



OCTIS™ SERIES

SIMPLIFICATION IS OUR INNOVATION



Visit www.radiall.com for more information

Contents

OCTIS

Introduction..... 9-4

Characteristics 9-5

SFP / SFP+ 9-6

RJ45 9-7

Power 9-8

Signal 9-9

Combo 9-9

Universal 9-10

Accessories and tools..... 9-11

SECTION 9 TABLE OF CONTENTS

Introduction



OCTIS™ is a compact multi-standard solution designed for outdoor wireless applications where reliability and high data transmission are required. OCTIS™ provides a robust I/O solution that can operate in harsh environments.

APPLICATIONS

- Wireless communications
- Industry
- Energy

Features and Benefits

- *Suitable for harsh environments*
 - Waterproof connection
 - Dust proof
 - Corrosion resistant
 - Extreme temperatures withstanding
 - Cable tensile and side load
 - EMI shielding
 - Lightning resistant
- *Quick and easy installation*
 - Blind mating
 - Visual coding
 - Physical coding
 - Field assembly of the plugs on the cable
 - Turn-key design of the equipment front panel to integrate the receptacle
- *Versatile solution*

The complete OCTIS™ range offers a variety of interface solutions including:

 - SFP
 - RJ45 for tab up socket
 - RJ45 for tab down socket
 - Power DC with 2 contacts + cable shielding
 - Power AC with 3 contacts
 - Multipin signal from 8 to 12 pins, compatible with Ethernet Cat5e
 - Combo with Power DC and signal multipin in one single connection
 - Universal: for LC Duplex, SC, USB, etc.

Characteristics

Test / Characteristics	Values / Remarks				
	SFP	RJ45	Power	Signal	Combo

MECHANICAL CHARACTERISTICS

Coupling mechanism	Lever + locking button				
Durability (mating cycles) (IEC 61300-2-2)	100 min (50 before and 50 after thermal cycles)				
Tensile load on cable (IEC 61300-2-4)	150 - 200 N depending on cable				
Side load on cable (GR950)	50 N min				
Cable size	5 to 11 mm jacket diameter (with proper grommet size)				
Vibration (IEC 61300-2-1)	GR-950(12/2010), GR3108(12/2008)				
Low level vibration (IEC 61300-2-1)	GR-950(12/2010), GR3108(12/2008)				
Packaged equipment shock (GR-950)	Fall from 1 m				

ENVIRONMENTAL CHARACTERISTICS

Temperature range	-40 ... +85°C				
Thermal aging (GR950)	90°C during 720h then 24 hours at 23°C				
Thermal cycling (GR950)	120 cycles equivalent to 30 days				
Corrosion	720 h salt mist + SO ₂ (ISO21207)				
Ozone exposure (GR-950, ASTM D 518, ASTM D 1149)	Rubber components : 40°C during 70h; Ozone 50 mPa				
Ingress protection	IP67 - IP68 (when mated)				
RoHS	compliant				
Flammability	UL94-V0				
UV resistance (GR950, ASTM G154)	UVB 1000 hours				
Fungus resistance (GR-950, ASTM G 21)	Incubation 28 days, 29°C, 96%RH				

ELECTRICAL CHARACTERISTICS

Contact resistance	Refer to Cable assembly characteristics	IEC 60512, Test 2a	≤4 mΩ @ 20A DC (EIA 364-06)	55 mΩ Max (EIA 364-23B, 4 wire pethod)	Same as Power and Signal
Working voltage			300 V AC [r.m.s]		
Insulation resistance (EIA 364-21)			5000 MΩ min		
Dielectric Withstanding Voltage (EIA 364-20)			500V AC during 60 s @ 1 atm	1000V AC during 60 s	
Current rating			16A with AWG16 wire (7xAWG24) 20A with AWG14 wire (7xAWG22)	1,5 A per pair	
Cross talk				Pair to pair @20MHz < -60dB All pairs to one victim @ 20MHz < -54dB (powersum)	
Impedance of pairs				100Ω +/- 10% @ 30 MHz	
IL	Refer to Cable assembly characteristics			< 0.1 dB @ 30MHz	
RL				< -37 dB @ 20MHz	
EMI shielding	Full EMI shielding of the panel cavity		EMI shielding by reduction of the panel cavity		
Grounding		Direct connection of cable braiding to the panel			
Lightning (IEC 62305-1)			> 5KA with wave form 10/350 μs on cable braiding > 1KA with wave form 10/350 μs on individual wires > 5KA with wave form 10/350 μs on all wires together > 2,2 KA with wave form 8/20 μs on individual wires		
Conducted immunity Surge (GR-1089-CORE – R4-25) (IEC 61000-4-5)"			> 6KV on individual wires > 6KV on all wires together Wave form 1,2/50 μs – open circuit /8/20 μs – short circuit 2 ohm		

SFP / SFP+

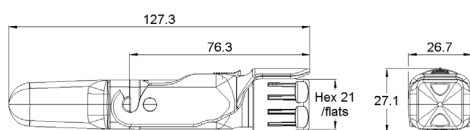


Fig. 1

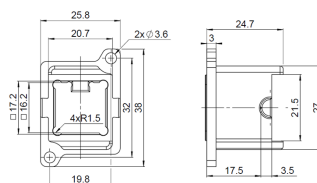


Fig. 2

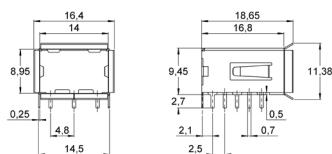


Fig. 3

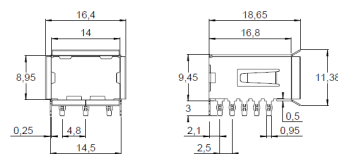


Fig. 4

Part number		Description	Fig.	Packaging
OCTI 117 500		SFP/SFP+ Plug kit	1	Bag
OCTI 107 500		SFP/SFP+ Screw-on receptacle	2	Tray
OCTI 140 500		SFP cage, Pin-In-Paste	3	
OCTI 140 505				
OCTI 140 550		"SFP cage, Press fit	4	Tray

RJ45

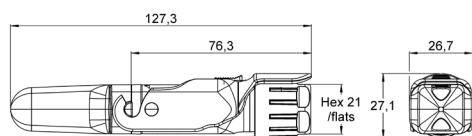


Fig. 1

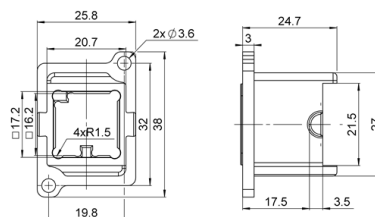


Fig. 2

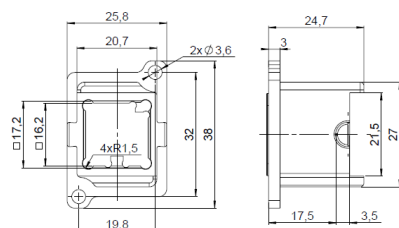


Fig. 3

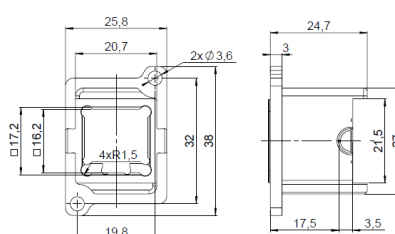


Fig. 4

Part number		Description	Fig.
OCTI 217 500		RJ45 Tab Up Plug kit, coding left*	1
OCTI 207 500		Receptacle kit RJ45 coding left	2
OCTI 217 505		RJ45 Tab Up Plug kit, coding right*	1
OCTI 207 505		Receptacle kit RJ45 coding right	3
OCTI 217 550		RJ45 Tab Down Plug kit*	1
OCTI 207 550		RJ45 Tab Down Receptacle	4

* To be used with specific board socket, contact us for more information.

Power

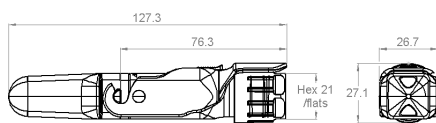


Fig. 1

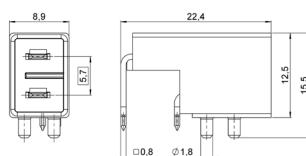


Fig. 2

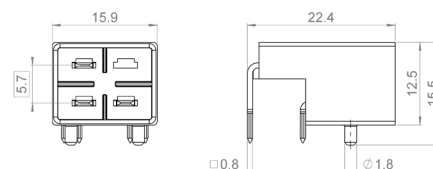


Fig. 3

Part number		Description	Contacts	Fig.
OCTI 317 500		Power Plug kit, crimp contacts	2 power contacts + cable grounding	1
OCTI 327 500		Power Plug kit for field assembly		
OCTI 360 500		Power board socket		2
OCTI 337 500		Power Plug kit, crimp contacts	3 power contacts	1
OCTI 337 550		Power Plug kit for field assembly		
OCTI 363 500		Power board socket		3

Signal

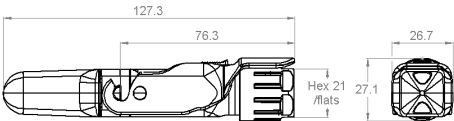


Fig. 1

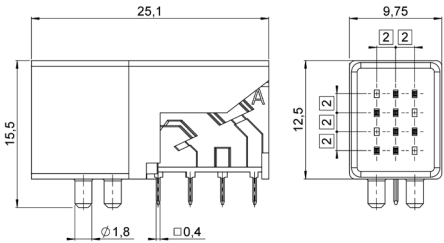


Fig. 2

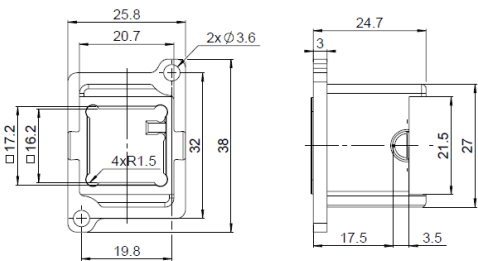


Fig. 3

Part number	Description	Contacts	Fig.
OCTI 417 500	Signal Plug kit	8 signal contacts + cable grounding	1
OCTI 407 500	Signal receptacle		3
OCTI 460 500	Signal board socket		2

Combo

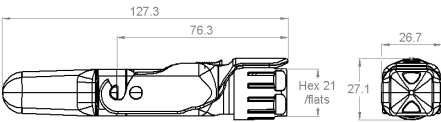


Fig. 1

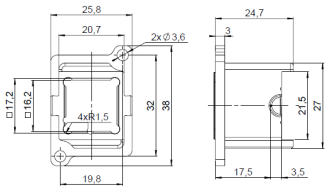


Fig. 2

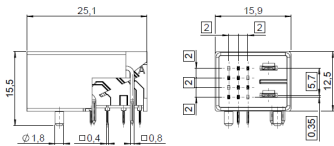


Fig. 3

Part number	Description	Contacts	Fig.
OCTI 517 500	Combo Plug kit	2 Power contacts + 8 signal contacts + cable grounding	1
OCTI 560 500	Combo board socket		3
OCTI 507 500	Combo receptacle		2

Universal

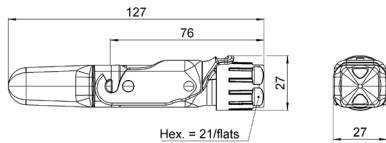


Fig. 1

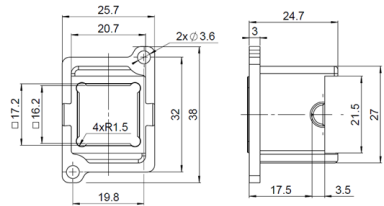


Fig. 2

Part number		Description	Fig.
OCTI 127 500		Plug kit for panel adaptor	1
OCTI 907 500		Universal screw-on receptacle**	2

** Suited for any cable assembly with interface fitting through a 15 mm diameter hole.

Accessories and Tools

OCTIS™

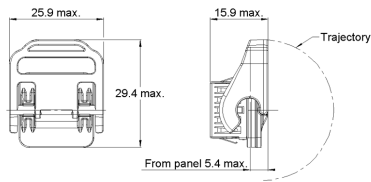


Fig. 1

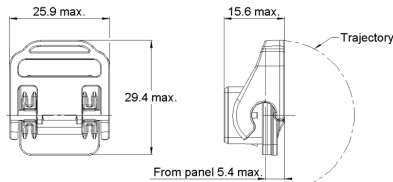


Fig. 2

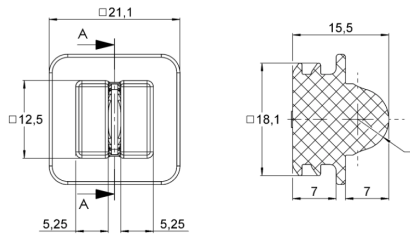


Fig. 3

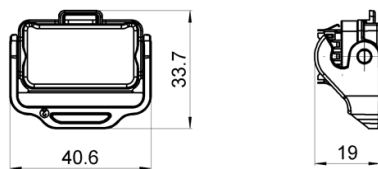


Fig. 4

Part number		Description	Fig.
OCTI 957 500		EMI + IP67 receptacle cap	1
OCTI 957 550		IP 67 receptacle cap	2
OCTI 955 500		Dust cap	3
OCTI W57 500		Universal cap	4

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Radial:](#)

[OCTI117370](#)