DATA SHEET

SI06ev

ABB Ability™ Symphony® Plus Hardware Selector

The SI06ev SOE Input module processes up to 16, CH-2-CH isolated, digital input field signals for Sequence of Events reporting. Each channel is independently configurable for 24 / 48 / 110 / 125 VDC, or 100 / 120 VAC input signal voltages.

The SI06ev SOE Input module is a Form/Fit/Function replacement for SED01 and SET01 SOE Digital Input modules.

FC 242 (DSOE Digital Event Interface) sets DI event processing parameters for each input channel. Each DI channel is scanned every millisecond. Change of state events are timestamped by the SIØ6ev module.

Each input channel can be configured to timestamp state changes as a SOE event. The timestamp resolution depends on the input voltage level and type (i.e., AC vs DC). Timestamp resolution ranges from 1 msec for 24 / 48 VDC to 20 msec for 100 / 120 VAC.

The SOE event data buffer size is configurable to include up to 50 events.

Features and benefits

- Sixteen (16) individually CH-2-CH isolated Dgital Input channels supporting:
- 24 / 48 / 110 / 125 VDC or 100 / 120 VAC DI signals
- SOE time-tamping performed by SI06ev module
- Configurable SOE event data buffer size
- SI06ev module can sink or source I/O current
- Input Status LEDs on module frontplate
- Galvanic isolation of 1500 V for up to 1 minute
- SI06ev DOES NOT support IRIG-B time synchronization input signal (SET01 module feature). An SNTP time sync source must be connected to the EN 2A Ethernet port of the S+ controller module.

General info	
Article number	7PAA008659R11
Type	Universal Digital Input
Signal specification	24/48/110/125 VDC, 100/120 VAC
Life cycle status	ACTIVE
Number of channels	16
Signal type	SOI DI
HART	No
SOE	Yes
Redundancy	No
Form factor	HR MMU
Mounting	MMU (1-Slot)
MTBF (per MIL-HDBK-217-FN2)	PR A: 181,071 hours @ 30 °C 149,154 hours @ 45 °C 78,025 hours @ 70 °C
MTTR (Hours)	8 Hours

Detailed data	
Module power requirements	551 mA (typical) @ 5 VDC ± 10%, 140 mA (typical) @ 24 VDC ± 10%
Module power connection	+ 5V connection on MMU
Field IO power	Per Channel: 4.8 mA (typical) 7.0 mA(max) @ 24 VDC 4.6 mA (typical) 5.3 mA(max) @ 48 VDC 5.0 mA (typical) 6.7 mA(max) @ 110 VDC 4.5 mA (typical) 5.5 mA(max) @ 125 VDC 5.0 mA (typical) 6.0 mA(max) @ 100 VAC 5.0 mA (typical) 6.0 mA(max) @ 120 VAC
Overvoltage category	Category I for power, inputs or outputs. Tested according to EN 61010-1
Max field cable length	600 meters (1968 feet)
Number of Channels	16 Digital Input Channels
SOE timestamp accuracy	1 msec for 24/48VDC DI, 15 msec for 110/125VDC DI, 20 msec for 100/120VAC
Field signal to Logic isolation	Galvanically isolated, 1500 V up to 1 minute
Channel isolation	Individual CH-2-CH isolated, 1500 V up to 1 minute

Diagnostics	
Front plate LED’s	R (Run), F (Fault), P (Primary), and B (Backup) + 8 Diagnostic & Status LEDs
Local availability	R (Run), F (Fault), P (Primary), and B (Backup) + 8 Diagnostic & Status LEDs
Remote availability	HN800 device diagnostics via SPE

Environment and certification	
Temperature, Operating	-40 to +70 °C Tested according to IEC/EN 60068-2-1, IEC/EN 60068-2-2
Temperature, Storage	-40 to +85 °C Tested according to MIL-STD-810G
Relative humidity	20% to 95% @ 40 °C non-condensing. Tested according to IEC/EN 60068-2-78, IEC/EN 61298-3
Vibration (operational sinusoidal)	5 to 60 Hz 0.137 mm (0.0054 in.), 60 to 150 Hz 1.0 G. Tested according to IEC/EN 60068-2-6
Vibration (transportation)	10 to 500 Hz. Tested according to MIL-STD-810G
Shock (storage)	15 G, 11 msec. Tested according to IEC/EN 60068-2-27
Drop	100 mm. Tested according to IEC/EN 60068-2-31
Protection class	IP20 according to EN 60529
Altitude (operational)	Sea level to 3,048 meters (10,000 ft.) Tested according to MIL-STD-810G
Altitude (storage)	Sea level to 12,192 meters (40,000 ft.) Tested according to MIL-STD-810G
Air quality	ISA S71.04 G3
ESD immunity	Tested according to IEC/EN 61000-6-2, IEC/EN 61000-4-2, Severity level 3
Surge immunity	Tested according to IEC/EN 61000-6-2, IEC/EN 61000-4-5, Severity level 3
Electrical fast transient immunity	Tested according to IEC/EN 61000-6-2, IEC/EN 61000-4-4, Severity level 3
Radiated RFI immunity	Tested according to IEC/EN 61000-6-2, IEC/EN 61000-4-3, Severity level 3
Conducted Immunity	Tested according to IEC/EN 61000-6-2, IEC/EN 61000-4-6, Severity level 3
Magnetic field immunity	Tested according to IEC/EN 61000-6-2, IEC/EN 61000-4-8, Severity level 4
Radiated emission	Tested according to IEC/EN 61000-6-2, IEC/EN 61000-4-6, Severity level 3
Conducted emission	Tested according to IEC/EN 61000-6-4, CISPR 11 + A1, CISPR 16-1-1, Group 1, Class A, ISM equipment
Voltage dips and interruption immunity	Tested according to IEC/EN 61000-6-2, IEC/EN 61000-4-11
CSA non-hazardous locations	Certified for use as process control equipment in an ordinary (non-hazardous) location
CSA hazardous, nonincendive locations	Class I, Division 2, Groups A, B, C, D
CE Mark	CE Mark EMC directive 2004/108/EC & Low Voltage Directive 2006/95/EC
RoHS compliance	RoHS Directive 2015/863
WEEE compliance	DIRECTIVE/2012/19/EU

Compatibility	
Use with MTU	NTDI02
Module keying code for base	n/a

Dimensions	
Width	35.6 mm
Depth	177.8 mm
Height	298.5 mm
Weight	420 g

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