



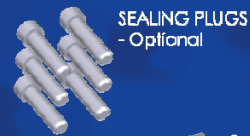
Amphenol

SINESYSTEMS

AHD | Series™ Connectors



AT | Series™ Connectors



SEALING PLUGS
- Optional



Back Cap
- Optional



Hyperbolic Contacts
- Optional

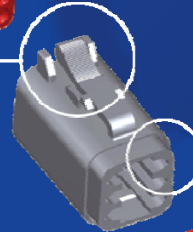


- Longer contact life
- Lower contact resistance
- Immunity to shock and vibration
- Low insertion and extraction forces
- Contact area extends 360° around pins



Rear Seal
- Also available in **Reduced Diameter** or **Solid**

ERGONOMICALLY DESIGNED CLIP
The increased size and tactile design of our clips allow for easier mating and unmating.



RECESSED SEALING AREA
The recessed cavity allows for a secure fitting front seal.

FRONT SEAL
The superior design ensures a tight environmental seal when used in conjunction with the recessed cavity of the connector body.



WEDGE with Added Seal Retention
The added seal retention feature ensures that the Front Seal does not move out of place.

Designed to fit with other industry products, allowing for flexibility of choice

Available configurations

- 2, 3, 4, 6, 8, 12 and 18 sizes

Improved ergonomically design latch

Strong Thermoplastic housing

Operating temperature range

- -55°C - +125°C

Enhanced silicone seal design

Accepts AWG 18 and 14 wire

13A rating for all sizes

Fail-safe secondary locks

Hand insertable/removable contacts

Custom color and keying options

Reduced and Solid Seal options

Stamped and Formed, Machined and RockSolid™ contact options



CURRENT CAPACITY

No. 16, 13 amps (max)

WIRE RANGE

No 16 contacts will accept wire ranges of 14 thru 20 awg.

TEMPERATURE

Operating temperature range: -55°C to +125°C at rated current

DIELECTRIC VALUE

Meets or exceeds 1500 volts minimum.

FLAME RESISTANCE

All dielectric materials have a flammability rating of UL94 V-O or better.

DROP TEST

Shall not become detached or loosened when placed at 750mm and dropped to concrete eight times.

SHOCK

No latch disengagement or discontinuity shall be the result when subjected to 50 g's in each of three axis (X, Y & Z).

VIBRATION

Continued continuity without degradation to mechanical or physical attributes following vibration. (max acceleration 20 g's at Sine sweep of 10-2000Hz)

CONNECTOR TERMINAL RETENTION

When subjected to a direct pull, size 14-18 achieves minimum pull-out force of 110 newtons.

continued...

CONNECTOR RETENTION

A mated connector subjected to a pulling force by the exiting wire bundle at 111 newtons times the number of contacts to a maximum of 444 newtons applying load for 30 seconds.

THERMAL SHOCK

Subjected to 10 cycles at 55°C to +125°C with no cracking, chipping or other damage detrimental to the normal operation of the connector.

INSULATION RESISTANCE

Insulation resistance at 25°C shall be greater than 20 megohms when 1000 VDC are applied.

MATING CYCLE DURABILITY

Following 100 cycles of connection engagement and disengagement, degradation either mechanical or electrical is not evident.

CONTACT MILLIVOLT DROP

No. 16 contacts with 16 awg conductor - *100 millivolt drop max at 13 amps test current

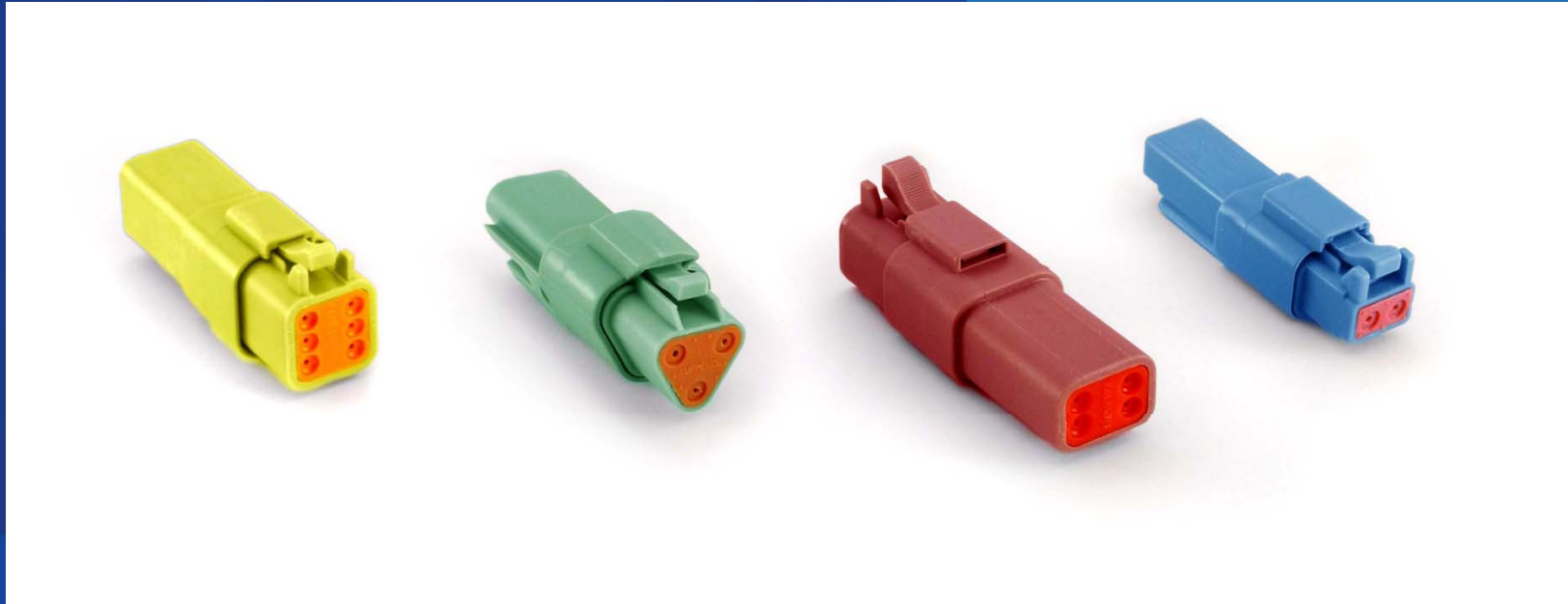
ULTRAVIOLET EFFECTS

Test the mated connectors for 1000 hours per ASTM G 154 or ASTM G 153 with 20 hours UV and 4 hours of condensation for each cycle.

WATER IMMERSION

A mated connection properly wired placed in an oven at +125°C for 1 hour then placed immediately in a depth of water of 1 meter for 4 hours without loss of electronic performance.

Optional Colors Available



Optional colors are available, based on your customized needs.

All of our AT Series products are designed to mate with existing attachments.



Designed to fit with other industry products, allowing for flexibility of choice.

Tactile verification for blind mating

No special tools required

Lowered overall cost

Integrated keying system

Strong Thermoplastic housing

Manual insertion/removable contacts

Field-proven results

RoHS compliant



MS=Military Style, **DG**=Diagnostic Grade Style

PHYSICAL SHOCK	(MS) No locking, unmating or other unsatisfactory result after 50 g's in each of three mutually perpendicular planes.
DIELECTRIC STRENGTH	(DG/MS) 1500 volts minimum
VIBRATION	(MS) Maintains continuity and exhibits no mechanical or physical damage after vibration. (20 g's at 10-2000Hz)
TEMPERATURE	(DG/MS) Operating temperature range: -55°C to +125°C at rated current.
INSULATION RESISTANCE	(DG/MS) 1000 megohms minimum at 25°C.
DURABILITY	(DG/MS) No electric or mechanical defects after 100 cycles of engagement and disengagement.
CORROSION RESISTANCE	(DG/MS) Connectors show no evidence of corrosion after exposure to 48 hours of salt spray per MIL-STD 1344 method 1001.
CONTACT CURRENT RATING	(DG/MS) At 125°C, continuous, less thru wire: #12 contact = 25 amps max. current; #16 contact = 13 amps max. current



Deutsch to Amphenol

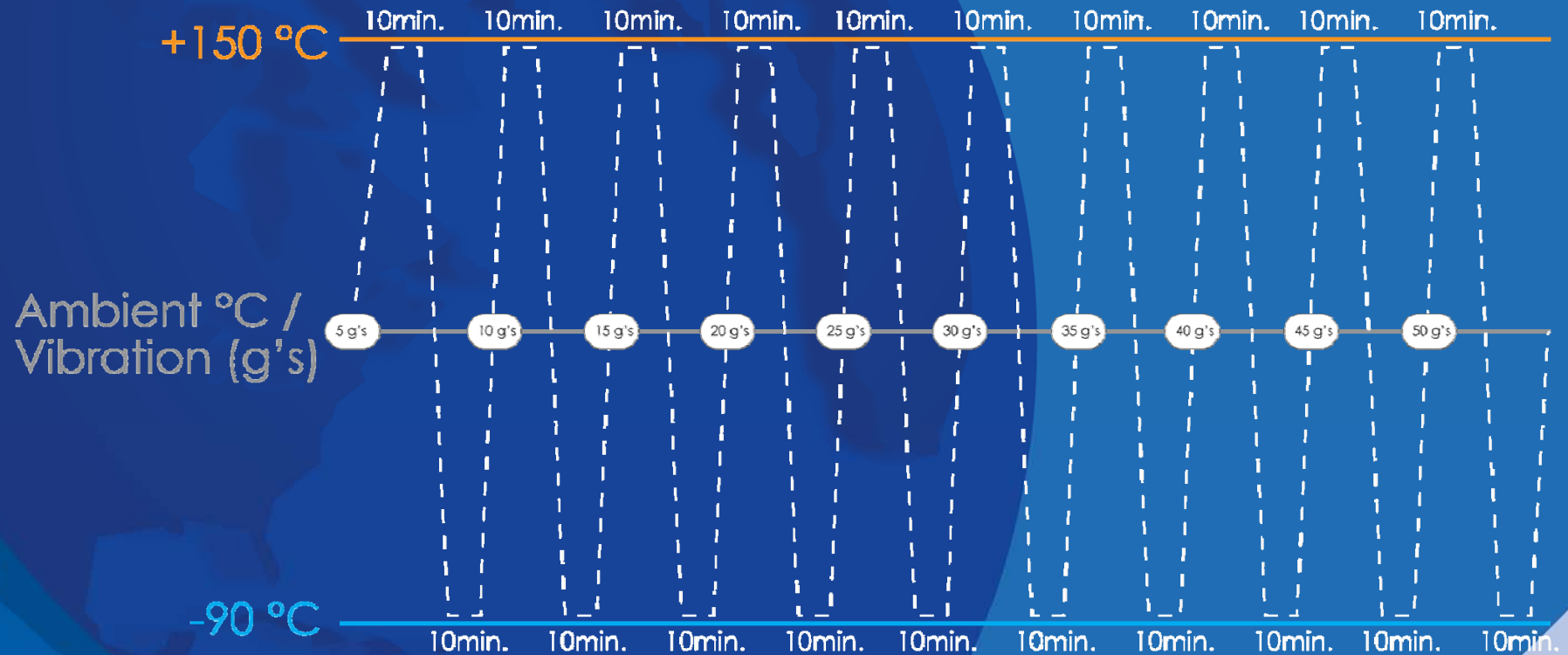


Amphenol to Amphenol



Amphenol to Deutsch

NOTE: All samples tested at 10V / 13A.



Vibration and Extreme Temperature



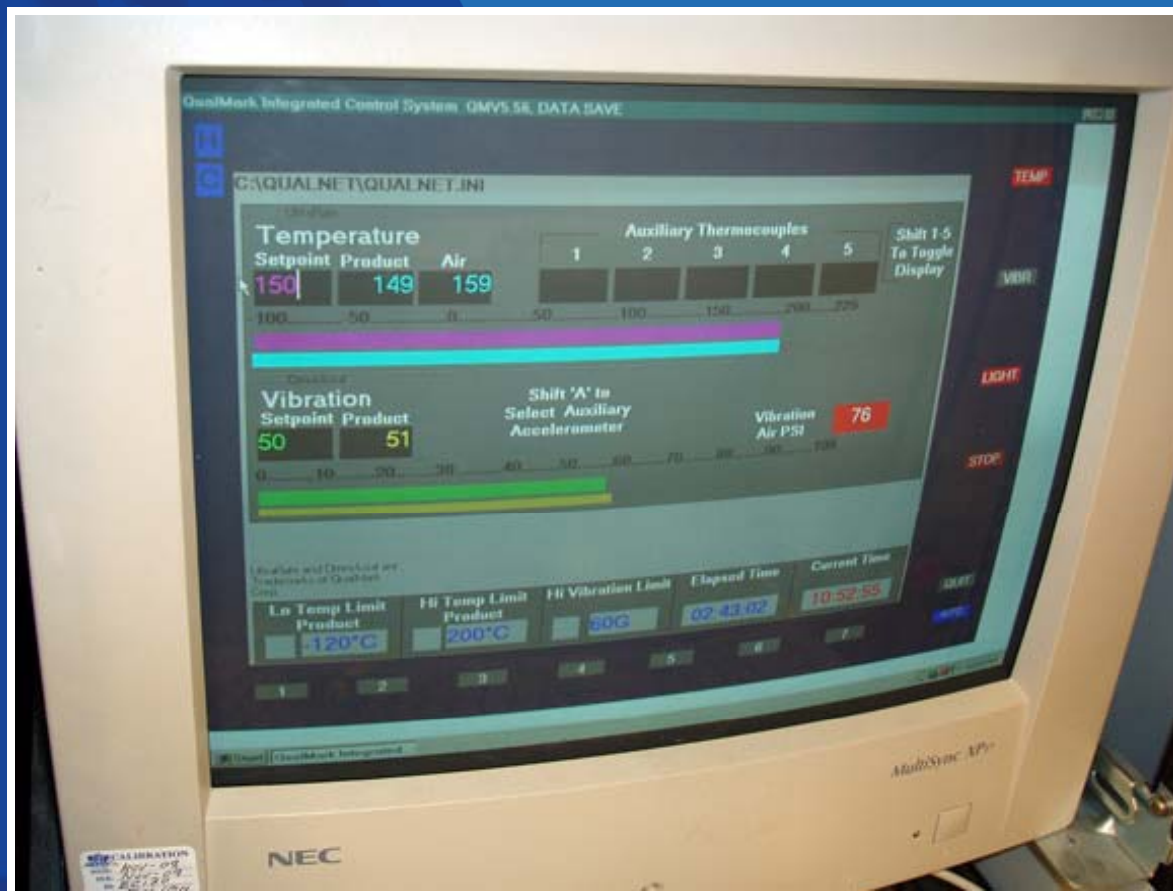
**Shaker
Table**

HALT samples 13-24 in chamber. Vibration Step Stress, Combined Environment.

HEAT TEST

Temperature = 150°C / 302°F

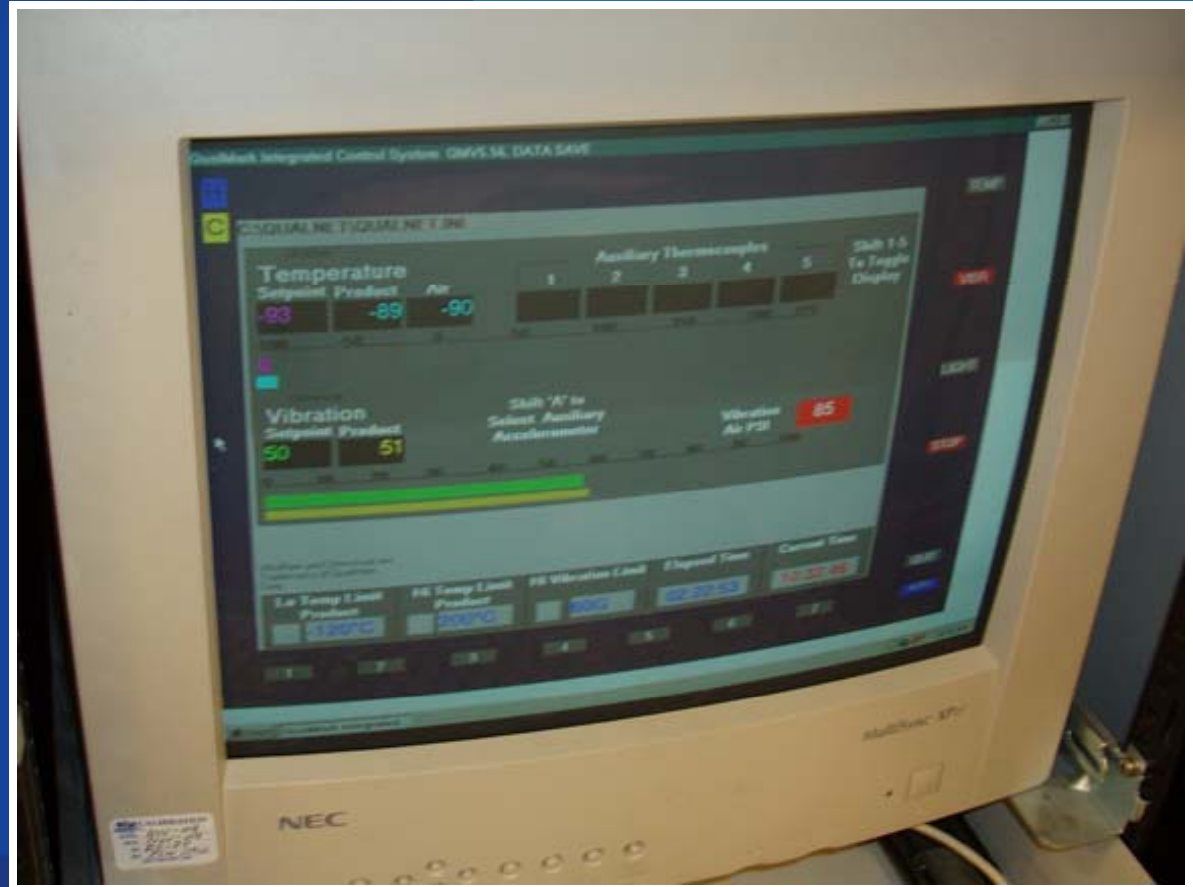
Vibration = 50g's



COLD TEST

Temperature = -93°C / -135°F

Vibration = 50g's





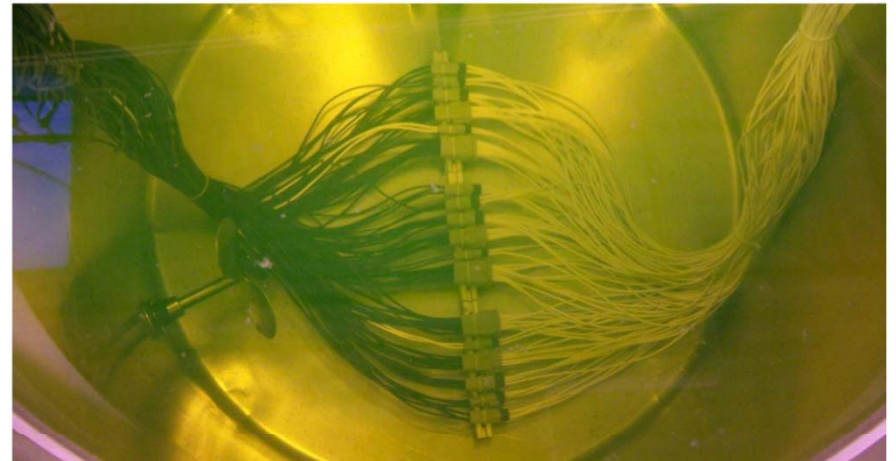
Water Spray Testing – Sine Plug Sine Receptacle small wire



Dust Testing – 4 position samples

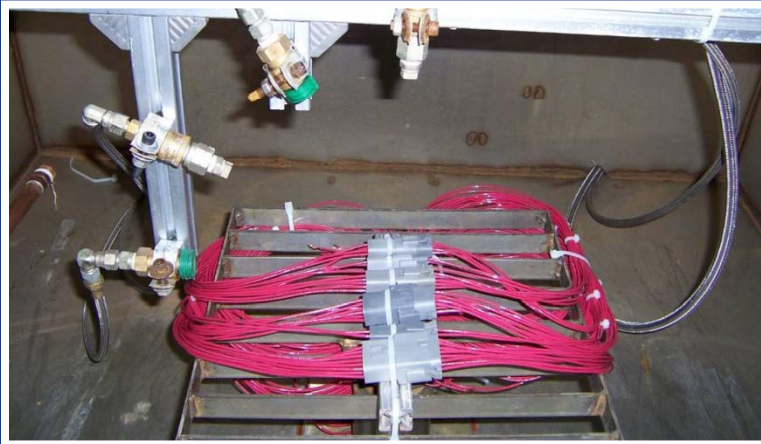


HALT samples 1 to 24 in chamber. Cold Step Stress, Hot Step Stress, Rapid Thermal Cycling.

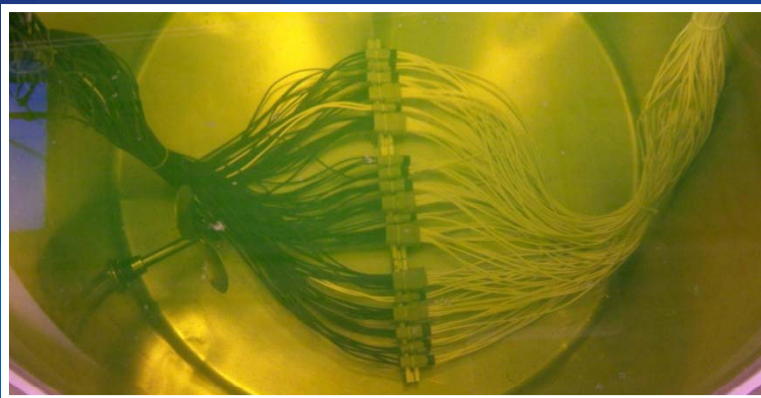


Water Immersion – Large Wire Samples in Submergence Tank (typical)

NOTE: All samples measured greater than $2G\Omega$ between each adjacent position following each test.



Water Spray



Water Immersion

IP67 & IP69K

Water Spray/Immersion/Dust Testing

Small Wire used

- TFFN (PVC/Nylon) Insulation
- 18AWG O.D. - .088 to .090in

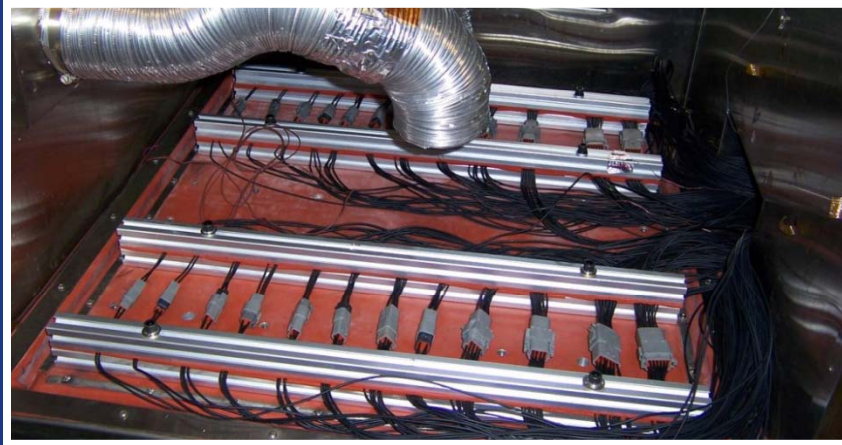
Large Wire used

- EPDM Insulation
- 18AWG O.D. - .140 to .142in



Dust

NOTE: All samples tested at 10V / 13A.



Highly Accelerated Life Test

Wire used

- GXL Type
- 16AWG O.D. - .104 to .106in



Thank You
for your
Time