DATA SHEET

PNI800K01

ABB Ability™ Symphony® Plus Hardware Selector

PNI800 provides real-time communications between SD Series Controllers and PC workstations running S+ Engineering, HMI (SPO or 800xA Operations) or general purpose interface software (e.g. Harmony OPC Server).

PNI800 Plant Network Interface provides bi-directional, real-time communications between SPE (engineering), HMI or SCADA software applications running on PC workstations and SD Series controllers connected to the PN800 real-time control network.

PN800 Plant Network supports IEC 62439 Parallel Redundancy Protocol (PRP). PRP provides optimum control network reliability and performance by eliminating single points of failure and supporting zero switch-over time in the event of a failed network component.

Features and benefits

- PN800 Plant Network redundancy is based on PRP (Parallel Redundancy Protocol of IEC 62439. In accordance with IEC 62439, the redundant PN800 control network is comprised of 2x LANs (Local Area Networks), PN800A and PN800B that have identical topologies.
- In terms of IEC62439, PNI800 is a DANP (Dual Attached Node implemePRP) as it connects to both PN800A and PN800B. Thus, the PNI800 provides a line redundant connection to the PN800 control network.
- PNI800 functionality has been virtualized and is available as "VPNI" optional software for SPE engineering, SPO & 800xA Operations HMI software and general purpose interface software such as Harmony OPC server. Performance and capacity may vary between PNI800 and VPNI software.

General info	
Article number	PNI800K01
Life cycle status	Active
Protocol	Harmony API (based on Ethernet TCP)
Communication type	Realtime Data Server
Capacity	Up to 10 SPE client connections Up to 30,000 HMI tags
Transmission speed	100 MBps
Communication connection(s)	Ethernet 2x RJ45 connectors on MB805 base
Diagnostics port	1x mini USB form factor on module front plate
Line redundancy	Yes
Module redundancy	No
Hot Swap	Yes
Form factor	xA Style (186mm)
Mounting	Horizontal Row
HN800 bus length	n/a
MTBF (per MIL-HDBK-217-FN2)	PNI800 PR: G = 135,873 hours, MB805 PR: E = 2,583,516 hours
MTTR (Hours)	PNI800 MTTR = 1 hour, MB805 MTTR = 8 hours

Detailed data	
Processor type	MCF5475 @ 256 Mhz
Memory	64 MB DRAM, 4 MB Flash ROM
Module power requirements	200 mA @ 24 VDC ±10%
Module power connection(s)	TB1 on MB805 base
Overvoltage category	Category 1 for power. Tested according to IEC/EN 61010-1
Mounting details	MB805, 1 = E, 2 = C

Environment and certification	
Temperature, Operating	0 to +55 °C
Temperature, Storage	-40 to +85 °C
Relative humidity	20% to 95% @ 40°C non-condensing. Tested according to IEC/EN 60068-2-78, IEC/EN 61298-3
Protection class	IP20 according to EN 60529, IEC 529
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
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 G1 (Standard), cRBX01A (Enhanced) ISA S71.04 G3 compliant version modules are 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 61000-6-4, CISPR 11 + A1, CISPR 16-1-1, Group 1, Class A, ISM equipment
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	
Width	59 mm
Height	186 mm
Depth	127 mm
Weight (include base)	500 g

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