OPTO 22

groov ACCESSORIES

Features

> Additional or replacement parts designed specifically for *groov* products

> Replacement terminals accept wire sizes from 28–14 AWG

> Cable includes six-foot (1.8 meter) wires pre-inserted into *groov*® I/O module terminal connectors for easy replacement

> Pre-assigned wire colors offer convenience and consistency

> Heat-shrink cable neck band helps keep wires bundled together, minimizing entanglement

GRV-TERM26-5

DESCRIPTION

groov accessories include replacement parts, like field wiring connectors, and helpful additional products, like pre-made cables that save you time and expense.

groov REPLACEMENT PARTS

GRV-TERM26-5 and **GRV-TERMG26-5** are packages of five terminal connectors for wiring field devices to *groov* I/O or *groov* RIO modules.

GRV-TERM26-5 connectors are black and are used with most modules. GRV-TERMG25-6 connectors are gray and provide cold-junction compensation for thermocouple channels. See the list of modules on page 2 to determine which part number you need. These terminals accept wire sizes from 28–14 AWG.

GRV-TEX-RCTM-5 are packages of five cable tie push mounts for bundling field wires to *groov* RIO modules. Push a mount into the vent of a *groov* RIO, then thread a zip tie through the mount.

GRV-TEX-SCTOOL is a long and sturdy spring clamp tool that makes it quick and easy to connect wires to *groov* I/O and *groov* RIO terminals.


GRV-TEX-RCTM-5

Part Numbers

Part	Description
GRV-TEX-26F6	26-wire cable for *groov* I/O modules. Straight-through; no common terminals. Flying leads.
GRV-TEX-SCTOOL	*groov* spring clamp terminal tool
GRV-TERM26-5	*groov* I/O module terminal, black, 5-pack
GRV-TERMG26-5	*groov* I/O module terminal, gray, for thermo-couple modules, 5-pack
GRV-TEX-RCTM-5	*groov* RIO cable ties push mounts, 5-pack

MADE IN THE USA

OPTO 22 • 800-321-6786 • 1-951-695-3000 • www.opto22.com • sales@opto22.com

groov TEX CABLES

groov TEX cables like the **GRV-TEX-26F6** save time and expense during installation, maintenance, and debugging by reducing the time and effort required to connect field devices to *groov* I/O modules.
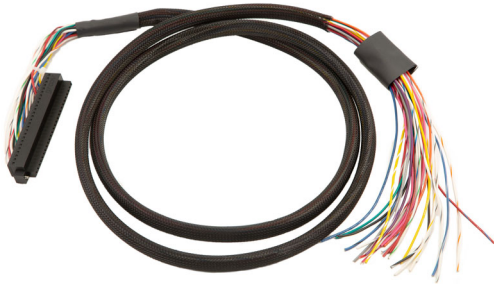
GRV-TEX-26F6

The wires are 20 AWG, offering significantly more flexibility, tighter radius bends, and an over-all easier cable management experience. The wires are ferruled before being inserted into the *groov* I/O module terminal connector, ensuring a proper connection and enhancing durability.

Pre-assigned wire colors help provide visual consistency across multiple modules, making pin assignments easier to remember. You can use the convenient "Pin/Wire Color/Device Assignments Worksheet" on page 4 to note which wire is connected to which device. Then make copies of the form to store in the field and in a central location for easy reference.

The six-foot wires and vinyl sheath that bundles the wires can be trimmed to any length. The heat-shrink neck band can be placed at the end of the vinyl sheath, preventing fraying of the vinyl sheath and keeping the wires securely bundled at the end of the sheath.

SPECIFICATIONS

groov Terminal Connectors

Specification	GRV-TERM26-5 and GRV-TERMG26-5
Wire size	28–14 AWG
Torque for connector screw	2.5 in-lb (0.28 N-m)

GRV-TERM26-5

Terminal connector part numbers for *groov* I/O modules

For this product	Use this terminal connector
GRV-CCANI-2	GRV-TERM26-5
GRV-CSERI-4	GRV-TERM26-5
GRV-IAC-24	GRV-TERM26-5
GRV-IACDCTTL-24	GRV-TERM26-5
GRV-IACDCTTLS-24	GRV-TERM26-5
GRV-IACHV-24	GRV-TERM26-5
GRV-IACHVS-24	GRV-TERM26-5
GRV-IACI-12	GRV-TERM26-5
GRV-IACIHV-12	GRV-TERM26-5
GRV-IACIHVS-12	GRV-TERM26-5
GRV-IACIS-12	GRV-TERM26-5
GRV-IACS-24	GRV-TERM26-5
GRV-IDC-24	GRV-TERM26-5
GRV-IDCI-12	GRV-TERM26-5
GRV-IDCIFQ-12	GRV-TERM26-5
GRV-IDCIS-12	GRV-TERM26-5
GRV-IDCS-24	GRV-TERM26-5
GRV-IDCSW-12	GRV-TERM26-5
GRV-IICTD-12	GRV-TERM26-5
GRV-IMA-24	GRV-TERM26-5
GRV-IMAI-8	GRV-TERM26-5
GRV-ITM-12	GRV-TERMG26-5
GRV-ITMI-8	GRV-TERMG26-5
GRV-ITR-12	GRV-TERM26-5
GRV-IV-24	GRV-TERM26-5
GRV-IVI-12	GRV-TERM26-5
GRV-IVIRMS-10	GRV-TERM26-5
GRV-OAC-12	GRV-TERM26-5
GRV-OACI-12	GRV-TERM26-5
GRV-OACIS-12	GRV-TERM26-5
GRV-OACS-12	GRV-TERM26-5
GRV-ODCI-12	GRV-TERM26-5
GRV-ODCIS-12	GRV-TERM26-5
GRV-ODCSRC-24	GRV-TERM26-5
GRV-OMRIS-8	GRV-TERM26-5
GRV-OVMAILP-8	GRV-TERM26-5
GRV-OVMALC-8	GRV-TERM26-5
GRV-R7-MM1001-10	GRV-TERMG26-5

OPTO 22

groov TEX Cable

Specification	GRV-TEX-26F6
Number of wires	26
Wire gauge	20 AWG
Temperature (operating)	-20 °C to +70 °C
Temperature (storage)	-40 °C to +85 °C
Humidity (non-condensing)	5–95% RH
Agency Approvals	CE, RoHS, DFARS
Warranty	30 months

groov I/O or *groov* RIO module terminal connector

Heat-shrink neck band (2)
(pre-shrunk on terminal connector end; adjustable and shrinkable on the other end)

Vinyl sheath
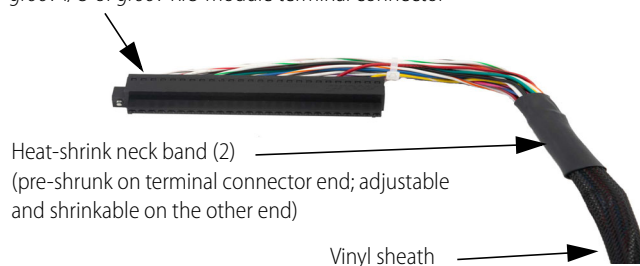
Pin-to-Wire Color Assignments

groov TEX Cable

Pin #	Color	Pin #	Color
1	White	14	White with Orange stripe
2	White with Black stripe	15	Gray
3	Red	16	White with Gray stripe
4	White with Red stripe	17	Violet
5	Black	18	White with Violet stripe
6	Black with White stripe	19	Pink
7	Green	20	Pink with Black stripe
8	White with Green stripe	21	Red with Black stripe
9	Yellow	22	Blue with Black stripe
10	White with Yellow stripe	23	Red with White stripe
11	Blue	24	Blue with White stripe
12	White with Blue stripe	25	Yellow with White stripe
13	Orange	26	Red with Blue stripe

MADE IN THE
USA

OPTO 22 • 800-321-6786 • 1-951-695-3000 • www.opto22.com • sales@opto22.com

PIN/WIRE COLOR/DEVICE ASSIGNMENTS WORKSHEET

The following worksheet is provided for your convenience.

Pin #	Wire Color(s)	Name/Description/Notes
1	White	
2	White with Black stripe	
3	Red	
4	White with Red stripe	
5	Black	
6	Black with White stripe	
7	Green	
8	White with Green stripe	
9	Yellow	
10	White with Yellow stripe	
11	Blue	
12	White with Blue stripe	
13	Orange	
14	White with Orange stripe	
15	Gray	
16	White with Gray stripe	
17	Violet	
18	White with Violet stripe	
19	Pink	
20	Pink with Black stripe	
21	Red with Black stripe	
22	Blue with Black stripe	
23	Red with White stripe	
24	Blue with White stripe	
25	Yellow with White stripe	
26	Red with Blue stripe	

PRODUCTS

Opto 22 develops and manufactures reliable, easy-to-use, open standards-based hardware and software products. Industrial automation, process control, building automation, industrial refrigeration, remote monitoring, data acquisition, and industrial internet of things (IIoT) applications worldwide all rely on Opto 22.

groov EPIC® System

Opto 22's *groov* Edge Programmable Industrial Controller (EPIC) system gives you an industrially hardened system with guaranteed-for-life I/O, a flexible Linux®-based processor with gateway functions, and software for your automation and IIoT applications.

groov EPIC I/O

groov I/O connects locally to sensors and equipment with up to 24 channels on each I/O module. Modules have a spring-clamp terminal strip, integrated wireway, swing-away cover, and LEDs indicating module health and discrete channel status.

groov I/O is hot swappable, UL Hazardous Locations approved, and ATEX compliant.

groov EPIC Processor

The heart of the system is the *groov* EPIC processor. It handles a wide range of digital, analog, and serial functions for data collection, remote monitoring, process control, and discrete and hybrid manufacturing.

In addition, the EPIC provides secure data communications among physical assets, control systems, software applications, and online services, both on premises and in the cloud.

Configuring and troubleshooting I/O and networking is easier with the EPIC's integrated high-resolution color touchscreen. Authorized users can manage the system locally on the touchscreen or on a monitor connected via the HDMI or USB ports.

groov EPIC Software

Software included in the *groov* EPIC processor:

- PAC Control engine to run PAC Control and PAC Display
- CODESYS Runtime engine to run IEC61131-3 compliant programs built with CODESYS Development System
- Optional access to the Linux operating system through a secure shell (SSH) to download and run custom applications
- *groov* View for building your own device-independent HMI, viewable on the touchscreen, PCs, and mobile devices
- Node-RED for creating simple logic flows from pre-built nodes
- Ignition Edge® from Inductive Automation®, with OPC-UA drivers to Allen-Bradley®, Siemens®, and other control systems, and MQTT communications with Sparkplug for efficient IIoT data transfer

groov RIO®

groov RIO revolutionizes remote I/O by offering a single, compact, PoE-powered industrial package with web-based configuration, commissioning, and flow logic software built in, plus support for multiple OT and IT protocols.

Standing alone, it meets the needs of small, variable I/O count applications, especially those that require data logging or data communications, commonly found in IIoT applications. *groov* RIO can also be used with a Modbus/TCP master or as remote I/O for a *groov* EPIC system.

Older products

From solid state relays (our first products) to world-famous G4 and SNAP I/O, to SNAP PAC controllers, older Opto 22 products are still supported and still doing the job at thousands of installations worldwide. You can count on us to give you the reliability and service you expect, now and in the future.

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 test each product twice before it leaves our factory rather than testing a sample of each batch, we can afford to 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 from engineers with 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.

Support is always available on our website, including free online training at OptoU, how-to videos, user's guides, the Opto 22 KnowledgeBase, troubleshooting tips, and OptoForums. In addition, instructor-led, hands-on Premium Factory Training is available 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** (toll-free in the U.S. and Canada) or **+1-951-695-3000**, or visit our website at www.opto22.com.

OPTO 22 • www.opto22.com
43044 Business Park Dr. Temecula, CA 92590-3614

SALES • sales@opto22.com
800-321-6786 • 1-951-695-3000

SUPPORT • support@opto22.com
800-835-6786 • 1-951-695-3080

MADE IN THE
USA