

LMSW – 08

Ruggedized Field Switch

Description:

The interconnection networks, based on fiber optic components, are designed to connect the nodes of tactical networks with the help of optical fiber cables. The Expanded Beam technology used preserves all advantages of signal transmissions through optical lines in harsh environmental field conditions.

For example, the tactical fiber optic cables with Expanded Beam connectors allow arranging of the connection between headquarters and subaltern points in field conditions in a very short time. The flexible 2 – 6 fiber 6 mm outer diameter optical cables have a high crush and strain relief resistance and a rugged field repairable connector design. The wide range of cable drums has been developed to facilitate storage and handling with cable coils. The drums are designed to store up to 500 m of tactical cable and the low weight of the cable coils allows easy network reconfiguration in field conditions.

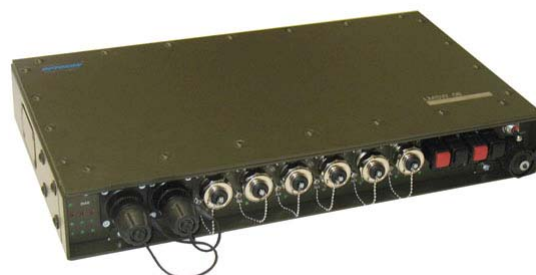
The optical interface of the active networking device should be based on the same Expanded Beam technology, preferably on the same standards used for installation of the passive infrastructure of the tactical fiber optic network.

The LMSW-08 is a low cost ruggedized field switch, which has been developed according to the above mentioned requirements. The switch combines all advantages: excellent optical network performance and rugged construction designed for operation in harsh environmental conditions. The LMSW-08 includes an 8 port switch (2 fiber optic, 6 UTP LAN ports) and a VoIP gateway with 2 FXS ports.

The LMSW-08M is managed, web-based SNMP v2 and RMON version.

Features:

- Robust compact design
 - Resistant to harsh environmental conditions and rough handling
 - 2 fiber optic ports, 6 UTP ports, 2 FXS ports
 - 10Base-T/100Base-TX and 100Base-FX standard
 - IEEE 802.3/802.3u auto-negotiation function
 - LED signalization
 - Power supply from 9 – 36 V DC or 230 V AC
 - options -48 V DC
 - external battery backup
 - Complies with STANAG 4643 standards
- LMSW-08M
- Web-based / SNMP Management
 - SNMP v2 and RMON
 - Full VLAN (802.1q) VID processing with double tagging up to 64VIDs
 - IGMP Snooping for multicast filtering
 - Port configuration, status, statistics, security
 - Loss of link management on fiber ports



Specifications:

Standard	data VoIP	IEEE 802.3 10Base-T, 802.3u 100Base-TX a 100Base-FX H323 (SIP ¹ , Call Manager ¹)
Interface		Metallic - mechanical resistant, watertight connectors Optical - OHMA 62.5/125 µm or 50/125 µm MM optical cable 9/125 µm SM optical cable
Wavelength		MM: 1300 nm, SM: 1310 nm, 1550 nm
Distance		UTP cable (10Base-T, 100Base-TX): 100 m MM optical cable, full duplex: 2 km, SM optical cable, full duplex: 10, 30, 50, 80 or 120 km
Environmental	temperature humidity	Fulfils MIL-STD 810E operating -30 °C to +50 °C, storage -50 °C to +70 °C 10% to 95%
Mechanical		Fulfils MIL-STD 810E, IP 63 protection
Power supply:	DC AC	9 to 36 V 230 V
Dimensions		430 x 300 x 65 mm (W x D x H)

1) on request

Marking code:

LMSW-08	-	XXX	-	XX	-	XX	-	XX																
LMSW-08M¹																								
Ports configuration <table border="1"> <thead> <tr> <th>Type</th> <th>FO</th> <th>UTP</th> <th>FXS</th> </tr> </thead> <tbody> <tr> <td>262</td> <td>2</td> <td>6</td> <td>2</td> </tr> <tr> <td>162</td> <td>1</td> <td>6</td> <td>2</td> </tr> <tr> <td>160</td> <td>1</td> <td>6</td> <td>-</td> </tr> </tbody> </table>				Type	FO	UTP	FXS	262	2	6	2	162	1	6	2	160	1	6	-	Fiber optic M: Multimode S3: SM 1310 nm S5: SM 1550 nm		Distance (FO) 02: 2 km (MM) 10: 10 km 30: 30 km 50: 50 km 80²: 80 km 120²: 120 km		Power supply DC: external AC: internal BC: external + battery backup
Type	FO	UTP	FXS																					
262	2	6	2																					
162	1	6	2																					
160	1	6	-																					

1) Managed version
2) for SM 1550 nm

Tests:

1. Environmental and mechanical tests		2. Electromagnetic compatibility tests	
MIL-STD 810E Method 501.3 High temperature	working temperature +50°C storage temperature +65°C	EMC – electromagnetic compatibility according to EMC Test Regulations: EN 55022/1998 + A1:2000 + A2:2003, Class A EN 55024/1998 + A1:2001 EM emission, EM compatibility	
MIL-STD 810E Method 502.3 Low temperature	working temperature -40°C storage temperature -50°C		
MIL-STD 810E Method 503.3 Change of temperature	High storage temperature +65°C Low storage temperature -50°C		
MIL-STD 810E Method 506.3	Rain		
MIL-STD 810E Method 507.3	Humidity Cyclic 95% RH max		
MIL-STD 810E Method 513.4	Acceleration		
MIL-STD 810E Method 514.4	Vibration		
MIL-STD 810E Method 516.4	Impact		

Standard Accessories:

- Documentation and User Manual
- Cables (number according to ports configuration and power supply version)
 - 6x LAN-RJ45 (CANON IP67)/RJ-45
 - (2x) FXS-RJ45 (CANON IP67)/RJ-11
 - 1x CONSOLE SWITCH-RJ45/DB9-IP65
 - (1x) CONSOLE GATEWAY – RJ45/DB9-IP65
 - (1x) power supply cable (3 pins connector)

Military Optical Network

