



## 5012 24 – Way Programmable Switch

**Time Electronics**

Calibration, Test & Measurement

- **24 Switches with LED Display**
- **2 Pole Changeover**
- **IEEE/GPIB/IEC/HPIB**
- **Local and Remote operation**
- **Self – test feature**



The **5012** is a microprocessor controlled, 24-channel switch that may be operated either manually or by the IEEE – 488 interface bus. It offers a wide variety of switching solutions. Applications include A.T.E., production, process control, and environmental monitoring.

Special relays with multi-layered contacts have been used to give the performance needed for switching thermocouples to switching currents.

Local operation is easily performed by entering the required channel on the keyboard. The LED's directly indicate the selected channels.

Features available in the local mode prove invaluable during system design and for troubleshooting. The step left and right keys will move all selected channels left or right one channel. An 'All Off' key will immediately turn off all selected channels and the self test function will select each channel in turn without external bus control.

Operation over the IEEE – 488 bus is also very simple. To operate a channel just send the number to the 5012. Again the LED's will indicate the selected channels.

In addition the 5012 has a timing feature. If timing is critical in your application, delays may be specified before a channel is turned on or off.

The 5012 is constructed in a standard size 19" 2 units high metal case, suitable for rack mounting.

## 5012 Technical Specifications

<u>INTERFACE</u>		<u>PROGRAMMING</u>
<b>INTERFACE TYPE:</b>	IEEE-488 GPIB/HPIB	Programming of the 5012 is identical to the earlier switch, the 9812. Each switch is addressed by its physical position number as shown on the front panel (1-24). Either a single switch or several may be selected by one command string. The commands to each switch are separated by a semi-colon (;) and the delay option specified by '/X/Y' where 'X' is the turn on delay and 'Y' is the turn off delay, both in 1/10ths of a second. The complete command string is terminated by either a carriage return (CR) or line feed (LF).
<b>DEVICE ADDRESS:</b>	Rear panel switch 0 –31	
<b>BUS CONNECTION:</b>	Standard 24 pin IEEE-488 connector	
<b>BUS ISOLATION:</b>	All switches are isolated from the bus up to 350V	
<u>SWITCH SPECIFICATION</u>		<u>PROGRAM MODES</u>
<b>TYPE:</b>	24 way double pole changeover, break before make.	<b>DECIMAL:</b> Switches to be turned on are specified by decimal commands. All other switches are turned off.
<b>CONTACT RES:</b>	<150 mΩ per switch	<b>MEMORY +:</b> Switches to be turned on are specified by a positive decimal command. All other switches remain unchanged.
<b>CONTACTS:</b>	Gold Layer	<b>MEMORY –:</b> Switches to be turned off specified as a negative decimal command. All other switches remain unchanged.
<b>OPERATION TIME:</b>	20 milli seconds	<b>DELAY OPTION:</b> Delays the decimal memory + or – commands by a specified amount (0.1s – 25s). On and Off delays are specified separately.
<b>OPERATION LIFE:</b>	Up to 200 million operations	<b>HEXADECIMAL:</b> Turn on switches by a hexadecimal string. All others turn off.
<b>CONNECTIONS:</b>	Four 37 way 'D' connectors	<b>G.E.T.:</b> Sets the 5012 to execute commands after the Group Execute Trigger command has been received.
<b>RATING:</b>	1 Amp @ 30V D.C. (100V A.C.)	<b>GOTO LOCAL:</b> Sets the 5012 into local mode.
<b>THERMAL EMF'S:</b>	Less than 1uV per switch	<b>TRANSMIT LOCAL:</b> Instructs the 5012 to send back all its settings.

### General Specification

<b>Dimensions:</b>	482 x 381 x 89mm (Rack Mount Version). 436 x 381 x 103mm (Bench Version)
<b>Weight:</b>	8.5kg (Rack Mount Version). 8kg (Bench Version)

### Ordering Information

Code	Description
5012	24-Way Programmable Switch (Including 19" Rack Mountings)

Due to continuous development Time Electronics reserves the right to change specifications without prior notice.

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