2 amp) and HART communications.

Features and benefits

- Analog input for 2-wire, 3-wire or 4-wire field devices, powered by AIS885
- Signal range: 4...20 mA
- Can be used in hazardous areas
- Certified for Functional safety
- Field power sourced from the power injection
- Short circuit proof, configurable current limit 0.1 to 1.2 A
- Transmitter power current limited to 25 mA (for 2-wire field devices; input current limitation for SCM pin 2)
- 16 bit A/D converter resolution
- Galvanic isolation
- Protected against wrong wiring (± 35 V) between all terminals
- Hardware filter, rise time 1 ms
- Software filter configurable through parameters
- Diagnostics:
 - Loop supervision (open circuit and short circuit)
 - Internal hardware supervision
 - Communication supervision
 - Device malfunction low, under-range, over-range and device malfunction high detection
 - Internal power supervision
 - Power injection supervision
- LED indicators:
 - Status (S)
 - Primary (P)
- Single loop granularity - each SCM handles a single channel
- Supports hot swap
- Mechanical locking slider which turns off field device power and/or output before removal
- Field disconnect function which can galvanically separate the field loop wiring from the SCM during commissioning and maintenance
- All SCMs have electronic current limitation
- Mechanical keying to prevent insertion of wrong module type after commissioning
- 24V DC powered through Modulebus
- Configurable through parameters
- LED indicators on the SCM indicate the operational state of the module.

General info	
Article number	3BSE080108R1
Type	Analog Input Module, SIL3
Signal specification	4...20 mA
HART	Yes
Detailed HART information	HART v7, HART pass-through and HART variables to the application
SOE	N/A
Redundancy	Yes
Hot swap	Yes
High integrity	Yes
Intrinsic safety	No
Mechanics	Select I/O

Detailed data	
Supported field devices	2-wire (loop powered transmitters), 3-wire (transmitters powered by SCM), 4-wire (transmitters powered by SCM)
Isolation	Galvanic isolation to system. Routine tested at factory with 3060 V DC.
Field power	Current limited (configurable)
Accuracy	0.1 %
Resolution	16 bit A/D converter
Diagnostics	<ul style="list-style-type: none"> - Loop supervision (open circuit and short circuit) - Power injection supervision - Device malfunction low, under-range, over-range and device malfunction high detection - Internal hardware supervision - Communication supervision - Internal power supervision
Calibration	Factory calibration
Power dissipation	0.65 W
Installation in Hazardous Locations	ATEX II 3G Ex ec IIC T4 Gc cULus (pending)
IS barrier	No
Field Input Robustness	±35 V between all terminals
Input impedance	250 Ω

Environment and certification	
Temperature, Operating	-40°C (-40°F) to +70°C (158°F)
Temperature, Storage	-40°C (-40°F) to +85°C (185°F)
Pollution degree	Degree 2, IEC 60664-1
Functional Safety	IEC 61508, SIL3
Relative humidity	5 to 95 % no condensation
Altitude	-100 to 2000 m
Mechanical operating conditions	IEC 61131-2
Overvoltage categories	Category II
Protection class	IP20 according to IEC 60529
CE-marking	Yes
Electrical Safety	IEC/EN 61010-1, IEC 61010-2-201, UL 61010-2-201, CSA C22.2 No. 61010-2-201
Hazardous Area	EN 60079-0, EN60079-7
Marine certification	DNV-GL, ABS
Corrosive atmosphere	ISA-S71.04 Severity level: G3
RoHS compliance	DIRECTIVE/2011/65/EU (EN 50581:2012)
WEEE compliance	DIRECTIVE/2012/19/EU

Dimensions

Width	77.9 mm
Depth	105 mm
Height	9.8 mm
Weight (including base)	73 g

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