

RJSML-8US1 & RJSML-8UG1 - Unmanaged military Ethernet switch - Fast or Gigabit

Military ethernet switch for harsh environment with industrial EMI compliancy

Description

SEALED, RUGGED & UNMANAGED SWITCH

Amphenol offers an unmanaged Ethernet switch with 8 gigabit ports RJSML-8UG1.

The switch 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.



The switch electronics are sealed within a waterproof IP68 metallic enclosure.

The conductive cadmium plating is suitable for most demanding EMI-RFI environments. Black paint is also offered when RoHS is required (other colors available).

The I/O interface includes redundant power inputs as well as waterproof rugged RJ45 connectors from the RJFTV FIELD threaded product series based on MIL-DTL-38999 (Series III) metallic shell size 19. This serie enables the transformation without tooling of any standard RJ45 cordset into a robust and waterproof connection system.

Main features

KEY FEATURES

- Rugged environmental feature
- Rugged metal packaging with cadmium or paint protection
- Mil-DTL-38999 III connectors for both power and Ethernet ports
- IP65/IP68 rated when mated
- Power filtering and protection (-704 option)
 - MIL- STD-461E
 - CE102, CS101, CS114, CS115 & CS116
 - MIL- STD-704A,
 - 600V spike suppressor
 - MIL- STD-1275A/B/C/D, Spikes: +/- 250 V for 50 µs
15 mJ
- MIL-STD-810F shocks
- RTCA/DO- 160C Vibrations
- Full-Duplex operation with flow control (no collisions!)
- MIL STD 810F altitude 50,000 ft (15,000 m)
- Auto-detecting, auto-crossover and auto-polarity
- Broadcast storm protection

MODELS 8US1

- 8 ports 10/100-BaseT(X)
- Wide operating temperature range of -40°C to 70°C

MODELS 8UG1

- 8 ports 10/100/1000-BaseT(X)
- Wide operating temperature range of -10°C to 60°C
- Supports Jumbo frame transmission up to 9kbytes

MODELS 8UG1-ET

- 8 ports 10/100/1000-BaseT(X)
- Wide operating temperature range of -40°C to 70°C
- Supports Jumbo frame transmission up to 9kbytes

IEEE Ethernet standards

Models	Features	802.3/u	802.3x	802.3ab
RJS XX 8US1 XX	Unmanaged - Fast	•	•	X
RJS XX 8UG1 XX	Unmanaged - Gigabit	•	•	•
IEEE 802.3/u	10 Mbps & 100 Mbps fast Ethernet			
IEEE 802.3x	Full-Duplex with flow control			
IEEE 802.3ab	1000 Mbps Gigabit Ethernet			

RJSML-8US1 & RJSML-8UG1 - Unmanaged military Ethernet switch - Fast or Gigabit

Ethernet features

RJ45 Ports	<ul style="list-style-type: none"> 8 shielded RJ45 ports 10/100 BaseT(X) or 1000 Base T(X)
Connectors for RJ45 ports	<ul style="list-style-type: none"> RJFTV: jam nut receptacle based on MIL-DTL-38999 III Olive drab cadmium or nickel plated
RJ45 speed	<ul style="list-style-type: none"> 10, 100 or 1000 Mbps auto -negotiation
Full / Half duplex	<ul style="list-style-type: none"> Automatic
MDI/MDIX	<ul style="list-style-type: none"> Auto-crossover

Environmental specifications

Safety	<ul style="list-style-type: none"> UL 60950-1, CAN/CSA-C22.2 No.60950
EMI emissions	<ul style="list-style-type: none"> U.S.A.: FCC Part 15 CISPR 22 U.E. EN55011, EN61000-6-4, EN55022 Class A, EN61000-3-2/3, EN55024, IEC61000-4-2/3/4/5/6/8, EN61000-6-2
Shocks	<ul style="list-style-type: none"> MIL-STD-810F: 40g, 11 ms, 18 saw tooth shocks
Vibrations	<ul style="list-style-type: none"> RTCA/DO-160C sinusoidal vibrations 5-55 Hz: 0.01 inch: 55-500 Hz: 1.5 g
Altitude	<ul style="list-style-type: none"> MIL-STD-810F: 50.000 ft - 15.000 m
Temperature	<ul style="list-style-type: none"> Operating models 8UG1: -10°C to +60°C models 8US1: -40°C to +70°C models 8UG1-ET: -40°C to + 70°C Storage all models: -40°C to +85°C

Weight

Weight	<ul style="list-style-type: none"> Approx 2.8 kg
---------------	---

Power supply

Input voltage	<ul style="list-style-type: none"> 8US1, 8UG1, & 8UG1-ET: 12-48 VDC, redundant power input (P1 and P2) 8US1-704 & 8UG1-704: 12-33 VDC, single power input (P1 only) 8US1-PSM & 8UG1-PSM: 85-264 VAC single power input
Input power	<ul style="list-style-type: none"> 5 W max
Connectors for power	<ul style="list-style-type: none"> MIL-DTL-38999 III jam nut receptacle, olive drab cadmium or nickel plated 1 connector TVx07xx0935P: 6 cts # 22D (wire 0.38 mm² maxi) 1 connector TVx07xx0935PA (for PSM option)
"OK" contact output	<ul style="list-style-type: none"> Sourcing power ; maximum current: 1 A @ 24VDC Not available for -704 and -PSM options

Additional power protection for models 8US1-704 & 8UG1-704 (option-704)

MIL-STD-461E/F	CE102 conducted emission
MIL-STD-461E/F/G	CS101, CS114, CS115 & CS116 conducted susceptibility
MIL-STD-704A	600V input transient, applied for 10 μs
MIL-STD-1275A/B/C/D	Spikes: +/- 250 V for 50 μs 15 mJ Surges: 100 V for 50 ms at 0.5 Ω

RJSML-8US1 & RJSML-8UG1 - Unmanaged military Ethernet switch - Fast or Gigabit

Description

- 1 IP68 aluminium enclosure with cadmium conductive plating or black paint (RoHS)
- 2 Redundant power inputs
- 3 Balance pressure vent
- 4 8 rugged IP68 RJF TV Ethernet ports
- 5 Fixture for vertical mounting

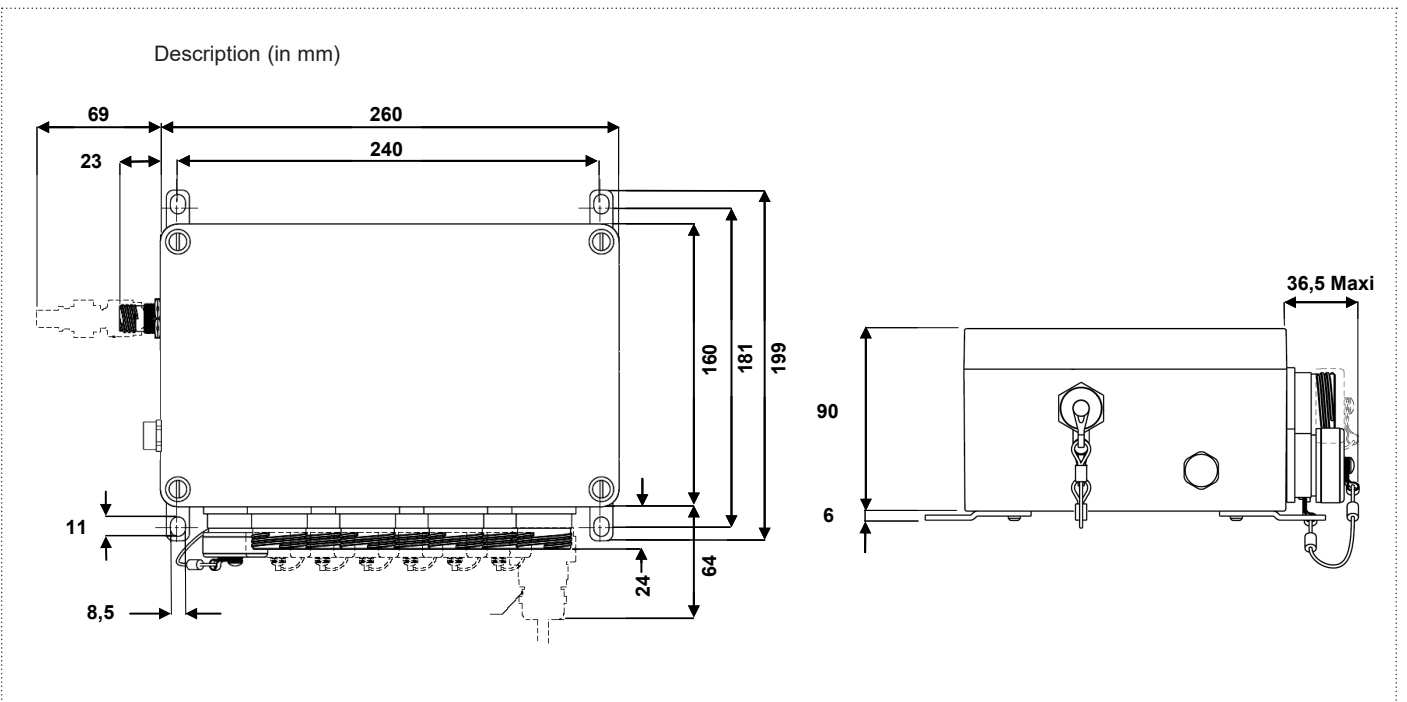
Optional caps available



IMPORTANT NOTE

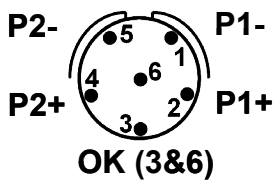
This model has no LED indicator.

Overall dimension

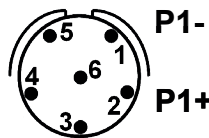


Dimensional line drawing - All measurements are in millimeters

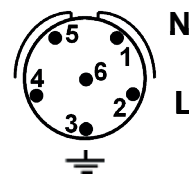
Pin-out for the power connector



8US1, 8UG1, & 8UG1-ET
P1 and/or P2: 12-48 VDC



8US1-704 & 8UG1-704
P1: 12-33VDC
3, 4, 5, 6: not connected



8US1-PSM & 8UG1-PSM
L: 85-264 VAC
4, 5, 6: not connected

RJSML-8US1 & RJSML-8UG1 - Unmanaged military Ethernet switch - Fast or Gigabit

How to order

1.	2.	3.	4.	5.	6.
Series	Type of enclosure	Type of electronics	Optional: transient suppression module; 600V spike suppressor	Optional: AC power supply	Optional: Caps for receptacles fixed with cord directly to the receptacle
RJS	ML	8US1	-	-	CAPS

1. Series

RJS	Rugged Unmanaged Ethernet Switch
-----	----------------------------------

2. Type of enclosure

ML	MIL-DTL-38999 (series III) Receptacles, OD Cadmium Plating
BKN	RAL 9005 (Jet black) Paint on aluminium box, Nickel plated 38999 (series III) Receptacles ✓

3. Type of electronics

8US1	Unmanaged 8 ports 10/100 Base T(X), wide temperature range
8UG1	Unmanaged 8 ports 10/100/1000 Base T(X)
8UG1-ET	Unmanaged 8 ports 10/100/1000 Base T(X), wide temperature range

✓ : RoHS compliant

Example: RJS ML 8UG1 704 CAPS: unmanaged switch in an aluminum enclosure with olive drab green conductive cadmium plating, 8 gigabit ports, RJFTV threaded coupling receptacles, additional transient suppression module, caps are added to the switch

Remark: All BKN Ethernet switches and nickel plated accessories are RoHS compliant.
 -704- and -PSM- options can not be selected together.
 With the -704- option, a filter module is included inside the switch allowing to meet MIL-STD-461 and other aircraft standards.
 With the -CAPS- option, all the receptacles come pre-equipped with a cap.

4. Optional: transient suppression module; 600V spike suppressor

-	No transient suppression module
704	Switch equipped with transient suppression module

5. Optional: AC power supply


-	Standard model
PSM	Switch powered with 85-264VAC instead of DC power

6. Optional: Caps for receptacles fixed with cord directly to the receptacle


-	No caps included. The Ethernet ports are still sealed but the contacts are not protected
CAPS	Attached caps for both power and data included

Accessories


Plugs for Ethernet ports:
 RJF TV 6 M G: cadmium OD plating
 RJF TV 6 M N: nickel plating
 Based on MIL-DTL-38999
 No tool required !!!



Caps for Ethernet ports:
 RJSML C7G: cadmium OD plating
 RJSML C7N: nickel plating
 A simple screwdriver is needed!



Plugs for I/O ports:
 MIL-DTL-38999,
 cadmium plated, crimp contacts
 Two plugs (6 cts # 22D)
 TV 06 RW 0935 S: cadmium OD plating
 TV S06 RF 0935 S: nickel plating



Backshells for I/O plugs:
 We suggest to use MIL-DTL-38999 III backshells. Consult the dedicated catalog (E118) for details.
Examples:
 TVNSA 09 014: shielding backshell, cadmium OD plating
 TVNSA 09 023: shielding backshell, nickel plating
 + 804221 straight heat shrink for sealing

