## **Cables - Classic**

#### **Features**

- 50-conductor ribbon cables
- Pre-made in convenient standard lengths
- Meader connectors and card edge connectors are both available

### Description

Opto 22 supplies several standard cables that interface with host controllers. There are two series of cables, designated according to the type of connector on each end.

- The HH series has a header connector on both ends. These cables are used to connect to racks with G4 I/O modules.
- The OD series has a card edge connector on one end and a header connector on the other end. These cables are used to connect to racks with G1 I/O modules.

The two cable types use 50-conductor ribbon cable and can be ordered in convenient pre-defined lengths. See Part Numbers table at right.

#### **Building Your Own Cables**

If the standard cables listed in this data sheet do not meet your requirements, the following list can help in choosing the appropriate connectors and cable.

Cable (50-Conductor):

3M	p/n 3365/50
ALPHA	p/n 3580/50 or 3583/50

Connectors for HH Series (Header-Header):

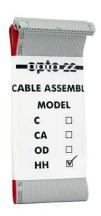
Circuit Assemblies, Inc.	p/n CA50IDS2-C-SPT

Connectors for OD Series (Edge-Header):

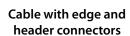
End #1 (Edge Connector)—3M	p/n 3415-0001
End #1 (Edge Connector)—Panduit	p/n 055-050-455
End #2 (Header Connector)—Circuit Assemblies	p/n CA50IDS2-C-SPT

Connectors with Strain Relief:

Use only Panduit Corporation p/n 050A050-455



Cable with header connector





#### **Part Numbers**

Part	Description
HH1.5	1.5-foot header-to-header cable
HH4	4-foot header-to-header cable
HH6	6-foot header-to-header cable
HH8	8-foot header-to-header cable
HH10	10-foot header-to-header cable
OD2	2-foot edge-to-header cable
OD4	4-foot edge-to-header cable
OD6	6-foot edge-to-header cable
OD8	8-foot edge-to-header cable
OD10	10-foot edge-to-header cable

# **More About Opto 22**

### **Products**

Opto 22 develops and manufactures reliable, flexible, easy-touse hardware and software products for industrial automation, energy management, remote monitoring, and data acquisition applications.

#### **OptoEMU Energy Management System**

The easy-to-use OptoEMU Sensor monitors electrical energy use in your facility and delivers detailed, real-time data you can see and analyze. The Sensor can monitor energy data from pulsing meters, electrical panels or subpanels, and equipment. View energy data online using a software service or incorporate the data into your control system for complete energy management.

#### **SNAP PAC System**

Designed to simplify the typically complex process of selecting and applying an automation system, the SNAP PAC System consists of four integrated components:

- SNAP PAC controllers
- PAC Project Software Suite
- SNAP PAC brains
- SNAP I/O

#### **SNAP PAC Controllers**

Programmable automation controllers (PACs) are multifunctional, modular controllers based on open standards.

Opto 22 has been manufacturing PACs for over two decades. The standalone SNAP PAC S-series and the rack-mounted SNAP PAC R-series both handle a wide range of digital, analog, and serial functions for data collection, remote monitoring, process control, and discrete and hybrid manufacturing.

SNAP PACs are based on open Ethernet and Internet Protocol (IP) standards, so you can build or extend a system easily, without the expense and limitations of proprietary networks and protocols.

#### **PAC Project Software Suite**

Opto 22's PAC Project Software Suite provides full-featured, cost-effective control programming, HMI (human machine interface) development and runtime, OPC server, and database connectivity software for your SNAP PAC System.

Control programming includes both easy-to-learn flowcharts and optional scripting. Commands are in plain English; variables and I/O point names are fully descriptive.

PAC Project Basic offers control and HMI tools and is free for download on our website, www.opto22.com. PAC Project Professional, available for separate purchase, adds OptoOPCServer, OptoDataLink, options for controller redundancy or segmented networking, and support for legacy Opto 22 serial  $mistic^{^{\top}}$  I/O units.

#### **SNAP PAC Brains**

While SNAP PAC controllers provide central control and data distribution, SNAP PAC brains provide distributed intelligence for I/O processing and communications. Brains offer analog, digital, and serial functions, including thermocouple linearization; PID loop control; and optional high-speed digital counting (up to 20 kHz), quadrature counting, TPO, and pulse generation and measurement.

#### **SNAPI/O**

I/O provides the local connection to sensors and equipment. Opto 22 SNAP I/O offers 1 to 32 points of reliable I/O per module, depending on the type of module and your needs. Analog, digital, and serial modules are all mixed on the same mounting rack and controlled by the same processor (SNAP PAC brain or rack-mounted controller).

### Quality

Founded in 1974, Opto 22 has established a worldwide reputation for high-quality products. All are made in the U.S.A. at our manufacturing facility in Temecula, California. Because we do no statistical testing and each part is tested twice before leaving our factory, we can guarantee most solid-state relays and optically isolated I/O modules for life.

# **Free Product Support**

Opto 22's California-based Product Support Group offers free, comprehensive technical support for Opto 22 products. Our staff of support engineers represents decades of training and experience. Support is available in English and Spanish by phone or email, Monday—Friday, 7 a.m. to 5 p.m. PST.

Additional support is always available on our website: how-to videos, OptoKnowledgeBase, self-training guide, troubleshooting and user's guides, and OptoForums.

In addition, hands-on training is available for free at our Temecula, California headquarters, and you can register online.

# **Purchasing Opto 22 Products**

Opto 22 products are sold directly and through a worldwide network of distributors, partners, and system integrators. For more information, contact Opto 22 headquarters at 800-321-6786 or 951-695-3000, or visit our website at www.opto22.com.

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