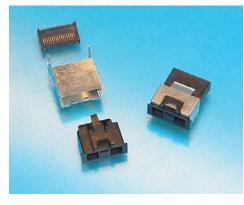


# EVERCLEAR Mini Multi-Lane High Speed Interconnects & Cable Assemblies



## **DESCRIPTION**

Tyco Electronics' EVERCLEAR product family is the next generation high speed multi-lane interconnect for internal and external receptacle applications and external cable assemblies. The system is designed to be meet to SFF-8086, 8087 and 8088 standards.

### **APPLICATIONS**

- · High Speed I/O
- Multiple Channels Interconnects
- · Switches for Fibre Channel and InfiniBand Standards
- · Internal and External SAS and SATA

### **KEY FEATURES**

- · 26 and 36 position receptacles
- · Keying options available
- · Potential for data rates beyond 10 Gb/s
- · High density 0.8mm contact spacing
- · SMT PCB attachment for high speed signaling
- · Cable assemblies available equalized and unequalized
- · Standard and custom cable assembly lengths
- · Robust pull tab latch release

### **TECHNICAL DOCUMENTS**

• Product Specification: 108-2234 • Qualification Test Report: 501-638

### **INDUSTRY STANDARDS**

• SFF-8087: Internal 36 Position Mini SAS

 SFF-8088: Internal 26 Position Mini SAS with Keys

### FOR MORE INFORMATION

Dave Stonfer- Cable Assembly Product Manager

Phone: 717-986-5950

Email: david.stonfer@tycoelectronics.com

Michael Walmsley- Connectors Product Manager

Phone: Email: MJWALMSL@tycoelectronics.com

717-985-2835

**Technical Support** 

Internet: http://www.tycoelectronics.com

USA: 1-800-522-6752

Canada: 1-905-470-4425

UK: 44-141-810-8967

Japan: 81-44-844-8013



### Internal Mini-SAS, SATA



### **Connectors:**

	SMT Receptacle	Solder tail	Shell	Combined	
	(36 pos)	length (shell)		Assembly	
	1888020-4	2.0 mm (,08 in)	1888413-4	1888174-2	
Vertical	1888020-4	2.8 mm (.11 in)	1888413-6	1888174-4	
	1888020-4	3.5 mm (.14 in)	1888413-8	1888174-6	
	1761987-8	2.0 mm (.08 in)	1888021-4	1888019-2	
Right Angle	1761987-8	2.8 mm (011 in)	1-1888021-2	1888019-6	
	1761987-8	3.5 mm (.14 in)	1-1888021-6	1888019-8	

Receptacles and shells can be ordered separately or as a combined assembly for single step processing.

### **External Mini-SAS, SATA**



### **Connectors:**

	1 Port	2 Port	3 Port	4 Port
Receptacle (26 position)	1761987-7	1761987-7	1761987-7	1761987-7
Shield (universal key #4) *	1888321-1	1888321-2	1888321-3	1888321-4

<sup>\*</sup> Other key and port configurations available, see Tyco Electronics' drawing 1888321.

Note: Part Numbers are RoHS Compliant.



### **External Mini SAS Cable Assemblies**



Туре	P/N	Length	AWG	Equalization		
	1928391-1	0.5 meter	28	Unequalized		
_	1928391-2	1.0 meter	28	Unequalized		
_	1928391-3	2.0 meters	28	Equalized		
Mini SAS to Mini SAS	1928391-4	3.0 meters	28	Equalized		
Standard keying	1928391-5	4.0 meters	28	Equalized		
(2-4, 4-6)	1928391-6	5.0 meters	28	Equalized		
` ' ' -	1928391-7	6.0 meters	24	Equalized		
_	1928391-8	4.0 meters	24	Equalized		
_	1928391-9	5.0 meters	24	Equalized		
_						
	2053534-1	0.5 meter	28	Unequalized		
_	2053534-2	1.0 meter	28	Unequalized		
_	2053534-3	2.0 meters	28	Equalized		
_	2053534-4	3.0 meters	28	Equalized		
Mini SAS to Mini SAS	2053534-5	4.0 meters	28	Equalized		
Universal Keying	2053534-6	5.0 meters	28	Egualized		
(2-4-6,6-4-2)	2053534-7	6.0 meters	24	Equalized		
	2053534-8	4.0 meters	24	Equalized		
_	2053534-9	5.0 meters	24	Equalized		
_				·		
	1928392-1	0.5 meter	28	Unequalized		
	1928392-2	1.0 meter	28	Unequalized		
Mini SAS to SAS 4X	1928392-3	2.0 meters	28	Unequalized		
Universal Key	1928392-4	3.0 meters	28	Equalized		
(2-4-6)	1928392-5	4.0 meters	28	Equalized		
_	1928392-6	5.0 meters	28	Equalized		
_	1928392-7	6.0 meters	28	Equalized		
Ōſ	Other keying options are available.					

### **Cable Assembly Options:**

- Custom cable lengths
- Right angle connector assemblies
- Various keying options
- Customized Equalization

\*Please contact Tyco Electronics for specific requirements or additional information.



### **ELECTRICAL TESTING**

### **EVERCLEAR External Cable Assembly Test Results Summary**

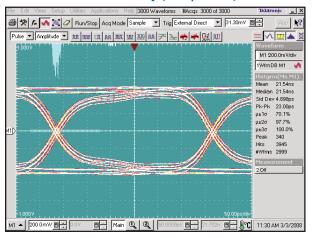
Cable AWG	Cable Length [M]	Imped 100+/-10 Min.		Intra-Pair Skew 50 PS Max	ISI 60 PS Max	Insertion Loss	Near-End Cross Talk
28	0.5	90.9	105.6	3.1	19	See Report	See Report
28	1	90.9	105.6	1.8	23	See Chart	See Chart
28	2	90.9	105.4	2.6	17	See Report	See Report
28	3	90.8	107.6	4.9	23	See Report	See Report
24	4	91.6	104.6	2.6	14	See Report	See Report
24	5	91.8	103.6	4.3	16	See Chart	See Chart
24	6	91.7	102.8	0.6	17	See Report	See Report

Test Report available from Tyco Electronics upon request.

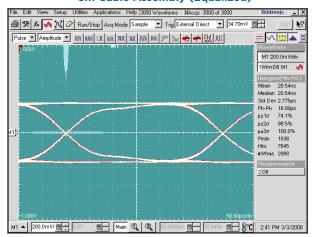


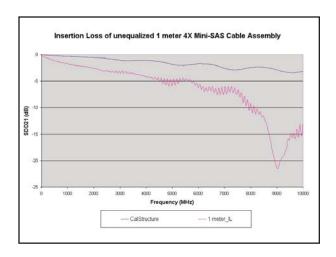
### **ISI Through Cable Assembly Measurements**

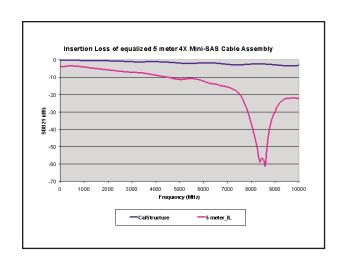
### 1m Cable Assembly (Unequalized)

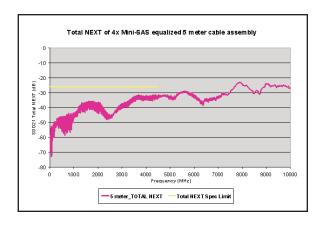


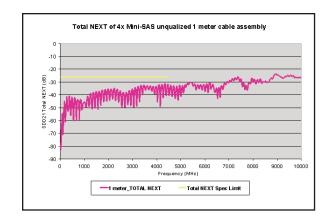
### 5m Cable Assembly (Equalized)











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- Cross-Reference from Non-compliant to Compliant Products
- Ability to browse RoHS Compliant Products in our on-line catalog
- Downloadable Technical Data
   Customer Information Presentation
- More detailed information regarding the definitions used above
- So whatever your questions when it comes to RoHS, we've got the answers at www.tycoelectronics.com/leadfree



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