SIM-9450 Status Input Module

Gateway Expansion for Legacy Hardware

19 in. Rack Mounted Configuration

64 Status/Accumulator Inputs per SIM

Status Wetting Voltage: 12 Vdc
                        24 Vdc
                        48 Vdc
                        125 Vdc

Wetting Polarity: Positive or Negative Keying Accepted

Status Connections: 5 mm Plug-in Terminal Blocks (#12 AWG)

Maximum Expansion: 256 SIM Units (up to 16,384 Status Inputs)

Communications: Each SIM has Two Four-wire RS 422 communication Lines. (for Data Pass-through or Redundancy)

SIM Units May be Configured in a Redundant Architecture for Automatic Failover

Power: 24 VDC (Supplied by Central ePAQ unit)

The SIM-9450 Status Input Module (SIM) is an accessory panel for ePAQ-94XX Multifunction Gateway products used within the automated substation. It enables the Gateway to accept hardwired status inputs and brings them into your enterprise SCADA system database.

Each SIM unit can accept 64 Status input signals utilizing a user provided positive or negative polarity wetting voltage of 12 Vdc, 24 Vdc, 48 Vdc or 125 Vdc. Additional SIM units can be added to provide the number of status inputs needed within the substation. Digital input status points are terminated directly to the SIM itself and the results are transmitted to the substation ePAQ gateway unit via RS-422 communication lines.

Mounted in a 6.35" X 19" circuit board assembly, the SIM can be locally "stacked" or distributed to provide the number of inputs needed within the substation at the locations desired. Status inputs are isolated from logic circuitry to provide a module that is "substation hardened" against environmental effects, such as electrical spikes and surges.

Each SIM module includes front panel LEDs to provide a local indication of communications activity (TX/RX), as well as power and SIM Microprocessor "heartbeat". Each status input is provided with its own indication LED as well, thus providing for rapid installation, diagnostics and maintenance.

SPECIFICATIONS

Status inputs	64 Status inputs per SIM-9450, 4 mA per status point. Maximum expansion is 256 SIM Units (up to 16,384 status inputs)
Scan Rate:	1 msec per point. Sequence-of-Events (SOE) capability available (when supported by the SCADA protocol)
Filtering:	Debounce filtering provided within SIM firmware
Isolation:	Inputs are isolated from logic circuits using optical-couplers and DC-D.C. converters. Minimum 5KV rms (status input to logic isolation) SWC/fast transient - IEEE C. 37.90.1, IEEE Standard 1613-2009 Power line surge - IEC 1000-4-2 Electromagnetic emissions - FCC part 15, class B Electromagnetic compatibility - EN 61000-4-3 Dielectric rating - 1000 Vdc, on all inputs Overload rating 500 Vdc (common mode to ground)
Configuration	The operating firmware of the SIM may be field configured via the RS-422 line from the master ePAQ substation gateway. (thus eliminating site visits for firmware changes and updates)
Baud Rate:	Up to 4 Mbps
Ports	Two, four wire RS-422 ports for serial communications with ePAQ substation multifunction gateway. Second RS-422 ports will allow multiple SIMs to be linked together in parallel or to allow multiple SIMs to share the same RS-422 channel to the gateway unit.
Input Power:	24 VDC +/- 20 percent Power is via the ePAQ Substation Gateway RS-422 line, thus eliminating the need for separate power cabling
LED Indicators	LED front panel indicators to monitor local power supply voltage, communications and central processor health. One LED is also provided to indicate status of each status input
Physical:	-40 to +75 degrees C, 0 to 95% humidity (non-condensing) Height - 6.35" Width - 18.87"

QEI

60 Fadem Road
Springfield, NJ 07081 USA
T: +973-379-7400 F: +973-379-2138
E: sales@qeiinc.com
W: www.qeiinc.com