

**Figure 1.** Module Load Derating

**DC path resistance**

- Initial ..... <0.55  $\Omega$
- End-of-life .....  $\geq 1 \Omega$

DC path resistance typically remains low for the life of the relay. At the end of relay life, the path resistance rapidly rises above 1  $\Omega$ . Load ratings apply to relays used within the specification before the end of relay life.

**Thermal EMF**

(typical at 23 °C) .....  $\leq 12 \mu V$

**Bandwidth (-3 dB, typical at 23 °C)**

50  $\Omega$  termination .....  $\geq 20$  MHz

**Crosstalk (typical at 23 °C, 50  $\Omega$  termination)**

**Channel-to-channel**

- 10 kHz .....  $\leq -85$  dB
- 100 kHz .....  $\leq -65$  dB
- 1 MHz .....  $\leq -45$  dB
- 10 MHz .....  $\leq -25$  dB

**Isolation (typical at 23 °C, 50  $\Omega$  termination)**

**Open channel**

- 10 kHz .....  $\geq 85$  dB
- 100 kHz .....  $\geq 65$  dB
- 1 MHz .....  $\geq 45$  dB
- 10 MHz .....  $\geq 25$  dB

**Dynamic Characteristics**

Maximum cycle speed ..... 145 cycles/s

**Relay operate time**

- Typical ..... 1 ms
- Maximum ..... 3.4 ms



**Note** Certain applications may require additional time for proper settling. For information about including additional settling time, refer to the *NI Switches Help*.

Expected relay life

Mechanical .....	$1 \times 10^8$ cycles
Electrical	
10 VDC,	
100 mADC resistive.....	$2.5 \times 10^6$ cycles
10 VDC, 1 ADC resistive .....	$1 \times 10^6$ cycles
30 VDC, 1 ADC resistive .....	$5 \times 10^5$ cycles
60 VDC, 1 ADC resistive .....	$1 \times 10^5$ cycles



**Note** The relays used in the NI SCXI-1169 are field replaceable. Refer to the *NI Switches Help* for information about replacing a failed relay.

## Trigger Characteristics

Input trigger

Sources .....	SCXI trigger lines 0–7, rear connector
Minimum pulse width .....	150 ns

Output trigger

Destinations .....	SCXI trigger lines 0–7, rear connector
Pulse width .....	Programmable (1 $\mu$ s to 62 $\mu$ s)

## Physical Characteristics

Relay type .....	Electromechanical, latching
Relay contact material .....	Palladium-ruthenium, gold covered
I/O connector .....	200 POS LFH Matrix 50, receptacle
SCXI power requirement	
+5 VDC .....	50 mA
+18.5 VDC to +25 VDC .....	170 mA
–18.5 VDC to –25 VDC .....	170 mA
Dimensions (L $\times$ H $\times$ W) .....	19.8 cm $\times$ 3 cm $\times$ 17.3 cm (7.8 in. $\times$ 1.2 in. $\times$ 6.7 in.)
Weight.....	755 g (26.6 oz)

## Environment

Operating temperature .....	0 °C to 50 °C
Storage temperature .....	–20 °C to 70 °C
Relative humidity.....	5% to 85% noncondensing
Pollution Degree .....	2
Maximum altitude.....	2,000 m
Indoor use only.	

## Accessories

Visit [ni.com](http://ni.com) for more information about the following accessories.

**Table 1.** NI Accessories for the NI SCXI-1169

Accessory	Part Number
LFH200 to 50-pin D-SUB switch cable (CH-Com twisted), 1 m	779038-02
LFH200 connector to bare wire switch cable, 2 m	779038-01



**Caution** You must install mating connectors according to local safety codes and standards and according to the specifications provided by the connector manufacturer. You are responsible for verifying safety compliance of third-party connectors and their usage according to the relevant standard(s), including UL and CSA in North America and IEC and VDE in Europe.

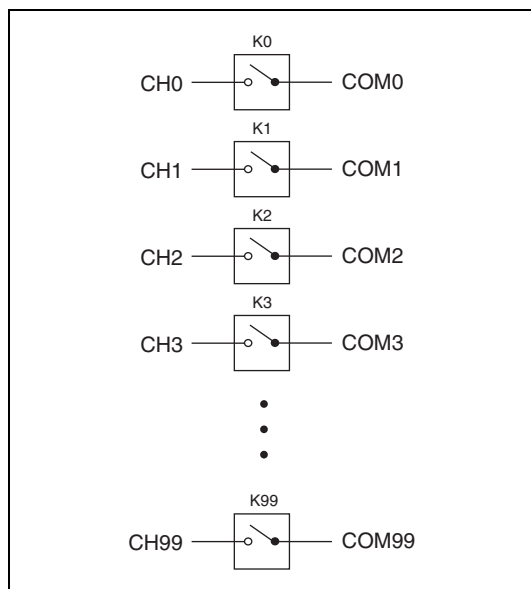
**Table 2.** Third-Party Accessories for the NI SCXI-1169

Accessory	Manufacturer	Part Number
Terminal sticks (four required per module)	Molex	71715-4002
Plug connector subassembly	Molex	71719-3000
Backshell only	Jevons	JDC200B-832
Mass interconnect cable assembly, 20 in.	Virginia Panel	540105010105
Mass interconnect cable assembly, 36 in.	Virginia Panel	540105010205
Mating ITA module* (one required per module)	Virginia Panel	510108131
Mating ITA PC* (198 required per module)	Virginia Panel	720101101
DAK assembly NI PCB, 200 Pin LFH, male	MAC Panel	561036
* PCB mount, additional cover, or enclosure required. See previous safety caution.		

**Table 3.** Third-Party Accessories for the LFH200 to 50-pin D-SUB Switch Cable

Accessory	Manufacturer	Part Number
VARIOFACE module, with screw connection and 50 position D-SUB pin strip	Phoenix Contact	FLK-D50 SUB/S
VARIOFACE module, with screw connection and 50 position D-SUB pin strip	Phoenix Contact	FLKM-D50 SUB/S
VARIOFACE module, with screw connection and 50 position D-SUB pin strip	Phoenix Contact	FLKMS-D50 SUB/S
VARIOFACE module, with screw connection and 50 position D-SUB pin strip, with LED indicators	Phoenix Contact	FLKM-D50 SUB/S/LA

Figure 2 shows the NI SCXI-1169 power-on state.



**Figure 2.** NI SCXI-1169 Power-On State

## Compliance and Certifications

### Safety

This product is designed to meet the requirements of the following standards of safety for electrical equipment for measurement, control, and laboratory use:

- IEC 61010-1, EN 61010-1
- UL 61010-1, CSA 61010-1



**Note** For UL and other safety certifications, refer to the product label or visit [ni.com/certification](http://ni.com/certification), search by model number or product line, and click the appropriate link in the Certification column.

### Electromagnetic Compatibility

This product is designed to meet the requirements of the following standards of EMC for electrical equipment for measurement, control, and laboratory use:

- EN 61326 EMC requirements; Minimum Immunity
- EN 55011 Emissions; Group 1, Class A
- CE, C-Tick, ICES, and FCC Part 15 Emissions; Class A



**Note** For EMC compliance, operate this device with shielded cabling.

### CE Compliance

This product meets the essential requirements of applicable European Directives, as amended for CE marking, as follows:

- 2006/95/EC; Low-Voltage Directive (safety)
- 2004/108/EC; Electromagnetic Compatibility Directive (EMC)



**Note** Refer to the Declaration of Conformity (DoC) for this product for any additional regulatory compliance information. To obtain the DoC for this product, visit [ni.com/certification](http://ni.com/certification), search by model number or product line, and click the appropriate link in the Certification column.

## Environmental Management

National Instruments is committed to designing and manufacturing products in an environmentally responsible manner. NI recognizes that eliminating certain hazardous substances from our products is beneficial not only to the environment but also to NI customers.

For additional environmental information, refer to the *NI and the Environment* Web page at [ni.com/environment](http://ni.com/environment). This page contains the environmental regulations and directives with which NI complies, as well as other environmental information not included in this document.

### Waste Electrical and Electronic Equipment (WEEE)



**EU Customers** At the end of their life cycle, all products *must* be sent to a WEEE recycling center. For more information about WEEE recycling centers and National Instruments WEEE initiatives, visit [ni.com/environment/weee.htm](http://ni.com/environment/weee.htm).

### 电子信息产品污染控制管理办法（中国 RoHS）



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