

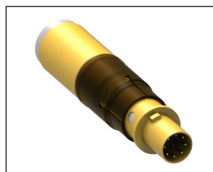
Octonet Contacts

Superior Ethernet Contact System for MIL-DTL-38999, Series III

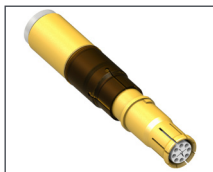
Amphenol
Aerospace

OVERVIEW

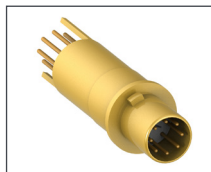
Eight strategically spaced inner contacts form four 100 Ohm matched impedance differential pairs.



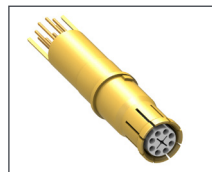
Pin for 24 awg



Socket for 24 awg



Pin PCB Tail



Socket PCB Tail



*Not limited to cables shown

FEATURES

- Available in size 8 crimp termination style
- Also available in PC Tails
- Can be installed in existing size 8 Quadrx cavities
- Meets performance specifications of CAT-6A cable
- 10G Ethernet compliant
- Overall higher bandwidth than standard CAT5E Quadrx-supports up to 4.0 Gbps per pair
- Enhanced crosstalk performance (compared to standard Quadrx)
- Supports wire ranges 26 to 24 gauge
- Requires modification of MIL-DTL-38999 connector to accommodate keyed contacts
- Operating Temp -65°C to 175°C
- Requires special backshell. See page 14 for backshell guide

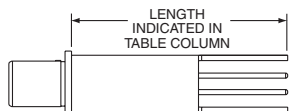
BENEFITS

- Easy drop-in replacement to installed connectors no need to redesign
- Self removing contact feature - no extra contact extraction tool needed (24 Gauge only)

SPECS

Environmental Sealing:	IAW connector specification
Corrosion Resistance:	500 hours salt spray
EMI Shielding:	360 degree shielding on each pair
Mating Cycles:	500 cycles
Voltage Rating:	500 Vrms max @ sea level
Dielectric Withstanding Voltage:	500 VAC RMS sea level

PCB L dimension length given in chart is the distance from the rear of the contact retention shoulder to the tip of the PCB tails.



Note: it does not indicate stickout length when installed in D38999 connector.

Pin	Socket	*Cable	AWG
21-032904-001	21-032905-001	Thermax: MX10G-24HP	24
21-032904-011	21-032905-011	W.L.Gore: RCN8966-24	
21-032904-021	21-032905-021	PIC E6A3824, Harbour E10024065, E10024064, E6A6824	
21-032904-031	21-032905-031	W.L.Gore: GSC-03-84043-01	
21-032904-041	21-032905-041	Axon P542810	
21-032904-061	21-032905-061	Thermax MX10G-24FLX4	
21-032904-051	21-032905-051	PIC E6A3826, MX10G-26	26
21-032904-071	21-032905-071	W.L.Gore: RCN9047-26, RCN8966-26	
21-032904-081	21-032905-081	TE C6A-26C444XB2MA	
PCB Pin	PCB Socket	L Dimension + or - 15	
21-032906-001	21-032907-001	Pin .884 / Socket 1.024	
21-032906-011	21-032907-011	.884	
21-032906-021	21-032907-021	.884	
21-032906-031	21-032907-031	.950	
21-032906-041	21-032907-041	.859	
21-032906-051	21-032907-051	.518	
21-032906-061	21-032907-061	.788	

Stabilizer-To be used on all PCB Pins & Sockets. 21-033323-023

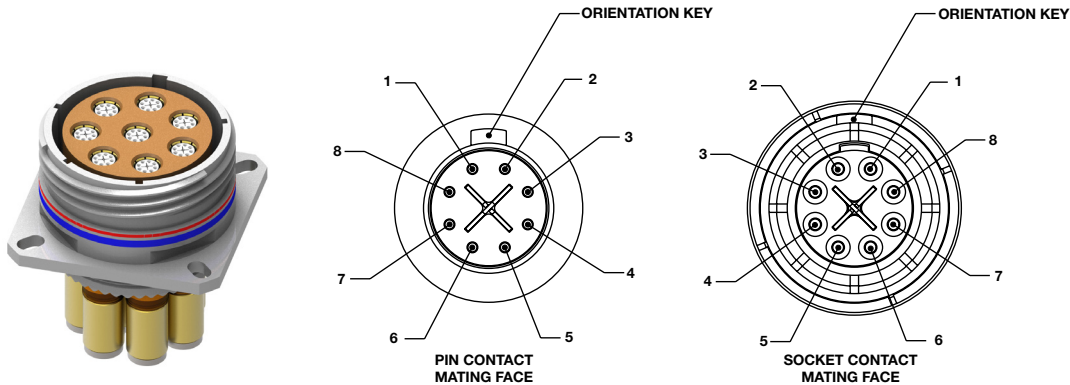
OCTONET CABLE DIMENSIONAL RESTRICTIONS

OD over cable jacket - .309 inch max
OD over braid - .268 inch max
Inner conductor insulation OD - .050 inch max

OCTONET TRANSITION ADAPTERS			
	Plug	21-032915-001	Thermax MX10G-24HP
	Plug	21-032915-011	GORE RCN 8966-26
	PCB Straight	21-032916-001	PCB length .165 inch
	PCB Straight	21-032916-021	PCB length .225 inch

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Differential Pairing	
Pair #	Contact ID
1	1-2
2	3-4
3	5-6
4	7-8

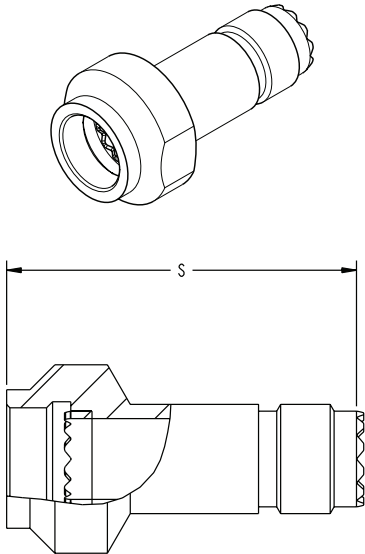
BACKSHELL EXTENDER

Due to the protusion of the Octonet Contacts through the rear of the grommet, a Backshell Extender must be used. The Extender is compatible with any Mil-Spec Backshell. Consult the factory for more information.

Part Number	Shell Size
FX-646409-01 ()	9
FX-646409-02 ()	11
FX-646409-03 ()	13
FX-646409-04 ()	15
FX-646409-05 ()	17
FX-646409-06 ()	19
FX-646409-07 ()	21
FX-646409-08 ()	23
FX-646409-09 ()	25

FINISH TABLE	
Prefix	Description
F2	Black Zinc Nickel
F4	Green Zinc Nickel
F7	Durmalon
F9	Thick OD Cadmium plate, Nickle Base
FH	Thick Electroless Nickel
FJ	Black Electroless Nickel

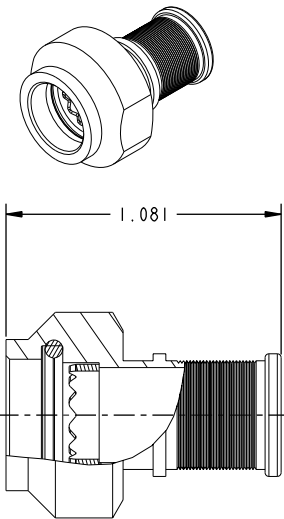
LENGTH TABLE	
Prefix	S ±.060
3	1.500
4	2.000
5	2.500
6	3.000
7	3.500
8	4.000
9	4.500



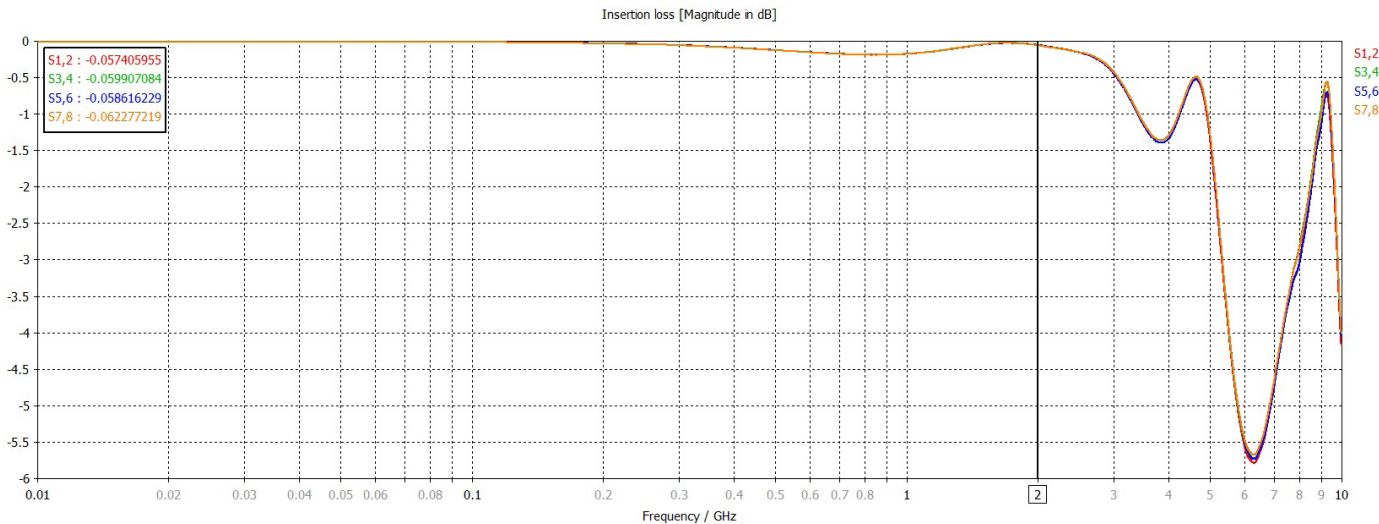
BANDING BACKSHELL

Part Number	Shell Size
FX-646409-500 ()	07
FX-646409-510 ()	09
FX-646409-520 ()	11
FX-646409-530 ()	13
FX-646409-540 ()	15
FX-646409-550 ()	17
FX-646409-560 ()	19
FX-646409-570 ()	21
FX-646409-580 ()	23
FX-646409-590 ()	25

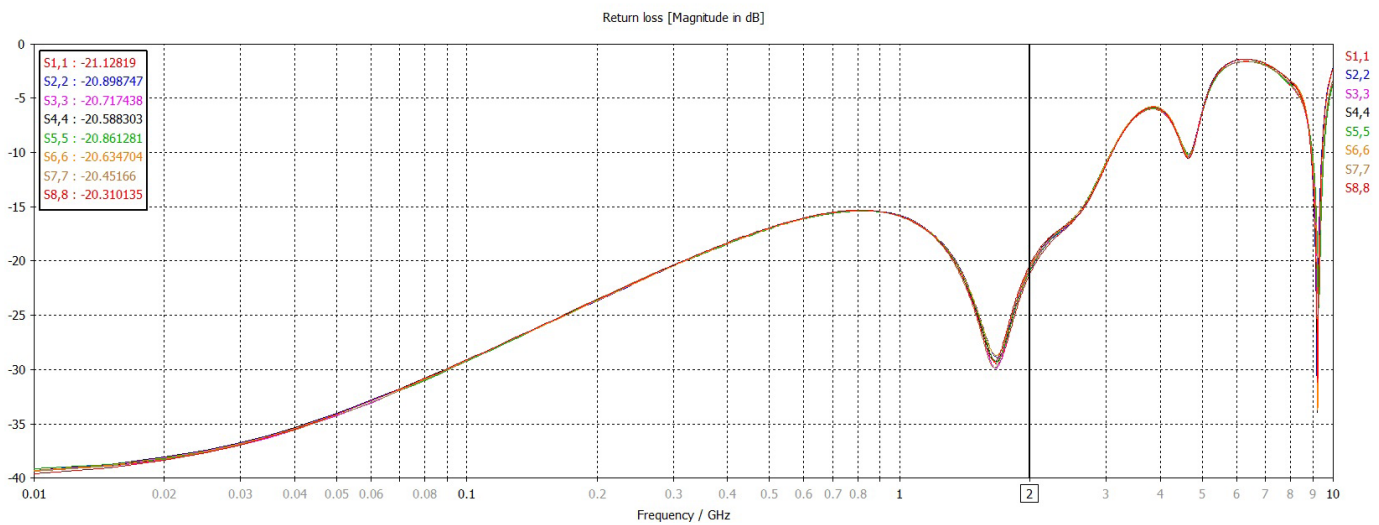
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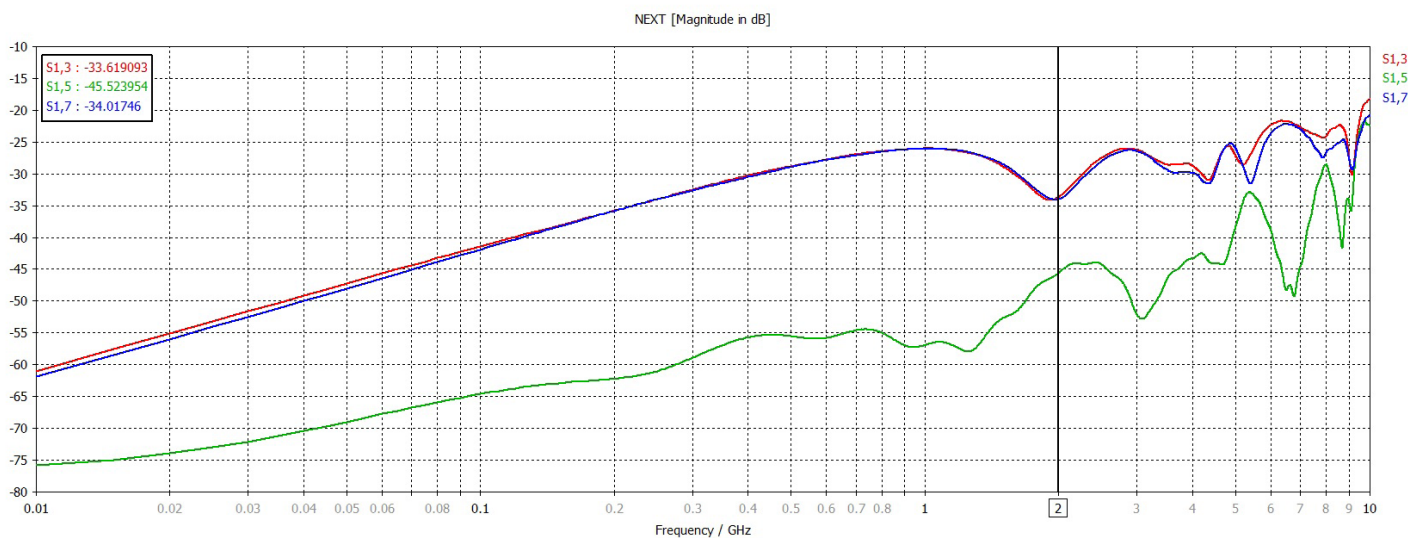
CONTACT DIFFERENTIAL INSERTION LOSS



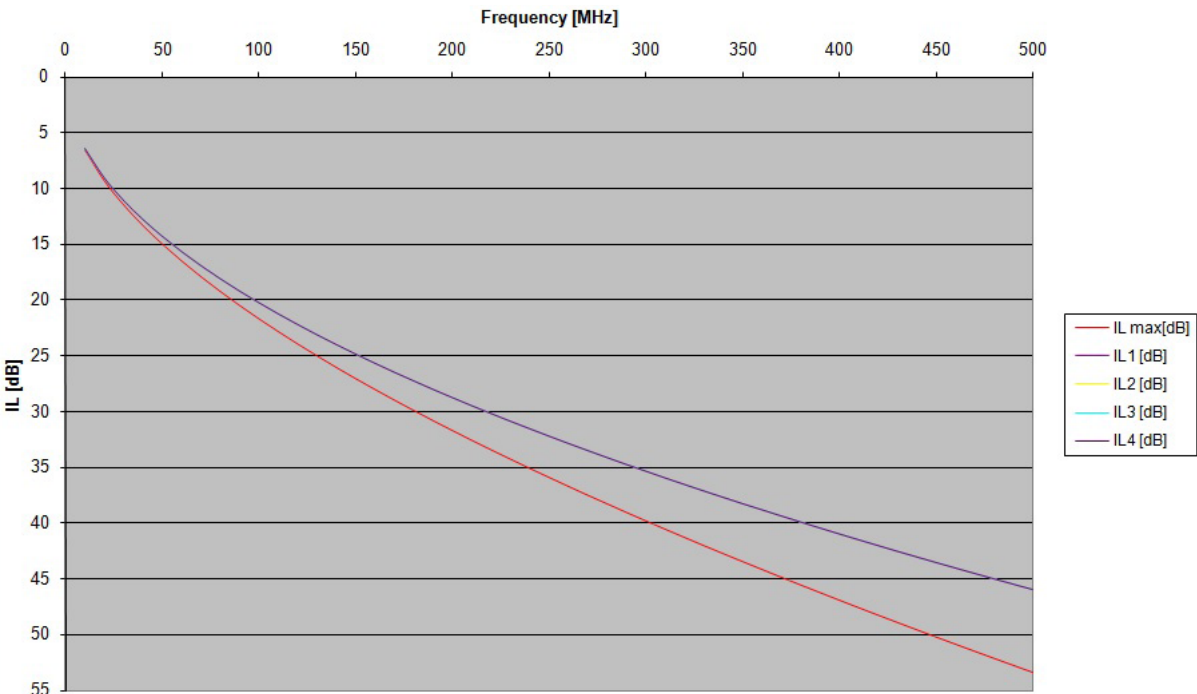
CONTACT DIFFERENTIAL RETURN LOSS



CONTACT DIFFERENTIAL REAR-END CROSSTALK

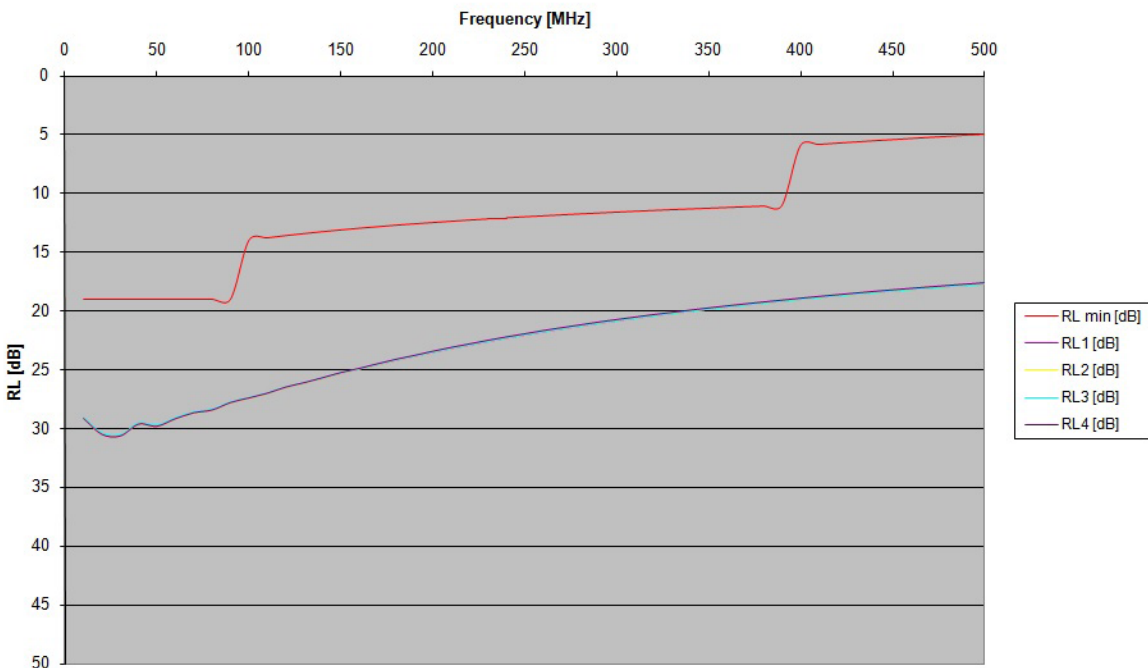


10GBASE-T DATA (TWO MATED CONTACTS ON EACH END OF 100 METER CAT6A CABLE)
INSERTION LOSS



Cable assembly near-end crosstalk

RETURN LOSS



Cable assembly return loss