

OCTOBYTE

**THE FASTER 4/8 POLE INTERCONNECT SYSTEM
FOR ETHERNET DATA APPLICATIONS**

APRIL 2016



Octobyte™

The faster 4/8 pole interconnect system for industrial Ethernet data applications

Glenair series ITH connector with Octobyte™ contacts is available with fully dedicated Ethernet protocol or in a combo version where a mix of signal-power and Ethernet is required. RoHS compliant, IP67 (IP68 on request) exceeds performance expectations typical in harsh environmental applications found throughout Rail and Industrial markets.

OCTOBYTE™ contacts are vibration resistant and available to work with ETHERNET cables from CAT 5 to CAT 7A, MVB-WTB, RG58 Coax.

ITH connectors with Octobyte™ contacts are easy and fast to assemble, making them the best solution for harsh environment applications where signal reliability is a must.



Tested for compliance according to EN50173-1 standards set for CAT5E and CAT7. Testing was conducted using 12 jumpers, each 7.5 meters in length for a total of 90 meters.



- Commuter rail
- Passenger information systems (audio/video/digital displays)
- Monitoring and control (braking/doors/lighting/data)
- Heavy industry
- Data control
- Safety systems
- Tested in accordance with: ISO F0 STP: CAT 7A
EN50173-1 F600-STP: CAT 7
EN50173-1 D STP: CAT 5E
ISO 11801 Class Fa

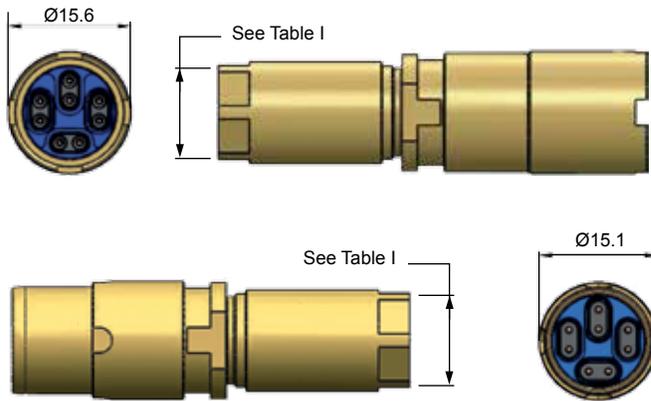
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Ethernet CAT 7A contacts

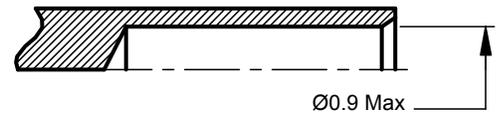


How To Order	
Sample Part Number	Q 0 8 P -X B1 XXX -7A
Product Series	Q = Octobyte contacts
Contact Size	0 = Contact size 0
Number of Contacts	8 = 8 Poles
Contact Gender	P = Pin contacts (male) S = Socket contacts (female)
Cable Range	See Table I
Plating	B1 = Gold plating
Alternative Color	See Table II. Omit for standard (Blue)
Category	-7A = Cat 7A



CONTACT BUCKET DETAIL

Wire Size : AWG 22 - AWG 28



Data Transmission Ethernet Contacts for	Ethernet CAT 6A
	Ethernet CAT 7
	Ethernet CAT 7A
Featuring	Internal crimpable contacts
	Inspectable contact
	Integrated cable clamp
	Low mating force
Technical Characteristics	Current rating 5A max
	Voltage drop (at 5A and 25°C) 70 mV max
Materials and Finish	Copper alloy and gold plating
Inserts	Thermoplastic resin - UL94V0 Aluminum alloy/anodized (alternative color available)

Table I	
Wire Size Type	Cable O.D. Range
A	6-7
B	7-8
C	8-9
D	9-9.6

Table II	
Color Code	Color
Omitted for Standard	
G14	Black
G14GN	Green
G14GY	Grey
G14R	Red
G14Y	Yellow

NOTES

Crimp Tools and Insertion/Removal Tools

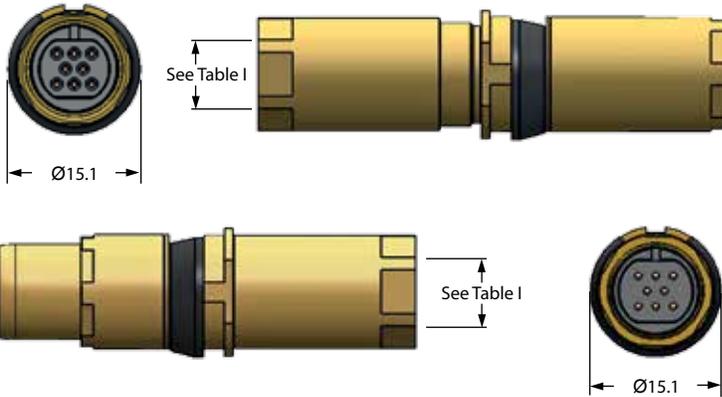
- Crimper: 809-015
- Positioner: 809-005
- Standard Insertion/Removal Tool: 809-088 and M.104010

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Ethernet CAT 5 contacts

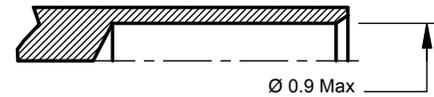


How To Order						
Sample Part Number	Q	0	8	P	-X	B1
Product Series	Q = Octobyte contacts					
Contact Size	0 = Contact size 0					
Number of Contacts	4 = 4 Poles 8 = 8 Poles					
Contact Gender	P = Pin contacts (male) S = Socket contacts (female)					
Cable Range	See Table I					
Plating	B1 = Gold plating					



CONTACT BUCKET DETAIL

Wire Size: AWG 22 - AWG 28



Data Transmission Ethernet Contacts for	Ethernet CAT 5
	Ethernet CAT 5E
	Ethernet CAT 6
	Ethernet CAT 6A
Featuring	Internal crimpable contacts
	Inspectable contact
	Integrated cable clamp
	Low mating force
Technical Characteristics	Current rating 5A max
	Voltage drop (at 5A and 25°C) 70 mV max
Materials and Finish	Copper alloy and gold plating
Inserts	Thermoplastic resin - UL94V0 - EN 45545 - R22, HL1 - HL2

Table I	
Wire Size Type	Cable O.D. Range
A	6-7
B	7-8
C	8-9
D	9-9.6

NOTES

Crimp Tools and Insertion/Removal Tools

- Crimper: 809-015
- Positioner: 809-005
- Standard Insertion/Removal Tool: 809-088 and M.104010

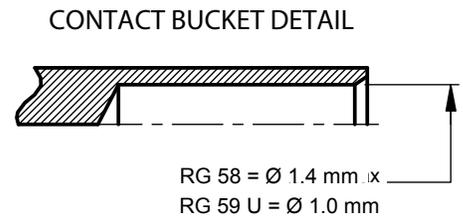
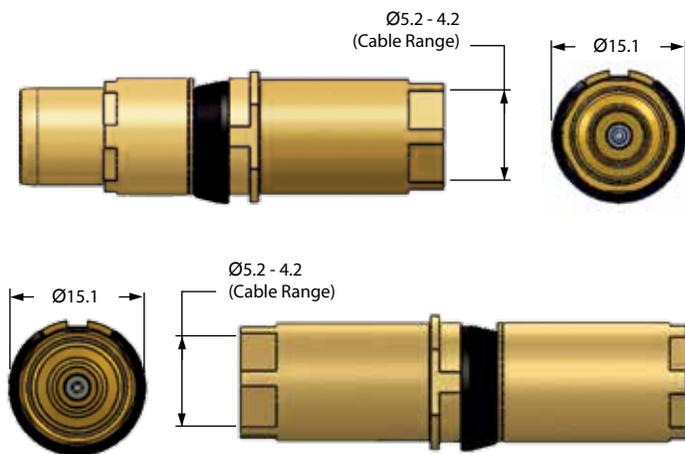
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COAX contacts



How To Order						
Sample Part Number	Q	0	CX	P	-RG58	B1
Product Series	Q = OctoByte contacts					
Contact Size	0 = Contact size 0					
Contact Type	CX = COAX					
Contact Gender	P = Pin contacts (male) S = Socket contacts (female)					
Cables	-RG58 - 50 Ohm -RG59U - 75 Ohm					
Plating	B1 = Gold plating					



Data Transmission Contacts for	RG58
Featuring	Internal crimpable contacts
	Inspectable contact
	Integrated cable clamp
	Low mating force
Technical Characteristics	Current rating 5A max
	Voltage drop (at 5A and 25°C) 70 mV max
Materials and Finish	Copper alloy and gold plating
Inserts	PTFE - UL94V0

NOTES

Crimp Tools and Die

- Crimper: M.112017
- Die: Y197 for RG58 cable and Y143 for RG59 cable

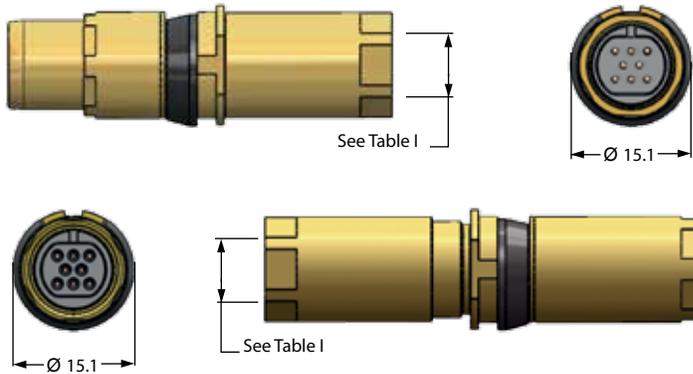
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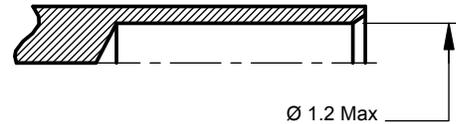
Ethernet MVB - WTB contacts



How To Order							
Sample Part Number	Q	0	4	P	-X	B1	AD
Product Series	Q = Octobyte contacts						
Contact Size	0 = Contacts size 0						
Number of Contacts	2 = 2 Poles 4 = 4 Poles						
Contact Gender	P = Pin contacts (male) S = Socket contacts (female)						
Cable Range	See Table I						
Plating	B1 = Gold plating						
Contact Adapter	AD = Adapter for crimp 18 ÷ 22 AWG						



CONTACT BUCKET DETAIL
WIRE SIZE : AWG 18 - AWG 22



Data Transmission Ethernet Contacts for	MVB - Multifunctional Vehicle Bus WTB - Wired Train Bus
Featuring	Internal crimpable contacts
	Inspectable contact
	Integrated cable clamp
	Low mating force
Technical Characteristics	Current rating 5A max Voltage drop (at 5A and 25°C) 70 mV max
Materials and Finish	Copper alloy and gold plating
Inserts	Thermoplastic resin - UL94V0 - EN 45545 - R22, HL1 - HL2

Table I	
Wire Size Type	Cable O.D. Range
A	6-7
B	7-8
C	8-9
D	9-9.6

NOTES

Crimp Tools and Insertion/Removal Tools

- Crimper: 809-015 and 809-136
- Positioner: 809-005 and 809-138
- Standard Insertion/Removal Tool: M.104010

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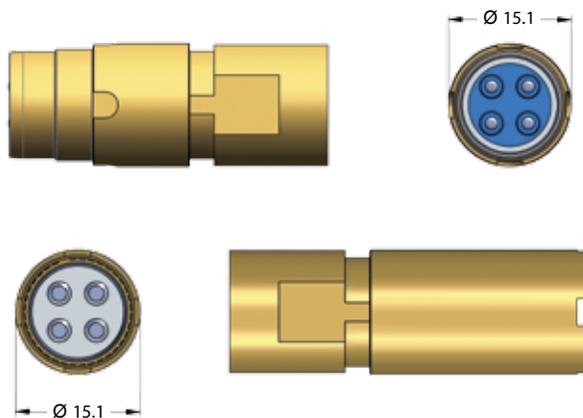
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Power contacts

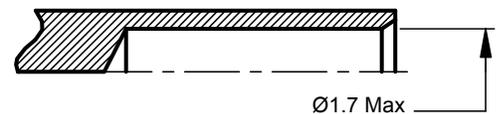


How To Order				
Sample Part Number	QP	0	4	P B1
Product Series	QP = Octobyte power contacts			
Contact Size	0 = Contacts size 0			
Number of Contacts	4 = 4 Poles			
Contact Gender	P = Pin contacts (male) S = Socket contacts (female)			
Plating	B1 = Gold plating			



CONTACT BUCKET DETAIL

Wire Size : AWG 16 - AWG 20



Power Module	4 Contacts 16 AWG
Featuring	Internal crimpable contacts
	Inspectable contact
	Integrated cable clamp
	Low mating force
Technical Characteristics	Current rating 13A max
	Voltage drop (at 13A and 25°C) 74 mV max
Materials and Finish	Copper alloy and gold plating
Inserts	Thermoplastic resin - UL94V0
Interfacial Seal	Fluorosilicone
Integrated Grommet	Fluorosilicone Cable accepted: 16 ÷ 20 AWG (Ø 1.65 ÷ Ø 2.8)

NOTES

Crimp Tools and Insertion/Removal Tools

- Crimper: 809-136
- Positioner: 809-137
- Standard Insertion/Removal Tool: 809-131

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How to Order Standard Insert Arrangement

How To Order	
Sample Part Number	ITH G 030 A 5C 32-Q4 S Y B0 N0 F6
Product Series	ITH = 5015 type reverse-bayonet connector with rigid insert
Plug Grounding Fingers	For 06 size 18 Plug connectors only Omit for standard
Style	030 = Rear Panel Mounting Receptacle 06 = Straight Plug
Class	A = non environmental R = environmental
Number of keys	5C = 5 keys
Shell Size - Insert Arrangements	See below
Contact Gender	P = Pin contacts (male) S = Socket contacts (female)
Alternate Insert Rotation	Omit for normal, consult factory for alternative rotation
Connector less contact	B0 = contact not supplied (order separately)
Accessory	N0 = without Backshell. Please consult the factory
Plating	F6 = Electrodeposition of black paint (cataphoresis), RoHS compliant F7 = Black Zinc Nickel, RoHS compliant

FRONT VIEW RECEPTACLE CONNECTOR



18-Q1



32-Q4



36-Q5



40-Q7

How to Order Combo Insert Arrangement

How To Order	
Sample Part Number	ITH 030 A 5C 36-OB7 S B0 N0 F6
Product Series	ITH
Style	030 = Rear Panel Mounting Receptacle 06 = Straight Plug
Class	A = non environmental R = environmental
Number of keys	5C = 5 keys
Insert Arrangements	See below.
Contact Gender	P = Pin contacts (male) S = Socket contacts (female)
Connector less contact	B0 = contact not supplied (order the contact separately)
Accessory	N0 = without Backshell. Please consult the factory
Plating	F6 = Electrodeposition of black paint (cataphoresis), RoHS compliant F7 = Black Zinc Nickel, RoHS compliant

FRONT VIEW RECEPTACLE CONNECTOR



28-OB4
2 OCTOBYTE
2 SIZE 8 CONTACTS



36-OB7
3 OCTOBYTE
4 SIZE 8 CONTACTS

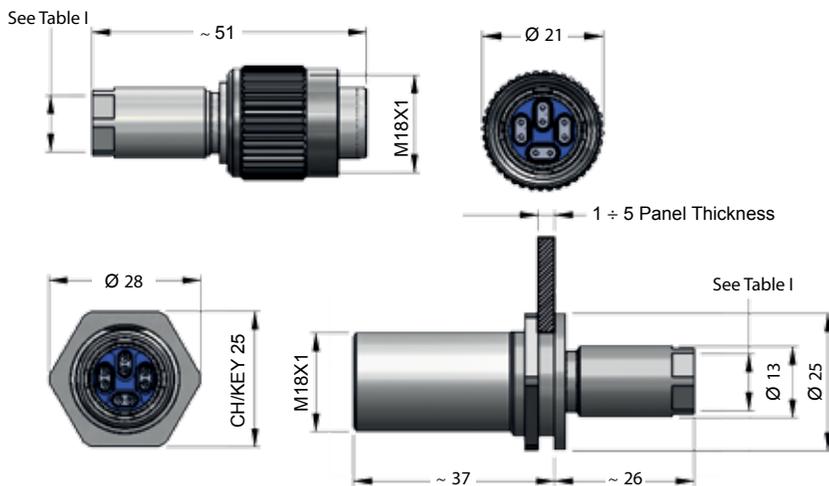
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QT Connectors for Ethernet Switches

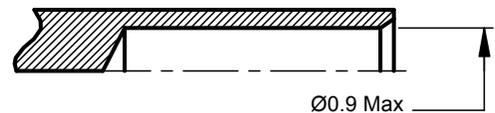


How To Order								
Sample Part Number	Q	T	8	P	-X	B1	XXX	-7A
Product Series	Q							
Connector Type	T = Octobyte power connectors							
Number of Contacts	8 = 8 Poles							
Contact Gender	P = Pin contacts - Plug only R = Socket contacts - Receptacle only							
Cable Range	See Table I							
Plating	Nickel plating							
Alternative Color	See Table II. Omit for standard (Blue)							
Category	-7A = Cat 7A							



CONTACT BUCKET DETAIL

Wire Size : AWG 22 - AWG 28



Data Transmission Ethernet Contacts for	Ethernet CAT 6A
	Ethernet CAT 7
	Ethernet CAT 7A
Featuring	Internal crimpable contacts
	Inspectable contact
	Integrated cable clamp
	Low mating force
Technical Characteristics	Current rating 5A max
	Voltage drop (at 5A and 25°C) 70 mV max
Materials and Finish	Copper alloy and gold plating
Inserts	Thermoplastic resin - UL94V0
	Aluminum alloy/anodized (see Table II)

Table I	
Wire Size Type	Cable O.D. Range
A	6-7
B	7-8
C	8-9
D	9-9.6

Table II	
Color Code	Color
Omitted for Standard	
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NOTES

Crimp Tools and Insertion/Removal Tools

- Crimper: 809-015
- Positioner: 809-005
- Standard Insertion/Removal Tool: 809-088 and M.104010

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Cable Harnesses

Glenair supplies installation tools for all Octobyte contacts.

Glenair also supplies the highest quality turnkey cable harnesses. Octobyte connectors are available as pigtails (usually for receptacles) and as jumpers to connect two receptacles. Contact the factory for details.



The plug connector can be equipped with rubber covered coupling nut RadGrip™ or with lanyard-release Quick Disconnect.

Designed to provide a quick disconnect of a connector plug and receptacle with an axial pull of the lanyard, the Quick Disconnect system offer a wide range of electrical and mechanical features:

1. Fast decoupling and damage free separation pulling the lanyard when needed. With this operation the electrical parts of the interconnectoin systems are safe when two coaches are disengaged not disconnecting the electrical connectors.
2. Standard mating with 3 ramps quarter turn lock
3. Standard decoupling regularly using the RadGrip™ coupling nut . Developed for harsh enviromental field application RadGrip™ is the perfect solution for advanced protection against shock and other forms of mechanical damage

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Insertion, Extration and Crimping Tools

CRIMP TOOLS



Crimp Tool
809-136
Daniels Part Number: AF8
Military Part Number: M22520/1-01



Crimp Tool
809-015
Daniels Part Number: AFM8
Military Part Number: M22520/2-01



Crimp Tool
M.112017
Daniels Part Number: HX4
Military Part Number: M22520/5-01

POSITIONERS



Positioner
809-137
Daniels Part Number: TH163
Military Part Number: M22520/1-04



Positioner
809-138
Daniels Part Number: TH653
Military Part Number: None



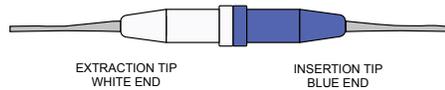
Positioner
809-005
Daniels Part Number: K1461
Military Part Number: None

Insertion, Extration and Crimping Tools

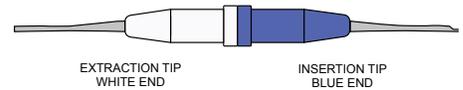
INSERTION AND REMOVAL TOOLS



Removal Tool
M.104010



Insertion/Removal Tool
809-088
Daniels Part Number: None
Military Part Number: None



Insertion/Removal Tool
809-131
Daniels Part Number: None
Military Part Number: M81969/14-03

DIE



Die
Daniels Part Number: Y197
Military Part Number: M22520/5-05A



Die
Daniels Part Number: Y143
Military Part Number: M22520/5-45B



Our Commit

Management System Certifications for Quality



- **ISO 9001:** this is a common standard Certification , its widespread and well known. It covers all the activities of Glenair Italy.
- **IRIS:** this system is based on ISO 9001 with specific requirements on railway sector. It covers all production of Glenair Italy in relation to the Mass Transit market (connectors, cabling, GLM products).
- **EN 9100:** this system is based on ISO 9001 with specific requirements on Aviation, Space and Defence industries. It covers all design, production of Glenair Italy relating to production in these three sectors.
- **EN 9120:** this system is based on ISO 9001 with specific requirements on Aviation, Space and Defence industries. It covers all distribution of Glenair in relation to these three sectors.



ment to Quality

Product Certifications



- **VG 95234, VG 95328, VG 95351, VG 96929, VG 96934:** these are certifications for five product families. They certify that our family of products guarantee the minimum performance requirements laid down by the relevant standard. They are issued by an institution of the German Ministry of Defense (BAAINBw) and are recognized by military entities in all NATO countries.
- **UL:** Upon request, some connectors from the ITS Series can be marked as a "UL Recognized Component."
- **ATEX/IECEX:** Glenair is a qualified manufacturer of connectors for potential explosive zone use according to IEC/EN 60079.

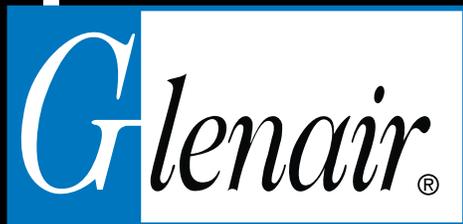


Test Lab Certification



- **ISO / IEC 17025:** this is a Test Lab certification from an independent laboratory. It certifies that our Test Lab is able to run to a series of professional certificate-level tests, listed in the same certificate, without having conflicts of interest with other activities in Glenair Italy establishment.





Out of This World
**INTERCONNECT
SOLUTIONS**

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