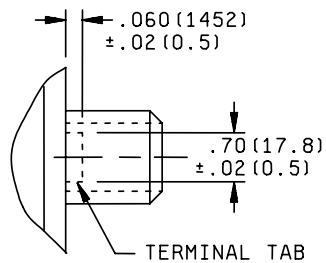
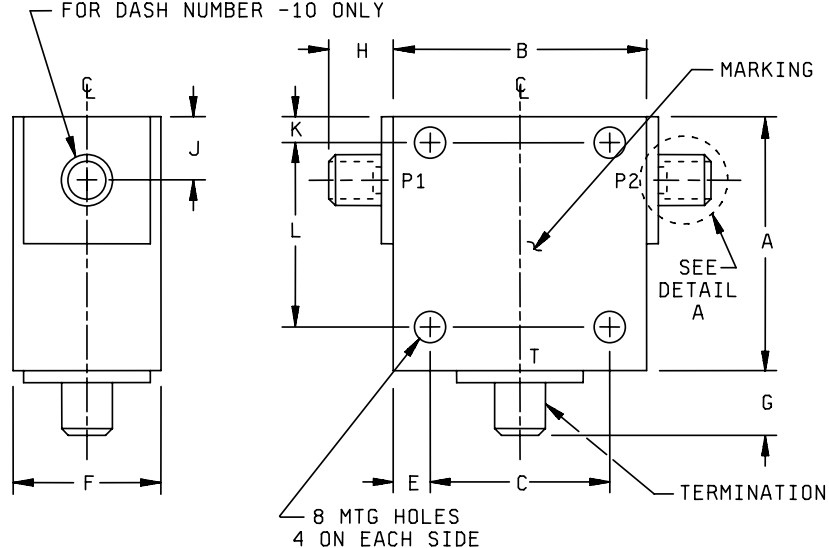


MIL-DTL-28791/1B

CONNECTORS SHALL MATE WITH SMA
TYPE CONNECTORS FEMALE OR MALE IAW
MIL-PRF-39012
SEE TABLE I
REMOVABLE SMA CONNECTORS
FOR DASH NUMBER -10 ONLY



DETAIL A

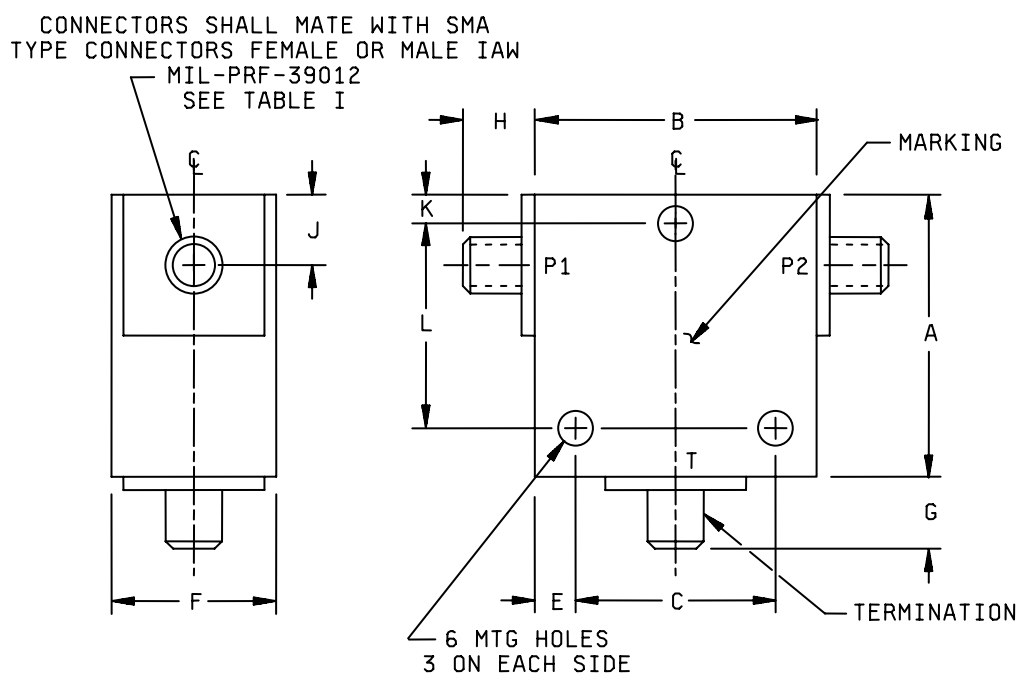
STRIPLINE TERMINAL TABS PROTRUSION FROM CASE WHEN INPUT AND OUTPUT
PORT CONNECTORS ARE REMOVED. SHIM CONNECTOR MOUNTINGS AS REQUIRED.

NOTES:

1. See table I for dimensions.
2. All un-dimensioned pictorial representations are for reference purposes only.
3. Metric equivalents are in parentheses.

FIGURE 2. Dimensions and configurations for dash numbers 006, 010, and 014.

MIL-DTL-28791/1B

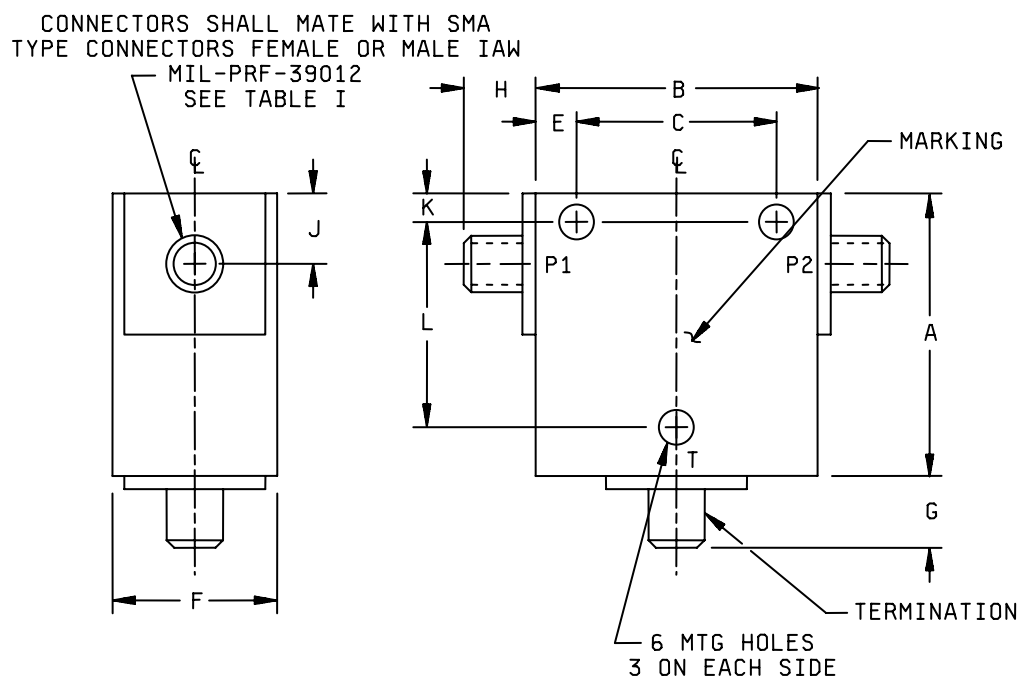


NOTES:

1. See table I for dimensions.
2. All un-dimensioned pictorial representations are for reference purposes only.

FIGURE 3. Dimensions and configurations for dash numbers 007, 009, 011, 012, and 027.

MIL-DTL-28791/1B

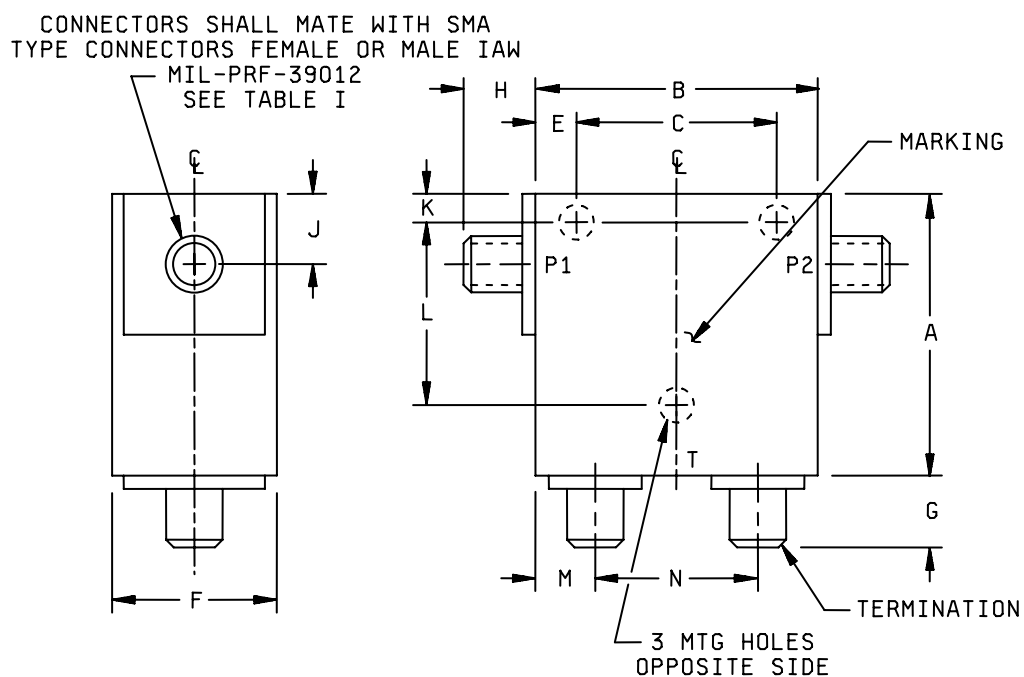


NOTES:

1. See table I for dimensions.
2. All un-dimensioned pictorial representations are for reference purposes only.

FIGURE 4. Dimensions and configurations for dash numbers 008, 013, 015, 018, 019, 021, 028, and 033.

MIL-DTL-28791/1B

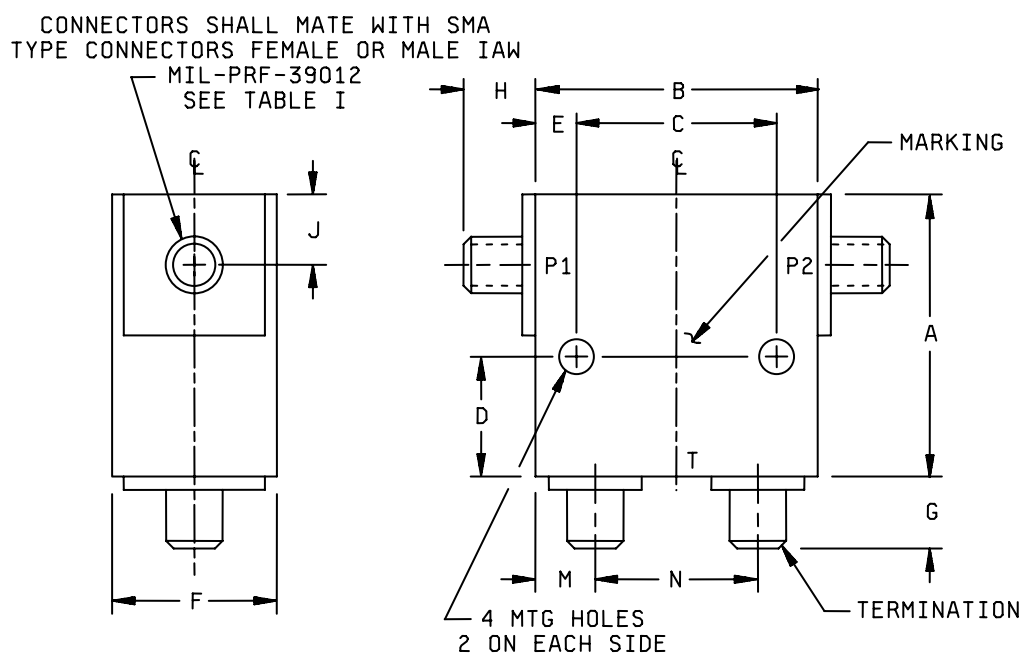


NOTES:

1. See table I for dimensions.
2. All un-dimensioned pictorial representations are for reference purposes only.

FIGURE 5. Dimensions and configurations for dash numbers 026 and 032.

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NOTES:

1. See table I for dimensions.
2. All un-dimensioned pictorial representations are for reference purposes only.

FIGURE 6. Dimensions and configurations for dash numbers 029 and 034.

TABLE I. Dimensional and thread requirements.

Dash no.	Dimensions 1/ 2/													
	A	B	C		D		E		F	G	H		J	
	Max	Max	Min	Max	Min	Max	Min	Max	Max	Max	Min	Max	Min	Max
-001	.66 (16.8)	.53 (13.5)	.345 (8.76)	.355 (9.02)	.407 (10.34)	.417 (10.59)	.070 (1.78)	.080 (2.03)	.53 (13.5)	.135 (3.43)	.220 (5.59)	.415 (10.54)	.245 (6.22)	.255 (6.48)
-002	.66 (16.8)	.53 (13.5)	.345 (8.76)	.355 (9.02)	.407 (10.34)	.417 (10.59)	.070 (1.78)	.080 (2.03)	.53 (13.5)	.135 (3.43)	"	"	.245 (6.22)	.255 (6.48)
-003	1.055 (26.80)	.955 (24.26)	.645 (16.38)	.655 (16.64)	.395 (10.03)	.405 (10.29)	.145 (3.68)	.155 (3.94)	.65 (16.5)	.27 (6.9)	"	"	.245 (6.22)	.255 (6.48)
-004	1.055 (26.80)	.955 (24.26)	.645 (16.38)	.655 (16.64)	.395 (10.03)	.405 (10.29)	.145 (3.68)	.155 (3.94)	.65 (16.5)	.27 (6.9)	"	"	.245 (6.22)	.255 (6.48)
-005	1.20 (30.5)	1.20 (30.5)	.945 (24.00)	.955 (24.26)	.395 (10.03)	.405 (10.29)	.125 (3.18)	.135 (3.43)	.75 (19.0)	.17 (4.3)	"	"	.255 (6.48)	.265 (6.73)
-006	1.25 (31.8)	1.25 (31.8)	.645 (16.38)	.655 (16.64)			.295 (7.49)	.305 (7.75)	.75 (19.0)	.17 (4.3)	"	"	.295 (7.49)	.305 (7.75)
-007	1.50 (38.1)	1.50 (38.1)	.995 (25.27)	1.005 (25.53)			.245 (6.22)	.255 (6.48)	.63 (16.0)	.27 (6.9)	"	"	.265 (6.73)	.275 (6.98)
-008	2.75 (69.8)	2.75 (69.8)	1.995 (50.67)	2.005 (50.93)			.495 (12.57)	.505 (12.83)	.89 (22.6)	.69 (17.5)	"	"	.399 (10.13)	.349 (8.86)
-009	1.25 (31.8)	1.25 (31.8)	.995 (25.27)	1.005 (25.53)			.115 (2.92)	.125 (3.18)	.63 (16.0)	.27 (6.9)	"	"	.245 (6.22)	.255 (6.48)
-010	1.500 (38.10)	1.49 (37.8)	.995 (25.27)	1.005 (25.53)			.245 (6.22)	.255 (6.48)	.65 (16.5)	.17 (4.3)	"	"	.275 (6.98)	.285 (7.24)
-011	1.25 (31.8)	1.25 (31.8)	.995 (25.27)	1.005 (25.53)			.115 (2.92)	.125 (3.18)	.63 (16.0)	.27 (6.9)	"	"	.245 (6.22)	.255 (6.48)
-012	2.00 (50.8)	2.00 (50.8)	1.713 (43.51)	1.723 (43.76)			.135 (3.43)	.145 (3.68)	1.00 (25.4)	.27 (6.9)	"	"	.495 (12.57)	.505 (12.83)
-013	1.70 (43.2)	1.63 (41.4)	1.115 (28.32)	1.125 (28.58)			.245 (6.22)	.255 (6.48)	.75 (19.0)	.27 (6.9)	"	"	.349 (8.86)	.355 (9.02)
-014	1.72 (43.7)	1.65 (41.9)	1.045 (26.54)	1.055 (26.80)			.295 (7.49)	.305 (7.75)	.75 (19.0)	.17 (4.3)	"	"	.335 (8.51)	.345 (8.76)
-015	2.08 (52.8)	1.77 (45.0)	1.095 (27.81)	1.105 (28.07)			.325 (8.26)	.335 (8.51)	.99 (25.1)	.17 (4.3)	"	"	.275 (6.98)	.285 (7.24)
-016	1.625 (41.28)	1.625 (41.28)	1.320 (33.53)	1.330 (33.78)	.807 (20.50)	.817 (20.75)	.120 (3.05)	.130 (3.30)	.75 (19.0)	.27 (6.9)	"	"	.370 (9.40)	.380 (9.65)
-017	1.625 (41.28)	1.625 (41.28)	1.320 (33.53)	1.330 (33.78)	.807 (20.50)	.817 (20.75)	.120 (3.05)	.130 (3.30)	.75 (19.0)	.27 (6.9)	"	"	.370 (9.40)	.380 (9.65)

See footnotes at end of table.

MIL-DTL-28791/1B

TABLE I. Dimensional and thread requirements - Continued.

Dash no.	Dimensions - Continued. 1/ 2/						
	K		L		MTG threads	Connectors	Figure no.
	Min	Max	Min	Max			
-001					.086-56 UNC-2B x .13DP	2 females	1
-002					.086-56 UNC-2B x .13DP	2 females	1
-003					.112-40 UNC-2B x .15DP	2 females	1
-004					.112-40 UNC-2B x .15DP	2 females	1
-005					.086-56 UNC-2B x .13DP	2 females	1
-006	.145 (3.68)	.155 (3.94)	.995 (25.27)	1.005 (25.53)	.086-56 UNC-2B x .30DP	2 females	2
-007	.145 (3.68)	.155 (3.94)	1.182 (30.02)	1.192 (30.28)	.112-40 UNC-2B x .13DP	2 females	3
-008	.399 (10.13)	.349 (8.86)	1.995 (50.67)	2.005 (50.93)	.112-40 UNC-2B x .19DP	2 females	4
-009	.115 (2.92)	.125 (3.18)	.995 (25.27)	1.005 (25.53)	.086-56 UNC-2B x .13DP	1 female and 1 male	3
-010	.115 (2.92)	.125 (3.18)	.995 (25.27)	1.005 (25.53)	.086-56 UNC-2B x .13DP	2 females	2
-011	.115 (2.92)	.125 (3.18)	.995 (25.27)	1.005 (25.53)	.086-56 UNC-2B x .13DP	1 female and 1 male	3
-012	.135 (3.43)	.145 (3.68)	1.713 (43.51)	1.723 (43.76)	.112-40 UNC-2B x .15DP	2 females	3
-013	1.075 (27.30)	1.085 (27.56)	.349 (8.86)	.355 (9.02)	.112-40 UNC-2B x .15DP	2 females	4
-014	.335 (8.51)	.345 (8.76)	1.0495 (26.657)	1.0505 (26.683)	.112-40 UNC-2B x .15DP	2 females	2
-015	.345 (8.76)	.355 (9.02)	1.395 (35.43)	1.405 (35.69)	.112-40 UNC-2B x .15DP	2 females	4
-016					.112-40 UNC-2B x .15DP	2 females	1
-017					.112-40 UNC-2B x .15DP	2 females	1

See footnotes at end of table.

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TABLE I. Dimensional and thread requirements - Continued.

Dash no.	Dimensions <u>1/ 2/</u>													
	A	B	C		D		E		F	G	H		J	
	Max	Max	Min	Max	Min	Max	Min	Max	Max	Max	Min	Max	Min	Max
-018	1.00 (25.4)	1.00 (25.4)	.795 (20.19)	.805 (20.45)			.095 (2.41)	.105 (2.67)	.50 (12.7)	.17 (4.3)	.220 (5.59)	.415 (10.54)	.245 (6.22)	.255 (6.48)
-019	1.06 (26.9)	1.00 (25.4)	.745 (18.92)	.755 (19.18)			.115 (2.92)	.125 (3.18)	.75 (19.0)	.27 (6.9)	"	"	.245 (6.22)	.255 (6.48)
-020	1.03 (26.2)	1.00 (25.4)	.595 (15.11)	.605 (15.37)	.395 (10.03)	.405 (10.29)	.195 (4.95)	.205 (5.21)	.63 (16.0)	.17 (4.3)	"	"	.275 (6.98)	.285 (7.24)
-021	1.30 (33.0)	1.15 (29.2)	.695 (17.65)	.705 (17.91)			.225 (5.72)	.235 (5.97)	.63 (16.0)	.17 (4.3)	"	"	.275 (6.98)	.285 (7.24)
-022	1.00 (25.4)	1.00 (25.4)	.745 (18.92)	.755 (19.18)	.182 (4.62)	.192 (4.88)	.120 (3.05)	.130 (3.30)	.50 (12.7)	.27 (6.9)	"	"	.245 (6.22)	.255 (6.48)
-023	1.00 (25.4)	1.00 (25.4)	.745 (18.92)	.755 (19.18)	.182 (4.62)	.192 (4.88)	.120 (3.05)	.130 (3.30)	.50 (12.7)	.27 (6.9)	"	"	.245 (6.22)	.255 (6.48)
-024	1.12 (28.4)	.91 (23.1)	.820 (20.83)	.830 (21.08)	.090 (2.29)	.100 (2.54)	.080 (2.03)	.090 (2.29)	.90 (22.9)	.27 (6.9)	"	"	.375 (9.52)	.385 (9.78)
-025	.85 (21.6)	.75 (19.0)	.595 (15.11)	.605 (15.37)	.255 (6.48)	.265 (6.73)	.075 (1.90)	.085 (2.16)	.60 (15.2)	.17 (4.3)	"	"	.255 (6.48)	.265 (6.73)
-026	.85 (21.6)	1.60 (40.6)	1.395 (35.43)	1.405 (35.69)			.095 (2.41)	.105 (2.67)	.60 (15.2)	.17 (4.3)	"	"	.245 (6.22)	.255 (6.48)
-027	1.06 (26.9)	.87 (22.1)	.620 (15.75)	.630 (16.00)			.115 (2.92)	.125 (3.18)	.81 (20.6)	.17 (4.3)	"	"	.245 (6.22)	.255 (6.48)
-028	1.08 (27.4)	.94 (23.9)	.620 (15.75)	.630 (16.00)			.155 (3.94)	.165 (4.19)	.56 (14.2)	.17 (4.3)	"	"	.275 (6.98)	.285 (7.24)
-029	1.00 (25.4)	1.80 (45.7)	1.595 (40.51)	1.605 (40.77)	.375 (9.52)	.385 (9.78)	.095 (2.41)	.105 (2.67)	.63 (16.0)	.17 (4.3)	"	"	.265 (6.73)	.275 (6.98)
-030	.77 (19.6)	.63 (16.0)	.495 (12.57)	.505 (12.83)	.515 (13.08)	.525 (13.34)	.058 (1.47)	.068 (1.73)	.50 (12.7)	.25 (6.4)	"	"	.245 (6.22)	.255 (6.48)
-031	.84 (21.3)	.63 (16.0)	.465 (11.81)	.475 (12.06)	.325 (8.26)	.335 (8.51)	.075 (1.90)	.085 (2.16)	.62 (15.7)	.17 (4.3)	"	"	.285 (7.24)	.295 (7.49)
-032	.68 (17.3)	1.02 (25.9)	.855 (21.72)	.865 (21.97)			.075 (1.90)	.085 (2.16)	.56 (14.2)	.45 (11.4)	"	"	.265 (6.73)	.275 (6.98)
-033	.83 (21.1)	.67 (17.0)	.355 (9.02)	.365 (9.27)			.155 (3.94)	.165 (4.19)	.62 (15.7)	.35 (8.9)	"	"	.275 (6.98)	.285 (7.24)
-034	.78 (19.8)	1.20 (30.5)	.955 (24.26)	.965 (24.51)	.525 (13.34)	.535 (13.59)	.115 (2.92)	.125 (3.18)	.63 (16.0)	.15 (3.8)	"	"	.245 (6.22)	.255 (6.48)
-035	.77 (19.6)	.63 (16.0)	.495 (12.57)	.505 (12.83)	.515 (13.08)	.525 (13.34)	.058 (1.47)	.068 (1.73)	.80 (20.3)	.25 (6.4)	"	"	.245 (6.22)	.255 (6.48)

See footnotes at end of table.

MIL-DTL-28791/1B

TABLE I. Dimensional and thread requirements - Continued.

Dash no.	Dimensions - Continued. 1/ 2/								Fig. no.
	K		L		M	N	MTG threads	Connectors	
	Min	Max	Min	Max	Max	Max			
-018	.225 (5.72)	.235 (5.97)	.645 (16.38)	.655 (16.64)			.086-56 UNC-2B x .13DP	2 females	4
-019	.225 (5.72)	.235 (5.97)	.695 (17.65)	.705 (17.91)			.086-56 UNC-2B x .13DP	2 females	4
-020							.112-40 UNC-2B x .15DP	2 females	4
-021	.175 (4.44)	.185 (4.70)	.945 (24.00)	.955 (24.26)			.112-40 UNC-2B x .15DP	2 males	4
-022							.125 DIA through	2 females	1
-023							.125 DIA through	2 females	1
-024							.086-56 UNC-2B x .13DP	2 females	1
-025							.086-56 UNC-2B x .16DP	2 females	1
-026	.245 (6.22)	.255 (6.48)	.495 (12.57)	.505 (12.83)	.40 (10.2)	.80 (20.3)	.086-56 UNC-2B x .16DP	2 females	5
-027	.145 (3.68)	.155 (3.94)	.732 (18.59)	.742 (18.85)			.112-40 UNC-2B x .18DP	2 females	3
-028	.245 (6.22)	.255 (6.48)	.595 (15.11)	.605 (15.37)			.086-56 UNC-2B x .16DP	2 males	4
-029					.45 (11.4)	.45 (11.4)	.112-40 UNC-2B x .15DP	2 females	6
-030							.086-56 UNC-2B x .13DP	2 females	1
-031							.086-56 UNC-2B x .13DP	2 females	1
-032	.265 (6.73)	.275 (6.98)	.305 (7.75)	.315 (8.00)	.25 (6.4)	.51 (13.0)	.086-56 UNC-2B x .13DP	2 females	5
-033	.225 (5.72)	.235 (5.97)	.485 (12.32)	.495 (12.57)			.086-56 UNC-2B x .16DP	2 males	4
-034							.086-56 UNC-2B x .16DP	2 females	6
-035							.086-56 UNC-2B x .13DP	2 females	1

1/ Metric equivalents are in parentheses.

2/ Metric equivalents are given for general information only.

MIL-DTL-28791/1B

MIL-DTL-28791/1B

Part or Identifying Number (PIN): M28791/1 - (dash number from table II).

ENGINEERING DATA:

Frequency range: See table II.

Voltage rating (sea level): 335 V.

Nominal impedance: 50 ohms.

Operating temperature range: See table II.

Power rating: See table II.

Input port: P₁.

Output port: P₂.

RF connectors: Shall be stainless steel.

REQUIREMENTS:

Dimensions and configurations: See figure 1 through figure 6, and table I.

Dielectric withstanding voltage: 1,000 V rms minimum.

Isolation: See table II.

Insertion loss: See table II.

VSWR: See table II.

Marking: See figure 1 through figure 6.

Salt spray (where applicable): MIL-STD-202, method 101, test condition B. This test shall be performed under first article inspection after the vibration test. Insertion loss and VSWR shall be measured after the test.

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TABLE II. Electrical and additional environmental requirements.

Dash number	Frequency range	Isolation	Insertion loss	VSWR	Operating temperature range	Input power rating average	Salt spray 1/
	GHz	dB min	dB max	max	°C	Watt min	
-001	9.50-10.0	20	0.3	1.25:1	-55°C to +95°C	10	N/A
-002	12.5-13.5	20	0.3	1.25:1	-55°C to +95°C	10	N/A
-003	7.0-11.0	20	0.5	1.30:1	-55°C to +95°C	10	N/A
-004	11.0-18.0	20	0.5	1.30:1	-55°C to +95°C	10	N/A
-005	0.95-1.225	20	0.5	1.25:1	-54°C to +85°C	2	N/A
-006	0.95-1.225	22	0.4	1.25:1	0°C to +71°C	2	Condition B
-007	0.96-1.215	18	0.5	1.25:1		75	N/A
-008	1-2	18	0.5	1.30:1	0°C to +71°C	2	Condition B
-009	1.255-1.41	20	0.4	1.25:1	-28°C to +65°C	5	Condition B
-010	1.26-1.666	20	0.5	1.25:1	-40°C to +65°C	0.03	Condition B
-011	1.495-1.65	20	0.3	1.25:1	-28°C to +65°C	5	Condition B
-012	1.53-1.87	20	0.5	1.25:1	-20°C to +70°C	2	N/A
-013	1.8-4.2	20	0.8	1.50:1	-40°C to +75°C	2	Condition B
-014	2-4	20	0.4	1.25:1	-55°C to +125°C	1	Condition B
-015	2-4	20	0.4	1.25:1	-54°C to +71°C	2	Condition B
-016	2.16-4.16	18	0.5	1.35:1	-55°C to +85°C	2	Condition B
-017	2.2-4.2	18	0.5	1.35:1	-55°C to +85°C	2	Condition B
-018	2.7-2.9	20	0.4	1.25:1	-41°C to +53°C	2	Condition B
-019	3.6-8.4	20	0.5	1.50:1	-40°C to +75°C	2	Condition B
-020	4.0-8.0	20	0.5	1.30:1	-55°C to +125°C	1	Condition B
-021	4.0-8.0	20	0.4	1.25:1	-54°C to +70°C	2	Condition B
-022	4.16-8.16	18	0.5	1.35:1	-55°C to +85°C	2	Condition B
-023	4.2-8.2	18	0.5	1.35:1	-55°C to +85°C	2	Condition B
-024	4.35-4.85	25	0.5	1.18:1	-40°C to +71°C	2	N/A
-025	7-11	20	0.4	1.22:1	-54°C to +105°C	10	N/A
-026	7.55-12.85	25	1.2	1.35:1	-40°C to +75°C	2	Condition B
-027	8-12	20	0.4	1.25:1	-54°C to +70°C	1	N/A
-028	8-12	20	0.4	1.25:1	-55°C to +95°C	2	Condition B
-029	8-12	40	0.8	1.25:1	0°C to +65°C	2	Condition B
-030	8.16-12.56	18	0.5	1.35:1	-55°C to +85°C	2	Condition B
-031	8-16	17	0.7	1.35:1	-45°C to +85°C	2	Condition B
-032	12-18.5	30	1.2	1.35:1	-40°C to +75°C	2	Condition B
-033	12-18	18	0.6	1.30:1	-54°C to +71°C	2	Condition B
-034	12.4-18	40	0.8	1.25:1	0°C to +65°C	2	Condition B
-035	12.56-18.16	17	1.0	1.45:1	-55°C to +85°C	2	Condition B

1/ This test shall be performed under first article inspection and be conducted after the vibration test. After exposure, isolators shall be examined for evidence of corrosion. Any corrosion shall be considered a failure. After the salt spray test, the VSWR shall be measured and shall not be greater than specified.

MIL-DTL-28791/1B

NOTE: Referenced documents. In addition to MIL-DTL-28791, this specification sheet references the following documents: MIL-PRF-39012 and MIL-STD-202.

Custodians:

Army - CR
Navy - EC
Air Force - 11
DLA - CC

Preparing activity:

DLA - CC

(Project 5985-2006-020)

Review activities:

Navy - AS, MC, OS, SH
Air Force - 99

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <http://assist.daps.dla.mil>.