

Amphenol EP-Octal-1G Octal 1G Base-T to SGMII Converter

Amphenol Aerospace adds 1G Base-T to SGMII Converter to the Electronics Product Family. This product line is rugged, flexible, and affordable with many options available.

The 1G Base-T to SGMII Converter couples SerDes technology and protocol conversion with a new level of ruggedization.

Features & Benefits:

- 8 Bi-directional Ethernet Channels
- Conversion of 1G Base-T to SGMII
- Compliant with IEEE 802.3 Ethernet Standards and Specifications
- Hermetic option available with a helium leak rate of 10^{-4} cc/sec

1G Base-T Copper Interface:

- D389999 Shell Size 19
- Size 22 contacts

SGMII Interface:

- Samtec EQDP Series for high speed SGMII, power, and MDC/MDIO control

Power Specifications:

- 5V power connection in Samtec connector
- Low power consumption

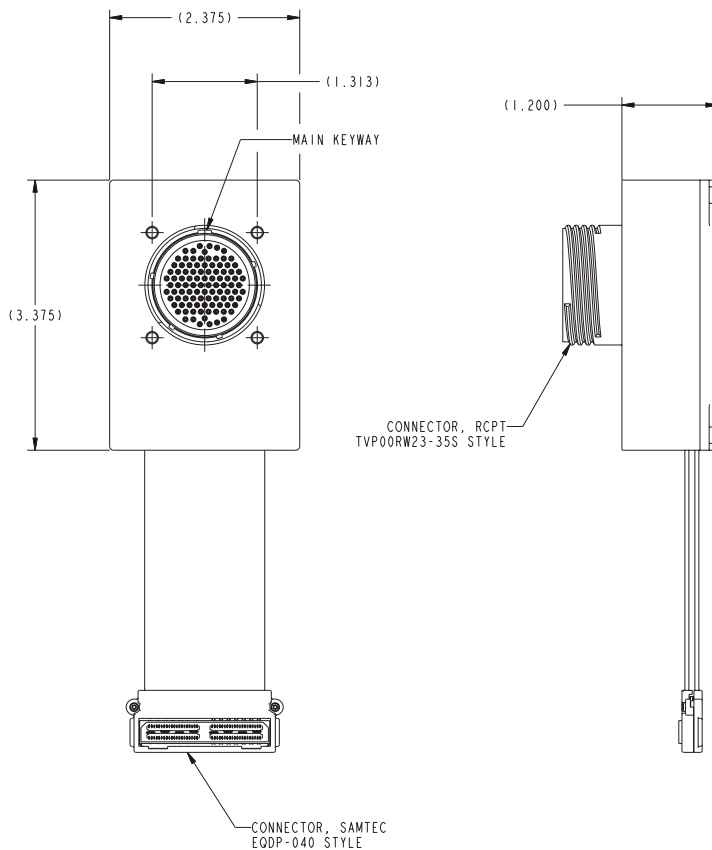
Ruggedization:

- Natural convection cooled (no fan)
- Operational temperature -40°C to $+85^{\circ}\text{C}$
- Shock, vibration, immersion resistant per MIL-STD-810

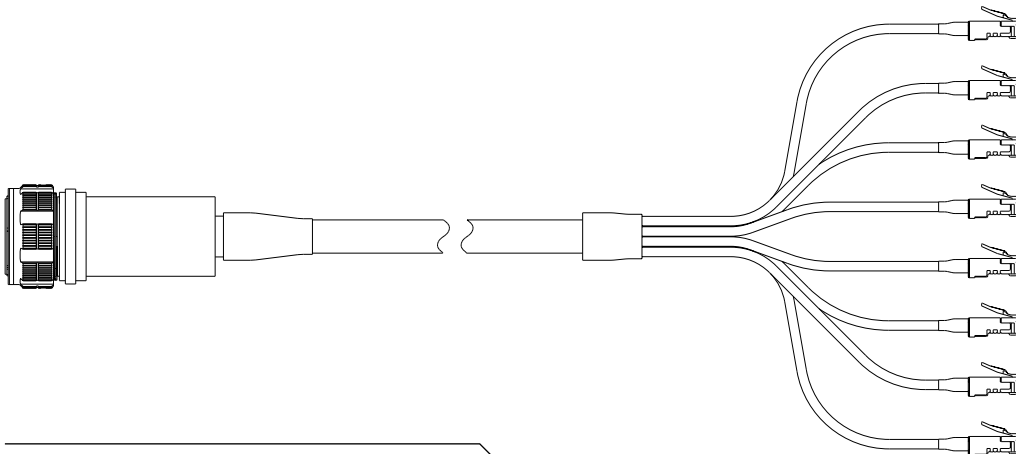


Amphenol EP-Octal-16

Drawing for both Hermetic & Non-Hermetic Configurations



Drawing for Test Cable CA-628485-A2()



Amphenol EP-Octal-16

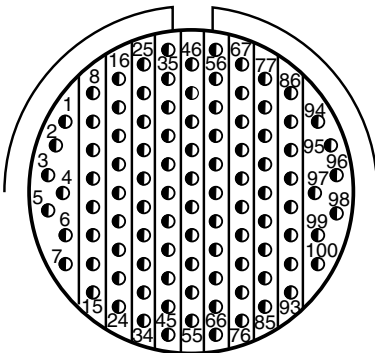
Pin outs

MIL-DTL-38999 Shell Size 23-25 size 22D pins

Pin	Description	Pin	Description	Pin	Description	Pin	Description
1	CH 1 A+	26	Ground	51	CH 5 A+	76	Ground
2	CH 2 A+	27	CH 4 A+	52	CH 5 A-	77	CH 7 A+
3	CH 2 A-	28	Ground	53	Ground	78	CH 7 A-
4	Ground	29	Ground	54	CH 5 B+	79	CH 7 B+
5	CH 2 B+	30	Ground	55	CH 5 B-	80	CH 7 B-
6	CH 2 B-	31	Ground	56	CH 6 A+	81	CH 7 C+
7	Ground	32	Ground	57	Ground	82	CH 8 A+
8	CH 1 A-	33	CH 3 D+	58	CH 6 B+	83	CH 8 A-
9	CH 1 B+	34	CH 3 D-	59	CH 6 B-	84	CH 8 B+
10	Ground	35	CH 1 C-	60	Ground	85	Ground
11	CH 2 C+	36	CH 1 D+	61	CH 5 C+	86	Ground
12	CH 2 C-	37	CH 4 A-	62	CH 5 C-	87	CH 7 D+
13	Ground	38	Ground	63	Ground	88	CH 7 D-
14	CH 2 D+	39	CH 4 B+	64	CH 5 D+	89	CH 7 C-
15	CH 2 D-	40	CH 4 B-	65	CH 5 D-	90	Ground
16	CH 1 B-	41	Ground	66	Ground	91	CH 8 C+
17	Ground	42	CH 4 C+	67	CH 6 A-	92	Ground
18	CH 3 A+	43	CH 4 C-	68	Ground	93	CH 8 B-
19	CH 3 A-	44	Ground	69	CH 6 C+	94	Ground
20	CH 3 B+	45	Ground	70	CH 6 C-	95	Ground
21	CH 3 B-	46	CH 1 D-	71	Ground	96	Ground
22	CH 3 C+	47	Ground	72	CH 6 D+	97	CH 8 C-
23	CH 3 C-	48	CH 4 D+	73	CH 6 D-	98	Spare
24	Ground	49	CH 4 D-	74	Spare	99	CH 8 D+
25	CH 1 C+	50	Spare	75	Spare	100	CH 8 D-

Samtec EQDP - 40 pins

Pin	Description	Pin	Description
1	CH 1 Tx+	21	CH 6 Tx+
2	CH 1 Tx-	22	CH 6 Tx-
3	CH 1 Rx+	23	CH 6 Rx+
4	CH 1 Rx-	24	CH 6 Rx-
5	CH 2 Tx+	25	CH 7 Tx+
6	CH 2 Tx-	26	CH 7 Tx-
7	CH 2 Rx+	27	CH 7 Rx+
8	CH 2 Rx-	28	CH 7 Rx-
9	CH 3 Tx+	29	CH 8 Tx+
10	CH 3 Tx-	30	CH 8 Tx-
11	CH 3 Rx+	31	CH 8 Rx+
12	CH 3 Rx-	32	CH 8 Rx-
13	CH 4 Tx+	33	5V Power
14	CH 4 Tx-	34	Ground
15	CH 4 Rx+	35	MDC
16	CH 4 Rx-	36	MDIO
17	CH 5 Tx+	37	Spare
18	CH 5 Tx-	38	Spare
19	CH 5 Rx+	39	Spare
20	CH 5 Rx-	40	Spare



Amphenol EP-Octal-16

How to Order

Ordering procedure is shown below using part number EP-

1.	2.	3.	4.	5.	6.	7.	8.
Connector Type	Material	SGMII Interface	Finish	Shell Style	Option (Hermetic or Non-Hermetic)	D38999 Connector Rotation	Main Keyway Rotation
EP							

Step 1. Connector Type

	Designates
EP	Electronics Product Family

Step 2. Select a Material

	Designates
-5	Aluminum Shell
-6	Composite Shell
-8	Stainless Steel Shell

Step 3. Select a SGMII Interface

	Designates
-5	Samtec EQDP Series Connector

Step 4. Select a Finish

	Designates
T	Aluminum Durmalon
Z	Aluminum Black Zinc Nickel
F	Aluminum Electroless Nickel
M	Composite Electroless Nickel
W	Aluminum OD Cad
J	Composite OD Cad
L	Stainless Steel Electrodeposited Nickel
Y	Stainless Steel Passivated

Step 5. Select a Shell Style

	Designates
0	Wall Mount

Step 6. Select an Option

	Designates
05	Non-Hermetic
06	Hermetic

Step 7. Select a Rotation for D38999 Connector (IAW MIL-DTL-38999)

	Designates
N	N
A	A
B	B
C	C
D	D

Step 8. Select a Rotation for Main Keyway (IAW MIL-DTL-38999)

	Designates
W	0°
X	90°
Y	180°
Z	270°

Available Test Equipment

	Part Number	Description
Test Cable	CA-628485-A30	RJ45 Test Cable for D38999 Connector, 5'
	CA-62848-A31	RJ45 Test Cable for D38999 Connector, 10'
	CA-62848-A32	RJ45 Test Cable for D38999 Connector, 15'
	CA-62848-A33	RJ45 Test Cable for D38999 Connector, 20'
Test Board	CF-020005-013	SMA Test Board for Samtec Connector

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