5664

Order #5045. SNAP® I/O interface board.

Features

- −40° to 85° C
- Interfaces to 1 or 2 Opto 22 SNAP–B, 8/16 position racks
- 64 digital and/or analog I/O supported
- Mix and match analog and digital modules in the same opto rack
- Supports AC, DC, current, voltage, frequency, ICTD, RTD, thermocouple
- Scanning TSR driver for DOS–based development tools
- Driver support for Intellution Paradym–31 DOS
- 5V operation
- MTBF 92.3 years

Description

The 5664 provides a convenient way to interface ISA Bus systems to the Opto 22 SNAP I/O modular I/O system. This SNAP system comprises a family of optically isolated modules covering a wide range of I/O. Optical isolation eliminates ground loops and reduces the chance of EMI events disturbing the control system.

The digital I/O includes input and output modules with ratings to 280 VAC/DC and up to 3A. Analog modules include AC and DC I/O to 250V and 10A, DC voltage and current loops, thermocouples (B, C, D, D, J, K, G, N, T, R, S), tachometer in puts to 1,500,000 RPM (25 kHz), ICTD temperature probes and RTDs.

Digital and analog I/O

The 5664 has two connectors that interface with 8– or 16–position, Opto 22 SNAP–B module racks. Each rack has:

- Four or eight analog/digital slots, and
- Four or eight analog–only slots.

Each 16–slot rack supports 32 digital I/O channels and 16 analog I/O channels, or up to 32 analog channels with no digital modules installed. Digital slots can be populated with a 4–channel, optically isolated Opto 22 SNAP module. These slots support both input and output modules. Each analog slot can be populated with a 2–channel, optically isolated SNAP module. Analog slots support both input and output analog modules. Two 5664 cards can be installed in a control system, and the 5664 interfaces to

the SNAP–B module rack through a CMA–80–24 (#5049) ribbon cable.

Driver software for I/O modules

The 4–channel digital modules are are addressed directly as bit I/O. The circuitry on the 5664 allows each bit to be programmed as an input or output. The 5664 communicates with each analog module individually through one of two RS–485 networks on the 5664. Octagon provides TSR drivers that handle all module communications via the RS–485 networks.

Connection to field wiring

Field wiring is terminated to a modular connector located on the top of each SNAP I/O module. The locking connector features quick disconnect for easy module replacement.

I/O organization

The 64 digital I/O lines and two RS–485 ports are organized into two identical connector groups. Each connector group has a 2–wire, RS–485 port and 32 TTL digital I/O lines. Each individual digital I/O line can be programmed as an input or output. However, the Opto 22 SNAP digital modules are grouped into four channels per input or output module. The four digital I/O lines associated with each module must be programmed the same as the module.

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Access indication

The 5664 has an LED indicator that flashes briefly when card is accessed. This is useful when debugging software. Additionally, the SNAP digital modules have LEDs that indicate individual channel status on both input and output modules.

Card address selection

The 5664 is jumper selectable to one of eight I/O address blocks. The two RS–485 ports share one interrupt (IRQ). The interrupt is also jumper selectable. Two 5664 cards can be used in the same control system.

Software support

TSR drivers are provided for DOS and Intellution Paradym–31 (DOS Version). Software examples are provided in QuickBasic, C, and in Octagon's control language, CAMBASIC™.

Specifications

DIGITAL INPUT VOLTAGE LEVEL

0–5V, 10K pull–up resistor

DIGITAL OUTPUT VOLTAGE LEVELS

0–5V, 10K pull–up resistor

ANALOG MODULE INTERFACE

RS–485

ANALOG MODULE RESOLUTION

12–bit

CONVERSION TIME

Module dependent

POWER SPECIFICATIONS

5V as 135 mA max., excluding any I/O current

ENVIRONMENTAL

–40° to 85° C operating
–55° to 95° C non–operating
RH 5% to 95%, non–condensing

ACCESSORIES

CMA–80–24 cable

Ordering Information

#5045 5664 Analog/Digital SNAP I/O Card
#5049 CMA–80–24 cable assembly (1–2 per card)

Availability of SNAP I/O modules:

The SNAP I/O and the SNAP–B module racks are available from OPTO 22 distributors. These can be obtained at www.opto22.com. Watch Octagon's web site for future availability information. www.octagonsystems.com.

To Order Call 303-412-2040