Racal Instruments™
1260-118/118A
80/24 Channel SPST Switch Plug-in

The Racal Instruments™ 1260-118/118A is an 80/24 channel SPST (Form A) plug-in relay card for the Adapt-a-Switch™ platform. It quickly and easily plugs into the front of Racal Instruments™ 1260-100 and 1260-101 Adapt-a-Switch™ carriers or Racal Instruments™ 1256 GPIB/Ethernet and 1256L (LXI Core 2011 Compliant) switching mainframes.

Key Features

- **80 or 24 channels of SPST switching**

- **100 MHz bandwidth (-3 dB)**

- **1260-118A version accommodates a low-cost ribbon cable interface**

- **Switches up to 2 A**

- **Can be used in VXI, GPIB/RS-232, and LXI switching systems**

- **Easily configured to meet user-defined network requirements**

- **Standard Adapt-a-Switch™ plug-in design for ease of replacement**

Product Information

Each channel of the 1260-118/118A can switch up to 2 A. Its bandwidth and current/voltage switching capability make it the ideal general-purpose switch card. In addition, the SPST architecture allows the user to interconnect the relays externally to create custom multiplexers and matrices.

Since all relays on the 1260-118/118A are electromechanical, all inputs/outputs are interchangeable to meet the test requirements. Interface connectors are not provided with the 1260-118 and must be ordered separately. However, a six-foot unterminated cable assembly is available as a standard option. For the 1260-118A, 2 A DIN crimp-style connectors or low-cost 1 A IDC ribbon cable connectors are also available as options.

The Racal Instruments™ Option-01T interface (for VXI) controls the 1260-118/118A using either register-based or message-based commands. The Racal Instruments™ 1256 (for GPIB/Ethernet) and 1256L (for LXI) support message-based operations.

Refer to the Option-01T/1256 literature for more information about product specifications and features such as include, exclude, scan lists, user-defined path names, and reset states.

The Racal Instruments™ Adapt-a-Switch™ series includes VXI*plug&play* support for frameworks based on Microsoft Win32® application programming interface, including drivers for LabWindows™/CVI and LabVIEW™.
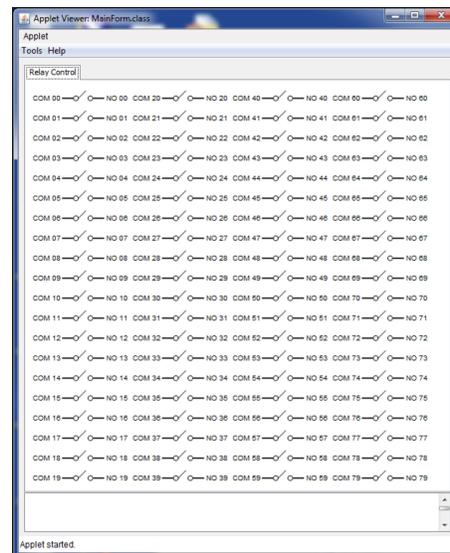
1260-118/118A LXI Web Control

Specifications

Note: The Astronics Test Systems policy is one of continuous development and improvement. Consequently, the equipment may vary in detail from the description and specifications in this publication.

Input

Maximum Switching Voltage
• 300 VDC or 300 VAC

Maximum Switching Current
• 2 ADC or 2 A AC 1 ADC/AC with IDC mating connector

Maximum Switching Power
• 60 W, 125 VA

DC Performance

Path Resistance
• <500 mΩ (Initial)

Insulation Resistance
• >10^9 Ω

Thermal EMF
• <10 µV

AC Performance

Bandwidth (-3 dB)
• 100 MHz

Insertion Loss
• 100 kHz: <0.5 dB
• 1 MHz: <1.0 dB

Isolation (50 Ω)
• 100 kHz: >80 dB
• 1 MHz: >40 dB

Crosstalk (50 Ω)
• 100 kHz: <80 dB
• 1 MHz: <-40 dB

Capacitance
• Channel-Chassis: <200 pF
• Open Channel: <20 pF

Interface

Power Requirements
• +5 VDC at 150 mA plus 30 mA per energized relay (730 mA max.)

Front Panel I/O Interface Connector
• 1260-118: 160 Pin DIN Connector
• 1260-118A: 64 Pin DIN Connector

Environmental

(All environmental conditions designed to meet MIL-PRF-28800F, Class 3)

Temperature
• Operating: 0º C to 55º C
• Storage: -40º C to 71º C

Relative Humidity
• 5% to 95% RH non-condensing ≤30º C
• 5% to 75% RH above 30º C
• 5% to 45% RH above 40º C

Altitude
• Operating: 10,000 ft
• Non-Operating: 15,000 ft

Shock
• 30 g peak, half sine, 11 ms pulse

Random Vibration
• Operating: 5 to 500 Hz, 0.3 G_{rms}
• Non-Operating: 5 to 500 Hz, 2.1 G_{rms}

Bench Handling
• 4-inch drop at 45º

Emissions/Immunity
• EN61326: 1997 + A1: 1998, Class A

Safety
• EN61010-1; 1993 + A2: 1995

Switching Time
• <3 ms (includes settling time)

Rated Switch Operation
• Mechanical: 1 x 10^8
• Electrical: 1 x 10^6 @ 50 V, 0.1 A; 1 x 10^6 @ 10 V, 10 mA

MTBF (MIL-STD-217E)
• ≥783,668 hrs

MTTR
• <5 min

Software

Drivers
• LabVIEW™, LabWindows™/CVI, VXI*plug&play* support for frameworks based on Microsoft Win32® application programming interface

Web Controls
• When used with a Racal Instruments™ 1256L

Mechanical

Weight
• 12,8 oz (0.36 kg)

Dimensions
• 4.5" H x 0.75" W x 9.5" D

Cooling
• See 1260-100 cooling data

Typical Channel

Insertion Loss
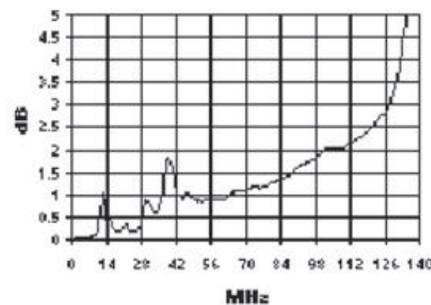
Crosstalk
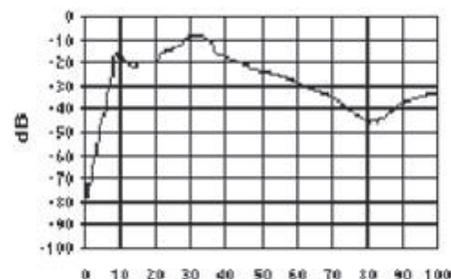
Isolation
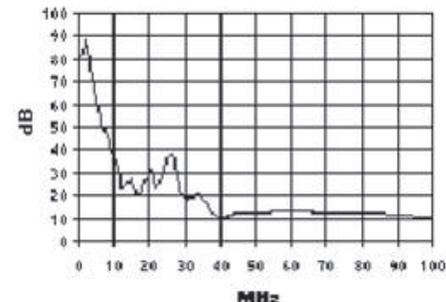
The CE Mark indicates that the product has completed and passed rigorous testing in the area of RF Emissions and Immunity to Electromagnetic Disturbances, and complies with European electrical safety standards.

Ordering Information

Notes: Each 1260-118/118A requires one mating connector.

If the 1260-118/118A is used in a VXI mainframe other than a 1256 or 1256L, a Racal Instruments™ Option 01T Smart Control Module must be installed in the mainframe's left-most slot.

407632 : Racal Instruments™ 1260-118
   Adapt-a-Switch™ Module, 80 Channel SPST, 2 A

407632-001 : Racal Instruments™ 1260-118A
   Adapt-a-Switch™ Module, 24 Channel SPST, 2 A

Accessories:
OPT-405108-001 : Racal Instruments™ Option 01T Smart Card Module installed (manual must be ordered separately; see below)

407531-001 : Racal Instruments™ Option 01T Smart Card Module (not installed) with manual

407408-001 : 160-Pin Cable Assembly, 6 ft, 24 AWG

407409-001 : 160-Pin Cable Assembly, 12 ft, 24 AWG

407664 : 160-Pin Connector Kit with Strain Relief

407809-001 : 160-Pin Cable Assembly, 6 ft, 24 AWG

602258-116 : 160-Pin Backshell

602258-900 : Extra 24 Gauge contact

990898 : Insertion Tool

990899 : Extraction Tool

991020 : Crimp Tool