

EMB01S-PIO

ABB Ability™ Symphony® Plus Hardware Selector



The EMB01S-PIO Evolution Module Base provides the mounting of a PI01e Pulse Input module to an EMC-_B0x Evolution Mounting Chassis. The base connects the I/O module to the HN800 I/O bus and the I/O cable to the field termination.

The base supports all of the functions of the PI01e module. Specifically, this includes pulse counting, frequency, duration, and period measuring in addition to optional module redundancy.

Features and benefits

- Mounts PI01e to EMC-_B0x Evolution Mounting Chassis
- Connects PI01e to redundant HN800 I/O bus
- Connects PI01e to NTDI0x TU via NKTU01 cables
- Connects PI01e to NIDI01 TM via NKTU02 or NKTM01 cables

| General info | |
|-----------------------------|---|
| Article number | 7PAA008524R1 (EMB01S-PIO) |
| Life cycle status | Active |
| Line redundancy | Yes |
| Channels | 8 |
| Hot swap | No |
| Supported IO modules | PI01e |
| Singular or redundant | Singular |
| Form factor | EMC-_B0_ Evolution Mounting Chassis |
| Mounting | EMC-DB01, EMC-DB02, EMC-SB01, EMC-SB02 |
| HN800 bus length | 190 mm |
| MTBF (per MIL-HDBK-217-FN2) | PR C: 1,404,403 Hours @ 30 °C, 1,369,046 Hours @ 40 °C, 1,246,948 Hours @ 70 °C |
| MTTR (Hours) | 8 Hrs |

Detailed data

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|---------------------------------|--|
| Overvoltage category | Category 1 for power. Tested according to IEC/EN 61010-1 |
| Process signal connections | Eight (8) Pulse Inputs |
| Field power connection | @ I/O Termination (TU or TM) |
| Field power fusing | @ I/O Termination (TU or TM) |
| Signal connection | Terminable Blocks on NTDI0x, NIDI01 or or HDIOT-XIO-01 |
| Max current | 250 mA |
| Galvanic isolation test voltage | 1500 V for up to 1 minute |

Environment and certification

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| 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 | Standard = ISA S71.04 G1, ISA S71.04 G3 compliant versions SPCxxxA also available |
| 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 |

Dimensions

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| Width | 35.5 mm |
| Depth | 173.46 mm |
| Height | 177 mm |
| Weight | 204 grams |

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