RACAL INSTRUMENTS 1260-23

High-Current, Low Path Resistance Power Switch Card 1260-23

- **1 Channel of SPDT, 2 Channels of DPDT, 5 Channels of SP4T, High-Current Switching**
- **Switching for Power Supplies and Current Sources**
- **Switches up to 25A, AC or DC**
- **Very Low Path Resistance, less than 20 mΩ**

Racal Instruments 1260-23 is a 1-channel of SPDT, 2 Channels of DPDT, and 5 Channels of SP4T, high-current switch module.

It was designed for switching and routing high-current, high power sources such as AC and DC power supplies in automated test systems. The 1260-23 switches currents up to 25A, AC or DC, and voltages up to 32 VDC or 130 VAC.

The 1260-23 uses a Military quality hermetically sealed relay to provide the ultimate power switching solution both in terms of performance and reliability. These relays are less susceptible to contact contamination hence; they maintain low contact resistance over a much longer lifetime.

To reduce voltage loss and heating effects, the module was designed to have very low series path resistance. The design uses low resistance connector pins, low resistance relays and heavy gauge wire.

The message-based and register-based Option 01T interface controls the 1260-23. Refer to the Option 01T data sheet for specifications and product features such as include, exclude, and scan lists; relay coil-current monitoring; and user-defined path names and reset states.

An IVI-COM driver is also available for this module.

EADS NORTH AMERICA DEFENSE

1260-23 PRODUCT SPECIFICATIONS

INPUT PERFORMANCE

Maximum Switching Voltage
130 VAC, 32 VDC

Maximum Switching Current
25 AAC, 25 ADC

Maximum Switching Power
2,875 VA, 700 W

DC PERFORMANCE

Path Resistance
<20 mΩ

Insulation Resistance
$>10^9$ Ω

AC PERFORMANCE (into 50 Ohm)

Bandwidth (-3 db)
>300 kHz

Isolation
DC to 100 kHz: >60 dB
100 kHz to 300 kHz: >50 dB

Crosstalk (dB)
DC to 100 kHz: <-60 dB
100 kHz to 300 kHz: <-50 dB

Capacitance
Channel-Chassis: < 40 pF
Open Channel: < 40 pF

VXIBUS INTERFACE DATA

Cooling Requirements (w/o Option 01T)
Airflow: 4.25 liters/sec
Backpressure: 0.394 mm H_2O

Maximum Overall Power Dissipation
80 W

Peak Current at 47.1 Watts
+5 VDC at 1.81 A
+5 VDC at 2.71 A with Option-01T
+12 VDC at 150 mA per energized relay (3.0 A max)

ENVIRONMENTAL DATA

Temperature
Operating: 0º C to +55º C
Non-operating: -40º C to +75º C

Humidity (non-condensing)
95 % at <30º C

Altitude
Operating: 10,000 ft.*
Non-operating: 15,000 ft.

Shock
30 g, 11 ms, 1/2 sine wave

Vibration (non-operating)
0.013" pk-pk, 5-55 Hz

Bench Handling
4-inch drop at 45°

EMC

Emissions**
EN55011A with limits in accordance with EN50081-1

Immunity**
IEC901-2,3,4 with limits in accordance with EN50082-1

SAFETY**

EN61010-1
Impulse Withstand 1000 V

RELIABILITY

Switching Time
<25 ms

Rated Switch Operations
Mechanical: 10,000,000 operations
Electrical: 10,000 operations at full rated load

MTBF (MIL-HDBK-217-FN2)
With relays: 383,962 hrs (25º C)
With relays: 352,367 hrs (30º C)
(50% rated load, 0.1 cycle / hour)

MECHANICAL

Weight
W/O Option-01T: 4.40 lbs. (2.00 kg)
With Option-01T: 4.71 lbs. (2.14 kg)

Dimensions
C-size, single-slot VXIbus module

Front Panel I/O Interface Connector
3 16-pin Positronic connectors

* Operation at 15,000 feet requires derating of maximum overall power dissipation to 65 W.

** Certification Pending

ORDERING INFORMATION

MODEL/DESCRIPTION	PART NUMBER
Racal Instruments 1260-23 Switch Module, 25A Low Path Resistance	408005
Racal Instruments Option 01T Smart Card Module (installed)	OPT-405108-001
Racal Instruments Option 01T Smart Card Module (spare)	407531-001
Connector Mating Kit contains:	407917
3 16-pin mating connector shells	
54 female connector pins	

*One Option O1T must be ordered with switch card(s). Please specify the card on which the Option O1T will be installed

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