

# D38999 Type Hybrid Breakaway-Series III

## Crimp, Metal Shell with Composite Operating Sleeve, and Lower Profile Lanyard Release Plug

**New Hybrid Lanyard Breakaway Fail Safe connector with a composite thermoplastic outer operating sleeve for greater durability.**

This new Hybrid Breakaway is the breakaway of choice for the Navy F-18 program. Amphenol's hybrid lanyard design offers greater durability over D38999 aluminum and composite designs because of its ability to handle abuse taken after weapons release. Other advantages include:

- Lower profile compared to full metal breakaway Fail Safe connectors
- Less weight

This Hybrid Breakaway meets the applicable requirements of MIL-DTL-38999/31 including random & sine vibration, ice resistance, fluid immersion and hydrolytic stability tests. (Test reports are available upon request). Currently the Hybrid Breakaway is available in shell sizes 17 and 25. It uses standard inserts available for breakaway plugs sizes 17 and 25, and is also available with inserts 25-20 and 25-11 for MIL-STD-1760. Consult Amphenol Aerospace for ordering of the new Hybrid Breakaway connectors. These hybrid connectors will accommodate the standard backshells for breakaway connectors see below.

**Amphenol offers a full range of accessories that are designed to enhance the performance of Amphenol Breakaway connectors.**

**Low Profile Backshells in shell size 25 with the following features:**

- Olive drab cadmium finish
- 90 degree termination
- Low profile design with three heights ranging from 1.010 to 1.660
- Rear access covers to help ease harness assembly and reparability



**New Hybrid Lanyard Release Plugs (Metal inside shells and Composite lower profile outer sleeves)**

Condition/Test	Description	Reference
Durability	400 complete mating/unmating cycles	MIL-DTL-38999/31D
High Impact Shock	Nine hammer blows from 1,3 and 5 feet, three each in three axes on mounting panel.	MIL-S- 901D
Vibration	10 to 2000Hz in three perpendicular axes, 4 hours in each axis for a total of 12 hours with no fracturing or breaking of parts.	MIL-STD-202F, Method 204
Ice Resistance	Pull tested after conditioned with Ice water at -18C for 35 minutes.	MIL-DTL-38999/31D
Fail Safe Disengagement	Rotationally unmated 180° from full mate position and pull tested in both a straight direction and at 15°.	MIL-DTL-38999/31D
High Speed Pull Separation	100 cycles at 30 feet per second.	MIL-DTL-38999/31D

\* Qualification Report is available upon request.



**Backshells are offered for use with Breakaway Fail Safe Connectors in three heights.**

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