

# RJ Switch

## Harsh Environment Military Ethernet Switches

### Sealed, Rugged & Waterproof Switch

Today many applications require the use of rugged and sealed connection solutions for extreme environments. Amphenol offers 8 port Ethernet Switches that can withstand a variety of extreme conditions. Whatever the situation - high temperatures, extreme shocks & vibrations, dust particles or even liquid immersion there is a solution available. This is an easy way to make the Ethernet networks of your systems deterministic.

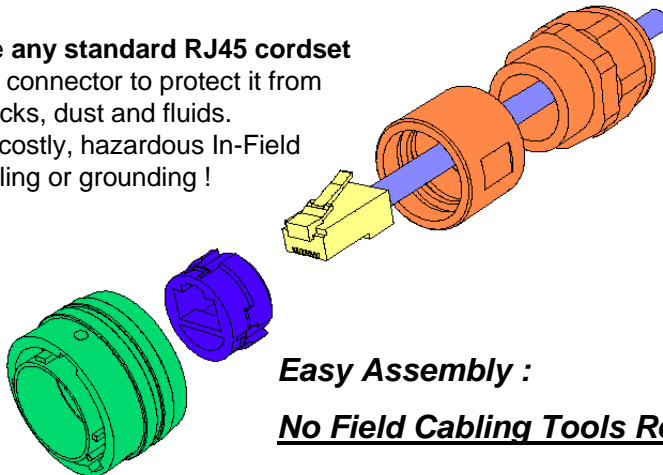
### Amphenol Military RJ Switch

Amphenol offers a wide range of both managed and unmanaged Ethernet switches specifically designed for the harshest of environments. The switch electronics are sealed within a waterproof IP67 metallic enclosure. The conductive cadmium plating is suitable for most demanding EMI-RFI environments. The I/O interface includes power inputs and alarm outputs as well as waterproof rugged RJ45 connectors from the RJF TV FIELD threaded product series based on MIL-DTL-38999 (Series III) metallic shell size 19. This series enables the transformation without tooling any standard RJ45 cordset into a robust and waterproof connection system.

### Key Features

- ✓ **Reduced Installation Costs** with the patented RJStop® system.

Use **any standard RJ45 cordset** in a connector to protect it from shocks, dust and fluids. No costly, hazardous In-Field cabling or grounding !



**Easy Assembly :**

**No Field Cabling Tools Required**

- ✓ Rugged **Enclosures** in Die-Cast Aluminum with conductive Olive Drab Green Cadmium plating
- ✓ **Wide Offering of Capabilities:** Either Unmanaged Versions or Managed Systems with **Elite Features** including Vlan, QoS, ...
- ✓ Proven **Electronics**
- ✓ Waterproof **IP67** Rating
- ✓ High **EMI & RFI** Protection
- ✓ Rugged RJField **Connectors**



**Sealed and Rugged  
Military Ethernet  
Switches**

### Military Applications

- Data Acquisition & Transmission
- Battlefield Communication C4ISR
- Rugged Networks
- Mobile Communications
- Test Equipment
- Avionic & Shipboard Systems

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**Amphenol®**

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# Managed Switch Product Offering

## RJS ML 6008 Managed Switch Features (6008 Version)

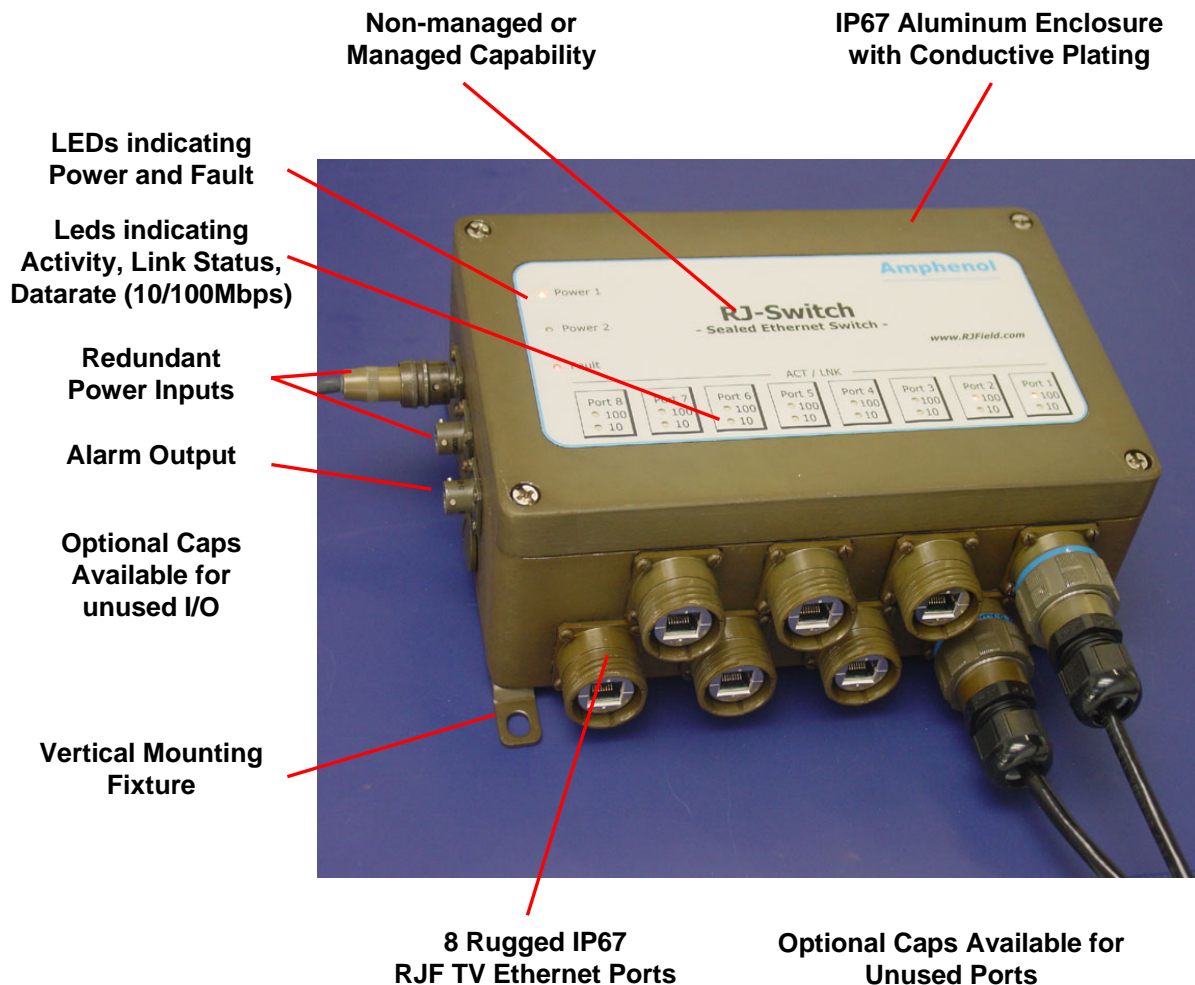
- Fast Ethernet Redundant Ring Topology  
(Recovery time < 300 ms)
- Automatic Alarm via Relay Output or E-mail  
(Configuration defined by System Manager)
- Management via Web Interface or Telnet Interface
- Network Parameter Management
- Port Mirroring
- Ping Command controls Segment Integrity

## RJS ML 508 Elite Managed Switch Added Features (508 Version)

- All Basic Managed Features Included
- IGMP Snooping
- IEEE 802.1Q VLAN
- IEEE 802.1P/1Q Quality of Service
- Port Lock
- 2 Digital Inputs

Electrical Isolation from Electronics  
8 mA Maximum Current Input  
Low state: - 30 to + 3 V  
High state: +13 to + 30 V

## RJ-Switch enclosure description



# Managed & Unmanaged Switch Features

## IEEE Ethernet Standards

		802.3	802.3u	802.3x	802.1D	802.1W	802.1Q	802.1p
RJS ML 308	Unmanaged	✓	✓	✓				
RJS ML 6008	Managed	✓	✓	✓	✓			
RJS ML 508	Managed Elite	✓	✓	✓	✓	✓	✓	✓

## Regulatory Approvals

EMI:	EN55022 class A
EMS:	EN61000-4-2 to EN61000-4-5, EN61000-4-8
Shocks:	IEC60068-2-27 (Pending)
Vibrations:	IEC60068-2-6 (Pending)
Free Fall:	IEC60068-2-32 (Pending)
Hazardous Location:	UL/CSA 60079-15, EN50021 Class1, Div. 2 / Zone 2 (Pending)

## Power Supply

Redundant 24 VDC Input	12 – 48 VDC for Unmanaged (308) & Managed Elite (508) versions 9 – 32 VDC for Managed (6008) versions
Current Consumption	350 mA at 24 VDC
Reverse Polarity Protection	
Protection Against Current Overload:	
	1.1A Unmanaged Switch Version (308)
	2.5A Managed Switch Version (6008)
	1.6A Managed Elite Switch Version (508)

## Ethernet Ports

8 Ports 10/100 Base T(X)  
Full / Half Duplex  
Automatic MDI / MDIX connection

## Temperature

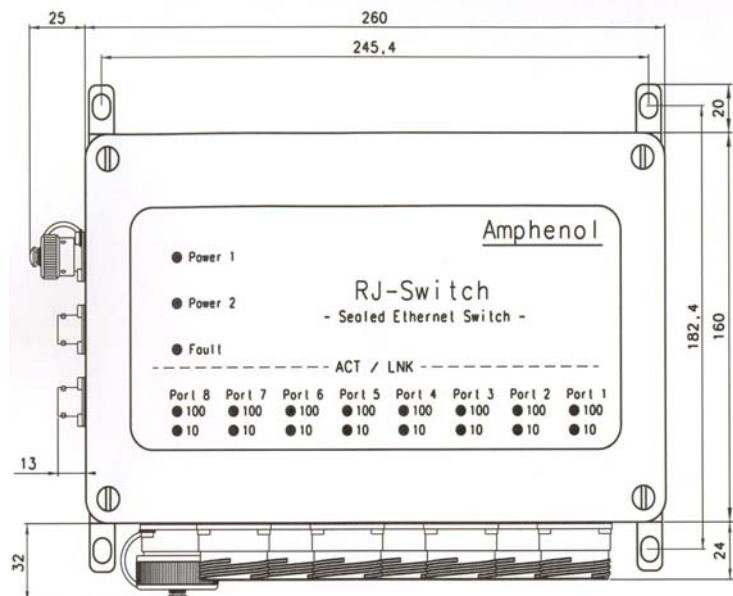
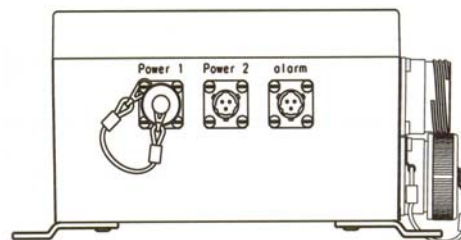
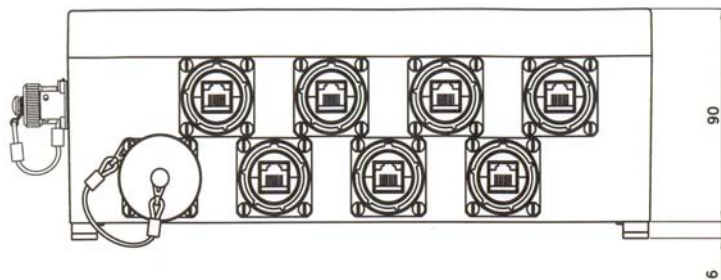
Operating Temperature Range:	- 40°C to +75°C
Storage Temperature:	- 40°C to +85°C

## Alarm

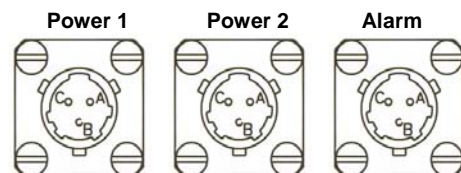
Relay Watchdog Output (1A at 24 VDC) in case of port disruption or power failures.  
Elite version RJSML508 offers 2 installed relays

# Dimensions (mm)

## Military Aluminum ML Enclosure

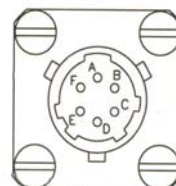


### Pin-Out for Aluminium ML Versions



A: Power 1 -    A: Power 2 -    A & C: Alarm  
 C: Power 1 +    C: Power 2 +    Relay

### Additional Connector for RJS ML 508 Elite Version



A & B: Second Alarm Relay  
 C to F: Digital Input  
 C: DI 1 -  
 D: DI 1 +  
 E: DI 2 -  
 F: DI 2 +

## Part Numbers

Series	RJS	ML	308	-
RJ-Switch				
Type of Enclosure	ML : Aluminum, OD Green Cadmium Plating & MIL-DTL-38999 (Series III) Receptacles			
Type of Electronics	308 : Unmanaged 8 ports 10/100 Base T(X) 6008 : Managed 8 ports 10/100 Base T(X) 508 : Managed 8 ports 10/100 Base T(X) with Elite Features			
Accessories:	Caps for receptacles fixed with string directly to the receptacle			
	Blank : No caps included			
	Caps : Attached caps for both power and data included			

**Example:** Managed switch with Elite functions in an aluminum enclosure with olive drab green conductive cadmium plating, 8 ports 10/100 Base T(X) & RJF TV threaded coupling receptacles & caps added to the switch : **RJS ML 508 CAPS**

## Accessories



Plugs for Ethernet ports  
 No tool required !!!  
**RJF TV 6 M G**



Plugs for Power 1, Power 2 and alarm ports  
 Solder termination  
**RJS ML Power Plug**



Plugs for I/O, for RJS-ML-508 only  
 Solder termination  
**RJS ML I/O Plug**