

# HYPERION-270

HYBRID CONTACTOR SPST/NO, 500 AMP, 270 VDC

Leach's Advanced Hybrid Technology



- Generator Line Contactor (GLC)
- Main Line Contactor (MLC)
- Battery Contactor (BTC)
- Cross-Tie Contactor (XTIE)
- High Current Load Contactors



## **HIGHLIGHTS**

- Hot Switch 270 VDC @ 500 A
- 8x Rupture (4,000 A) of rated current
- Galvanic Isolation
- Qualified IAW MIL-PRF-6106
- Economizer Circuit

## PRINCIPAL TECHNICAL CHARACTERISTICS

Main Contacts Rated	270 VDC, 400 A / 500 A	
Weight	2.0 lbs (±5%)	
Dimensions (inch)	4.87" x 2.96" MAX x 4.16"	
Contact Arrangement	SPST / NO	

<sup>\*</sup>Special units available upon request, including at operating current 1,000  $\mbox{A}$ 



# CONTACT ELECTRICAL CHARACTERISTICS

DECUTDEMENT	CVCLES	POWER LOAD		
REQUIREMENT	CYCLES	CURRENT	VOLTAGE	
RESISTIVE ELECTRICAL LIFE @400A	50,000+ CYCLES [1]	400 A	270 VDC	
RESISTIVE ELECTRICAL LIFE @500A	50,000+ CYCLES [1]	500 A	270 VDC	
OVERLOAD [3]	1,000+ CYCLES	1,000 A	270 VDC	
RUPTURE [3]	20 CYCLES	2,000 A	120 VDC	
RUPTURE [3]	25 CYCLES	4,000 A	28 VDC	
MECHANICAL LIFE [2]	100,000 CYCLES	NO LOAD		

## **NOTES**

- 1. Power-load as defined by MIL-PRF-6106P or equivalent.
- 2. Mechanical life with no load for 100,000 cycles is applicable to main contacts only.
- 3. The break operation under these conditions may leave irreversible degradation to the unit. Performance is not guaranteed and maintenance is recommended.

## LOAD DERATION CURVE





# **COIL CHARACTERISTICS**

OPERATING VOLTAGE [4] [6]	28 VDC NOMINAL	
DIELECTRIC STRENGTH	500 VRMS (SEA LEVEL)	
INSULATION RESISTANCE	100 MΩ MIN (500 VDC, SEA LEVEL)	
HOLD VOLTAGE	12 VDC MINIMAL	

OPERATING TEMPERATURE	10°C	25°C	71°C	85°C	-40°C
PICK-UP VOLTAGE (MAXIMUM) AT BEGINNING OF LIFE (BOL)	15 V	16 V	20 V	20 V	15 V
PICK-UP VOLTAGE (MAXIMUM) AT EOL (END OF LIFE)	18 V	18 V	22 V	23 V	18 V
DROP OUT VOLTAGE (VDC)	2 <v<12< td=""><td>2<v<12< td=""><td>2<v<12< td=""><td>2<v<12< td=""><td>2<v<12< td=""></v<12<></td></v<12<></td></v<12<></td></v<12<></td></v<12<>	2 <v<12< td=""><td>2<v<12< td=""><td>2<v<12< td=""><td>2<v<12< td=""></v<12<></td></v<12<></td></v<12<></td></v<12<>	2 <v<12< td=""><td>2<v<12< td=""><td>2<v<12< td=""></v<12<></td></v<12<></td></v<12<>	2 <v<12< td=""><td>2<v<12< td=""></v<12<></td></v<12<>	2 <v<12< td=""></v<12<>
MAXIMUM PULL-IN CURRENT (28 VDC) [5]	5 A	4.5 A	4 A	4 A	5 A
MAXIMUM HOLD CURRENT (28 VDC)	0.55 A	0.45 A	0.42 A	0.40 A	0.55 A
MAXIMUM OPERATE TIME (28 VDC)	25 ms	25 ms	35 ms	40 ms	25 ms
MAXIMUM RELEASE TIME (28 VDC)	20 ms	15 ms	15 ms	15 ms	20 ms
COIL TRANSIENT VOLTAGE (MAXIMUM)	62 V	62 V	62 V	62 V	62 V

## **NOTES**

- 4. Allow 10% (0.5 A) increase to max pull-in current at end of life (EOL)
- 5. Polarity reversal on coil is not allowed. Follow the schematic for coil polarity
- 6. Coil Data Measured IAW MIL-PRF-6106 or Equivalent



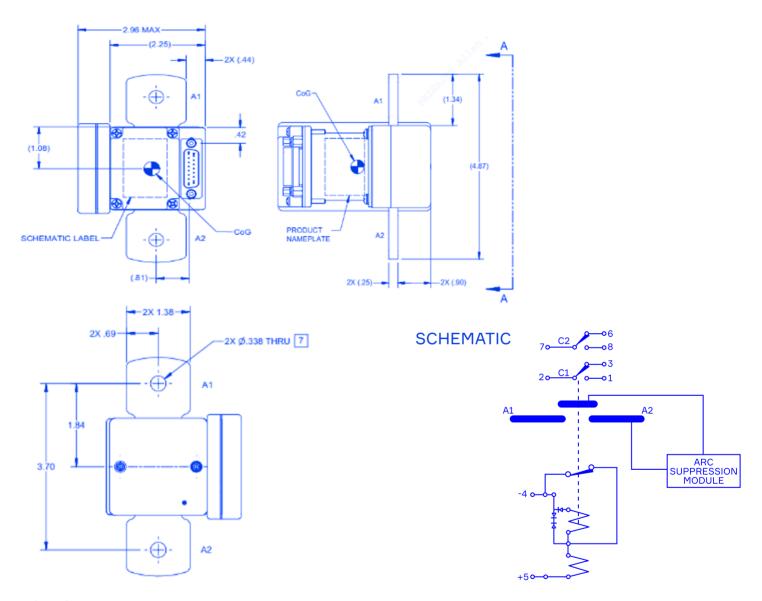
## **GENERAL CHARACTERISTICS**

OPERATING TEMPERATURE  -40°C TO +71°C AS DESCRIBED BY CLASS 2 EQUIPMENT IN MIL-HDBK-5400 (CURVE A) +85°C INTERMITTENT OPERATION  TEMPERATURE  -55°C TO +125°C (NOT EXPECTED TO OPERATE)  TEMPERATURE  -55°C TO +125°C (NOT EXPECTED TO OPERATE)  TEMPERATURE  -55°C TO +125°C (NOT EXPECTED TO OPERATE)  NON-OPERATING TEMPERATURE  -55°C TO +125°C (NOT EXPECTED TO OPERATE)  NON-OPERATING TEMPERATURE  -55°C TO +125°C (NOT EXPECTED TO OPERATE)  NON-OPERATING TEMPERATURE  -55°C TO +125°C (NOT EXPECTED TO OPERATE)  ALTITUDE [8]  -0 TO 70,000 FT MSL  TEMPERATURE / ALTITUDE  MIL-HDBK 5400, CLASS 2, FIGURE 2, CURVE A  DECOMPRESSION  -70,000 FT OPERATIONAL REQUIREMENT  OVERPRESSURE  -70,000 FT OPERATIONAL  -70,000 FT O		
TEMPERATURE  10°C TO +71°C (SEA LEVEL) (CHASSIS AMBIENT TEMPERATURE) AS DESCRIBED BY CLASS 2 EQUIPMENT IN MIL-HOBM-5400 (CURVE A) +85°C TO +125°C (NOT EXPECTED TO OPERATE)  ALTITUDE [8] 0 TO 70.000 FT MSL  TEMPERATURE/ ALTITUDE MIL-HOBM 5400, CLASS 2, FIGURE 2, CURVE A  DECOMPRESSION 70.000 FT OPERATIONAL REQUIREMENT  OVERRESSURE RTCA DO-1666 SECTION 4 CATEGORY 2  TEMPERATURE VARIATION +40°C to +71°C NOMINAL  HUMIDITY MIL-STD-810F, METHOD 516.5, PROCEDURE 1, Table 516.5-I Flight Equipment. 206 FOR 11 ms  VIBRATION RANDOM, ENDURANCE PIECE AND 11 ms  VIBRATION RANDOM, ENDURANCE AND 11 ms  VIBRATION RANDOM, ENDURANCE AND 120°C +10°C +10°C NOMINAL  LEVEL AND 140°C +10°C +10	OPERATING TEMPERATURE	
BY CLASS 2 EQUIPMENT IN MIL-HDBK-5400 (CURVE A) +55°C TOT-H11/TENT OPERATION  NON-OPERATING TEMPERATURE -55°C TO +125°C (NOT EXPECTED TO OPERATE)  ALTITUDE [8] 0 TO 70,000 FT MSL  TEMPERATURE/ ALTITUDE MIL-HDBK 5400, CLASS 2, FIGURE 2, CURVE A  DECOMPRESSION 70,000 FT OPERATIONAL REQUIREMENT  OVERPRESSURE RTCA DO-1606 SECTION 4 CATEGORY 2  TEMPERATURE VARIATION -40°C to +71°C NOMINAL HUMIDITY MIL-STD-810F, METHOD 507.4  OPERATIONAL SHOCK MIL-STD-810F, METHOD 507.4  VIBRATION RANDOM, ENDURANCE Figure 514.80-1  VIBRATION RANDOM, ENDURANCE LEVEL VIBRATION RANDOM, ENDURANCE RIL-STD-810H, Method 514.5, Cat 12, Wo = 0.19 g² / Hz Procedure I, Figure 514.80-1  VIBRATION RANDOM, ENDURANCE RIL-STD-810H, Method 514.8, Category 12, Procedure I, Figure 514.80-1  VIBRATION RANDOM, ENDURANCE RIL-STD-810H, Method 514.8, Category 12, Procedure I, Figure 514.80-1  VIBRATION RANDOM, ENDURANCE RIL-STD-810H, Method 514.8, Category 12, Procedure I, Figure 514.80-1  VIBRATION RANDOM, ENDURANCE RIL-STD-810H, Method 514.8, Category 12, Procedure I, Figure 514.80-1  VIBRATION RANDOM, ENDURANCE RIT-STD-810F, METHOD 11.4  FUNGUS RESISTANCE RIT-STD-810F, METHOD 511.4  FUNGUS RESISTANCE RIT-STD-810F, METHOD 11.4  FUNGUS RESISTANCE RIT-STD-810F, METHOD 11.4  FUNGUS RESISTANCE RIT-STD-704F METHOD LDC101, Load Measurements METHOD LDC101, Load Measurements METHOD LDC101, Steady State Limits For Voltage METHOD LDC103, Voltage Distortion Spectrum METHOD LDC103, Voltage Distortion Spectrum METHOD LDC103, Voltage Transients METHOD LDC302, Abnormal Voltage Transients METHOD LDC302, Abnormal Voltage Transients METHOD LDC302, Abnormal Voltage Transients METHOD LDC302, Steady State Limits For Voltage METHOD LDC302, Steady State Limits For Voltage METHOD LDC302, Steady State Limits For Voltage METHOD LDC303, Voltage Transients METHOD LDC304, Steady State Limits For Voltage METHOD LDC304, Steady State Limits For Vol	STORAGE TEMPERATURE	-55°C TO +125°C (NOT EXPECTED TO OPERATE)
ALTITUDE [8] 0 TO 70,000 FT MSL  TEMPERATURE/ ALTITUDE MIL-HOBK 5400, CLASS 2, FIGURE 2, CURVE A  DECOMPRESSION 70,000 FT OPERATIONAL REQUIREMENT  VOVERPRESSURE RTO DO-1606 SECTION 4 CATEGORY 2  TEMPERATURE VARIATION -40°C to +71°C NOMINAL  HUMIDITY MIL-STD-810F, METHOD 507.4  OPERATIONAL SHOCK MIL-STD-810F, METHOD 516.5, PROCEDURE 1, Table 516.5-I Flight Equipment. 206 FOR 11 ms  VIBRATION RANDOM, ENDURANCE OPERATIONAL MIL-STD-810F, Method 514.5, Cat 12, Wo = 0.19 g² / Hz Procedure I, Figure 514.8D-1  VIBRATION RANDOM, ENDURANCE LEVEL MIL-STD-810F, Method 514.5, Cat 12, Wo = 0.19 g² / Hz Procedure I, Figure 514.8D-1  VIBRATION RANDOM, ENDURANCE LEVEL MIL-STD-810F, Method 514.5, Cat 12, Wo = 0.19 g² / Hz Procedure I, Figure 514.8D-1, at Wo = 0.1 g² / Hz (Overall 11.5 Grms)  VIBRATION RANDOM, ENDURANCE LEVEL MIL-STD-810F, Method 514.8, Category 12, Procedure I, Figure 514.8D-1, at Wo = 0.1 g² / Hz (Overall 11.5 Grms)  VIBRATION RANDOM, ENDURANCE MIL-STD-810F, METHOD 511.4  FLUID SUSCEPTIBILITY RTCA DO-160G SECTION 13  FUNGUS RESISTANCE RTCA DO-160G SECTION 13, CATEGORY F  MAGNETIC EFFECT RTCA DO-160G SECTION 15, CATEGORY A  MIL-STD-704F METHOD LDC101, Load Measurements METHOD LDC101, Steady State Limits For Voltage METHOD LDC102, Steady State Limits For Voltage METHOD LDC103, Voltage Distortion Spectrum METHOD LDC104, Total Ripple METHOD LDC201, Power Interrupt METHOD LDC301, Steady State Limits For Voltage METHO	TEMPERATURE	BY CLASS 2 EQUIPMENT IN MIL-HDBK-5400 (CURVE A)
TEMPERATURE / ALTITUDE MIL-HDBK 5400, CLASS 2, FIGURE 2, CURVE A  DECOMPRESSION 70,000 FT OPERATIONAL REQUIREMENT  OVERPRESSURE RTCA DO-1606 SECTION 4 CATEGORY 2  TEMPERATURE VARIATION - 40°C to +71°C NOMINAL  HUMIDITY MIL-STD-810F, METHOD 507.4  OPERATIONAL SHOCK MIL-STD-810F, METHOD 516.5, PROCEDURE 1, Table 516.5-I Flight Equipment. 20G FOR 11 ms  VIBRATION RANDOM, ENDURANCE OPERATIONAL SHOCK MIL-STD-810F, METHOD 516.5, Cat 12, Wo = 0.19 g² / Hz Procedure I, Figure 514.8D-1, at wo = 0.1 g² / Hz (Overall 11.5 Grms)  EXPLOSIVE ATMOSPHERE MIL-STD-810F, METHOD 511.4  FLUID SUSCEPTIBILITY RTCA DO-1606 SECTION 11  FUNGUS RESISTANCE RTCA DO-1606 SECTION 15, CATEGORY F  MAGNETIC EFFECT RTCA DO-1606 SECTION 15, CATEGORY A  MIL-STD-704F METHOD LDC102, Steady State Limits For Voltage METHOD LDC102, Steady State Limits For Voltage METHOD LDC104, Total Ripple METHOD LDC201, Power Interrupt METHOD LDC301, Steady State Limits For Voltage METHOD LDC301, Steady Sta	NON-OPERATING TEMPERATURE	-55°C TO +125°C (NOT EXPECTED TO OPERATE)
DECOMPRESSION 70,000 FT OPERATIONAL REQUIREMENT  OVERPRESSURE RTCA DO-160G SECTION 4 CATEGORY 2  TEMPERATURE VARIATION -40°C to +71°C NOMINAL  HUMIDITY MIL-STD-810F, METHOD 507.4  OPERATIONAL SHOCK MIL-STD-810F, METHOD 516.5, PROCEDURE 1, Table 516.5-I Flight Equipment. 20G FOR 11 ms  VIBRATION RANDOM, ENDURANCE Figure 514.8D-1  VIBRATION RANDOM, ENDURANCE AT W6 = 0.19 g² / Hz Procedure I, Figure 514.8D-1  VIBRATION RANDOM, ENDURANCE AT W6 = 0.1 g² / Hz (Overal) 11.5 Grms)  VIBRATION RANDOM, ENDURANCE AT W6 = 0.1 g² / Hz (Overal) 11.5 Grms)  VIBRATION RANDOM, ENDURANCE AT W6 = 0.1 g² / Hz (Overal) 11.5 Grms)  VIBRATION RANDOM, ENDURANCE AT W6 = 0.1 g² / Hz (Overal) 11.5 Grms)  VIBRATION RANDOM, ENDURANCE AT W6 = 0.1 g² / Hz (Overal) 11.5 Grms)  VIBRATION RANDOM, ENDURANCE AT W6 = 0.1 g² / Hz (Overal) 11.5 Grms)  VIBRATION RANDOM, ENDURANCE AT W6 = 0.1 g² / Hz (Overal) 11.5 Grms)  VIBRATION RANDOM, ENDURANCE AT W6 = 0.1 g² / Hz (Overal) 11.5 Grms)  WIL-STD-810H, Method 514.8, Category 12, Procedure I, Figure 514.8D-1, at W6 = 0.1 g² / Hz (Overal) 11.5 Grms)  W7 LEVEL AT W6 DO-160G SECTION 11  FUNGUS RESISTANCE RTCA DO-160G SECTION 13, CATEGORY F  METHOD LOC160G SECTION 13, CATEGORY A  MIL-STD-704F METHOD LOC101, Load Measurements METHOD LOC101, Voltage Poistortion Spectrum METHOD LOC101, Voltage Poistortion Spectrum METHOD LOC101, Voltage Poistortion Spectrum METHOD LOC201, Voltage Pransients  W6THOD LOC301, Voltage Distortion Spectrum METHOD LOC301, Voltage Transients  W6THOD LOC301, Normal Voltage Transients  W6THOD LOC301, Steady State Limits For Voltage METHOD LOC301, Steady State Limits For V	ALTITUDE [8]	0 TO 70,000 FT MSL
OVERPRESSURE         RTCA D0-1606 SECTION 4 CATEGORY 2           TEMPERATURE VARIATION         -40°C to +71°C NOMINAL           HUMIDITY         MIL-STD-810F, METHOD 507.4           OPERATIONAL SHOCK         MIL-STD-810F, METHOD 516.5, PROCEDURE 1, Table 516.5-I Flight Equipment. 206 FOR 11 ms           VIBRATION RANDOM, ENDURANCE OPERATIONAL         MIL-STD-810F, Method 514.5, Cat 12, Wo = 0.19 g² / Hz Procedure I, Figure 514.8D-1           VIBRATION RANDOM, ENDURANCE LEVEL         MIL-STD-810H, Method 514.8, Category 12, Procedure I, Figure 514.8D-1, at Wo = 0.1 g² / Hz (Overall 11.5 Grms)           EXPLOSIVE ATMOSPHERE         MIL-STD-810F, METHOD 511.4           FLUID SUSCEPTIBILITY         RTCA D0-1606 SECTION 13           FUNGUS RESISTANCE         RTCA D0-1606 SECTION 13, CATEGORY F           MAGNETIC EFFECT         RTCA D0-1606 SECTION 15, CATEGORY A           METHOD LDC102, Steady State Limits For Voltage METHOD LDC102, Voltage Distortion Spectrum METHOD LDC102, Voltage Distortion Spectrum METHOD LDC203, Voltage Distortion Spectrum METHOD LDC203, Steady State Limits For Voltage METHOD LDC303, Steady State Limits For Voltage METHOD LDC303, Steady State Limits For Voltage METHOD LDC301, Steady State Limits For Voltage METHOD	TEMPERATURE/ ALTITUDE	MIL-HDBK 5400, CLASS 2, FIGURE 2, CURVE A
TEMPERATURE VARIATION -40°C to +71°C NOMINAL HUMIDITY MIL-STD-810F, METHOD 507.4  OPERATIONAL SHOCK MIL-STD-810F, METHOD 516.5, PROCEDURE 1, Table 516.5-I Flight Equipment. 206 FOR 11 ms  VIBRATION RANDOM, ENDURANCE OPERATIONAL MIL-STD-810F, Method 514.5, Cat 12, Wo = 0.19 g² / Hz Procedure I, Figure 514.8D-1  VIBRATION RANDOM, ENDURANCE MIL-STD-810F, Method 514.8, Category 12, Procedure I, Figure 514.8D-1, at Wo = 0.1 g² / Hz (Overall 11.5 Grms)  EXPLOSIVE ATMOSPHERE MIL-STD-810F, METHOD 511.4  FLUID SUSCEPTIBILITY RICA DO-1606 SECTION 11  FUNGUS RESISTANCE RICA DO-1606 SECTION 13, CATEGORY F  MAGNETIC EFFECT RICA DO-1606 SECTION 15, CATEGORY A  MIL-STD-704F METHOD LDC101, Load Measurements METHOD LDC103, Voltage Distortion Spectrum METHOD LDC103, Voltage Distortion Spectrum METHOD LDC104, Total Ripple METHOD LDC204, Power Interrupt METHOD LDC205, Abnormal Voltage Transient METHOD LDC301, Steady State Limits For Voltage METHOD LDC301, Steady State Li	DECOMPRESSION	70,000 FT OPERATIONAL REQUIREMENT
HUMIDITY MIL-STD-810F, METHOD 507.4  OPERATIONAL SHOCK MIL-STD-810F, METHOD 516.5, PROCEDURE 1, Table 516.5-I Flight Equipment. 200 FOR 11 ms  VIBRATION RANDOM, ENDURANCE OPERATIONAL SIDERAL STATES AND STATES	OVERPRESSURE	RTCA DO-160G SECTION 4 CATEGORY 2
OPERATIONAL SHOCK  MIL-STD-810F, METHOD 516.5, PROCEDURE 1, Table 516.5-I Flight Equipment. 206 FOR 11 ms  VIBRATION RANDOM, ENDURANCE OPERATIONAL  VIBRATION RANDOM, ENDURANCE HIGH States of Figure 514.8D-1  VIBRATION RANDOM, ENDURANCE LEVEL  VIBRATION RANDOM, ENDURANCE LEVEL  WIL-STD-810H, Method 514.8, Category 12, Procedure I, Figure 514.8D-1, at W0 = 0.1 g² / Hz (Overall 11.5 Grms)  EXPLOSIVE ATMOSPHERE  MIL-STD-810F, METHOD 511.4  FLUID SUSCEPTIBILITY  RICA DO-160G SECTION 11  FUNGUS RESISTANCE  RICA DO-160G SECTION 13, CATEGORY F  MAGNETIC EFFECT  RICA DO-160G SECTION 15, CATEGORY A  MIL-STD-704F  METHOD LDC101, Load Measurements  METHOD LDC102, Steady State Limits For Voltage  METHOD LDC103, Voltage Distortion Spectrum  METHOD LDC1041, Total Ripple  METHOD LDC301, Normal Voltage Transient  METHOD LDC301, Power Interrupt  METHOD LDC301, Abnormal Voltage Transients  WETHOD LDC301, Steady State Limits For Voltage  METHOD LDC	TEMPERATURE VARIATION	-40°C to +71°C NOMINAL
VIBRATION ARANDOM, ENDURANCE OPERATIONAL VIBRATION RANDOM, ENDURANCE OPERATIONAL VIBRATION RANDOM, ENDURANCE LEVEL  WILL-STD-810F, Method 514.5, Cat 12, Wo = 0.19 g² / Hz Procedure I, Figure 514.8D-1  WIBRATION RANDOM, ENDURANCE LEVEL  MIL-STD-810H, Method 514.8, Category 12, Procedure I, Figure 514.8D-1, at W0 = 0.1 g² / Hz (Overall 11.5 Grms)  EXPLOSIVE ATMOSPHERE  MIL-STD-810F, METHOD 511.4  FLUID SUSCEPTIBILITY  MIL-STD-810F, METHOD 511.4  FUNGUS RESISTANCE  MIL-STD-704F METHOD LDC101, Load Measurements METHOD LDC101, Load Measurements METHOD LDC101, Voltage Distortion Spectrum METHOD LDC102, Steady State Limits For Voltage METHOD LDC1032, Voltage Distortion Spectrum METHOD LDC201, Power Interrupt METHOD LDC301, Steady State Limits For Voltage METHOD LDC302, Abnormal Voltage Transients  WOLTAGE SPIKE (COIL)  MIL-STD 4616 - CS114 conducted susceptibility, bulk cable injection MIL-STD 4616 - RE102 radiated emissions, electric field MIL-STD 4616 - RE102 radiated emissions, electric field MIL-STD 4616 - RS103, radiated susceptibility, bulk cable injection, impulse excitation MIL-STD 4616 - RS103, radiated susceptibility, damped sinusoidal transients, cables and power leads  FIRE AND FLAMMABILITY  RTCA D0-1606, SECTION 14, CATEGORY C  SALT FOG  RTCA D0-1606, SECTION 14, CATEGORY S	HUMIDITY	MIL-STD-810F, METHOD 507.4
OPERATIONAL         Figure 514.8D-1           VIBRATION RANDOM, ENDURANCE LEVEL         MIL-STD-810H, Method 514.8, Category 12, Procedure I, Figure 514.8D-1, at W0 = 0.1 g² / Hz (Overall 11.5 Grms)           EXPLOSIVE ATMOSPHERE         MIL-STD-810F, METHOD 511.4           FLUID SUSCEPTIBILITY         RTCA DO-160G SECTION 11           FUNGUS RESISTANCE         RTCA DO-160G SECTION 13, CATEGORY F           MAGNETIC EFFECT         RTCA DO-160G SECTION 15, CATEGORY A           MIL-STD-704F METHOD LDC101, Load Measurements METHOD LDC102, Steady State Limits For Voltage METHOD LDC104, Total Ripple METHOD LDC104, Total Ripple METHOD LDC201, Power Interrupt METHOD LDC301, Steady State Limits For Voltage METHOD LDC301, Steady State Limits For Voltage METHOD LDC301, Steady State Limits For Voltage METHOD LDC501, Steady State Limits For Voltage           VOLTAGE SPIKE (COIL)         600 V           EMI         MIL-STD 4616 - CS114 conducted susceptibility, bulk cable injection impulse excitation MIL-STD 4616 - RE102 radiated emissions, electric field MIL-STD 4616 - RS103, radiated susceptibility, damped sinusoidal transients, cables and power leads           FIRE AND FLAMMABILITY         RTCA DO-166, SECTION 26 CATEGORY C           SALT FOG	OPERATIONAL SHOCK	
LEVEL at W0 = 0.1 g² / Hz (Overall 11.5 Grms)  EXPLOSIVE ATMOSPHERE MIL-STD-810F, METHOD 511.4  FLUID SUSCEPTIBILITY RTCA DO-160G SECTION 11  FUNGUS RESISTANCE RTCA DO-160G SECTION 13, CATEGORY F  MAGNETIC EFFECT RTCA DO-160G SECTION 15, CATEGORY A  MIL-STD-704F METHOD LDC101, Load Measurements METHOD LDC102, Steady State Limits For Voltage METHOD LDC103, Voltage Distortion Spectrum METHOD LDC104, Total Ripple METHOD LDC201, Power Interrupt METHOD LDC201, Power Interrupt METHOD LDC302, Abnormal Voltage Transients METHOD LDC302, Abnormal Voltage Transients METHOD LDC401, Steady State Limits For Voltage METHOD LDC501, Steady State Limits For Voltage METHOD LDC401, Steady State Limits For Voltage METHOD LDC501, Steady State Limits For Voltage METHOD LDC401, Steady State Limits For Voltage METHOD LDC401, Steady State Limits For Voltage METHOD LDC501, Voltage Transients METHOD LDC501, Steady State Limits For Voltage METHOD LDC501, Voltage Transients METHOD LDC5	The state of the s	, , , , , , , , , , , , , , , , , , ,
FLUID SUSCEPTIBILITY  RTCA DO-160G SECTION 13, CATEGORY F  MAGNETIC EFFECT  RTCA DO-160G SECTION 15, CATEGORY A  MIL-STD-704F METHOD LDC101, Load Measurements METHOD LDC102, Steady State Limits For Voltage METHOD LDC103, Voltage Distortion Spectrum METHOD LDC201, Normal Voltage Transient METHOD LDC201, Normal Voltage Transients METHOD LDC301, Steady State Limits For Voltage METHOD LDC301, Steady St		MIL-STD-810H, Method 514.8, Category 12, Procedure I, Figure 514.8D-1, at W0 = 0.1 $g^2$ / Hz (Overall 11.5 Grms)
FUNGUS RESISTANCE  RTCA DO-160G SECTION 13, CATEGORY F  MAGNETIC EFFECT  RTCA DO-160G SECTION 15, CATEGORY A  MIL-STD-704F METHOD LDC101, Load Measurements METHOD LDC102, Steady State Limits For Voltage METHOD LDC103, Voltage Distortion Spectrum METHOD LDC104, Total Ripple  POWER INPUT (COIL)  METHOD LDC201, Power Interrupt METHOD LDC301, Steady State Limits For Voltage METHOD LDC301, Voltage Transients METHOD LDC301, Steady State Limits For Voltage METHOD LDC301, Voltage Transients METHOD LDC301, Steady State Limits For Voltage METHOD	EXPLOSIVE ATMOSPHERE	MIL-STD-810F, METHOD 511.4
MAGNETIC EFFECT  RTCA D0-160G SECTION 15, CATEGORY A  MIL-STD-704F METHOD LDC101, Load Measurements METHOD LDC102, Steady State Limits For Voltage METHOD LDC103, Voltage Distortion Spectrum METHOD LDC104, Total Ripple METHOD LDC201, Power Interrupt METHOD LDC301, Steady State Limits For Voltage METHOD LDC501, Steady State Limits For Voltage METHOD LDC5	FLUID SUSCEPTIBILITY	RTCA DO-160G SECTION 11
MIL-STD-704F METHOD LDC101, Load Measurements METHOD LDC102, Steady State Limits For Voltage METHOD LDC103, Voltage Distortion Spectrum METHOD LDC105, Normal Voltage Transient METHOD LDC201, Power Interrupt METHOD LDC301, Steady State Limits For Voltage METHOD LDC301, Steady State Limits For Voltage METHOD LDC401, Steady State Limits For Voltage METHOD LDC401, Steady State Limits For Voltage METHOD LDC501, Starting Voltage Transients  VOLTAGE SPIKE (COIL)  MIL-STD 461G - CS114 conducted susceptibility, bulk cable injection MIL-STD 461G - RE102 radiated emissions, electric field MIL-STD 461G - CS115 conducted susceptibility, bulk cable injection, impulse excitation MIL-STD 461G - RS103, radiated susceptibility, electric field MIL-STD 461G - CS116, conducted susceptibility, damped sinusoidal transients, cables and power leads  FIRE AND FLAMMABILITY  RTCA DO-160G, SECTION 14, CATEGORY C  SALT FOG  RTCA DO-160G, SECTION 14, CATEGORY S	FUNGUS RESISTANCE	RTCA DO-160G SECTION 13, CATEGORY F
METHOD LDC101, Load Measurements METHOD LDC102, Steady State Limits For Voltage METHOD LDC103, Voltage Distortion Spectrum METHOD LDC104, Total Ripple METHOD LDC205, Normal Voltage Transient METHOD LDC201, Power Interrupt METHOD LDC301, Steady State Limits For Voltage METHOD LDC301, Steady State Limits For Voltage METHOD LDC302, Abnormal Voltage Transients METHOD LDC501, Steady State Limits For Voltage METHOD LDC501, Steady State Limits For Voltage METHOD LDC501, Starting Voltage Transients  VOLTAGE SPIKE (COIL)  MIL-STD 4616 - CS114 conducted susceptibility, bulk cable injection MIL-STD 4616 - RE102 radiated emissions, electric field MIL-STD 4616 - CS115 conducted susceptibility, bulk cable injection, impulse excitation MIL-STD 4616 - RS103, radiated susceptibility, electric field MIL-STD 4616 - CS116, conducted susceptibility, damped sinusoidal transients, cables and power leads  FIRE AND FLAMMABILITY  RTCA D0-160, SECTION 26 CATEGORY C  SALT FOG  RTCA D0-1606, SECTION 14, CATEGORY S	MAGNETIC EFFECT	RTCA DO-160G SECTION 15, CATEGORY A
MIL-STD 461G - CS114 conducted susceptibility, bulk cable injection MIL-STD 461G - RE102 radiated emissions, electric field MIL-STD 461G - CS115 conducted susceptibility, bulk cable injection, impulse excitation MIL-STD 461G - RS103, radiated susceptibility, electric field MIL-STD 461G - CS116, conducted susceptibility, damped sinusoidal transients, cables and power leads  FIRE AND FLAMMABILITY  RTCA D0-16G, SECTION 26 CATEGORY C  SALT FOG  RTCA D0-160G, SECTION 14, CATEGORY S	POWER INPUT (COIL)	METHOD LDC101, Load Measurements METHOD LDC102, Steady State Limits For Voltage METHOD LDC103, Voltage Distortion Spectrum METHOD LDC104, Total Ripple METHOD LDC105, Normal Voltage Transient METHOD LDC201, Power Interrupt METHOD LDC301, Steady State Limits For Voltage METHOD LDC302, Abnormal Voltage Transients METHOD LDC401, Steady State Limits For Voltage
MIL-STD 461G - RE102 radiated emissions, electric field MIL-STD 461G - CS115 conducted susceptibility, bulk cable injection, impulse excitation MIL-STD 461G - RS103, radiated susceptibility, electric field MIL-STD 461G - CS116, conducted susceptibility, damped sinusoidal transients, cables and power leads  FIRE AND FLAMMABILITY  RTCA D0-16G, SECTION 26 CATEGORY C  SALT FOG  RTCA D0-160G, SECTION 14, CATEGORY S	VOLTAGE SPIKE (COIL)	600 V
SALT FOG RTCA DO-160G, SECTION 14, CATEGORY S		MIL-STD 461G - RE102 radiated emissions, electric field MIL-STD 461G - CS115 conducted susceptibility, bulk cable injection, impulse excitation MIL-STD 461G - RS103, radiated susceptibility, electric field MIL-STD 461G - CS116, conducted susceptibility, damped sinusoidal
	FIRE AND FLAMMABILITY	RTCA DO-16G, SECTION 26 CATEGORY C
SAND AND DUST RTCA DO-160G, SECTION 12, CATEGORY D	SALT FOG	RTCA DO-160G, SECTION 14, CATEGORY S
	SAND AND DUST	RTCA DO-160G, SECTION 12, CATEGORY D

4



#### **CONFIGURATION STYLE**



#### **NOTES**

- 7. 0-50,000 Ft Nominal. 70,000 Ft maximum with some thermal derated performance
- 8. This hybrid contactor uses Leach's patented design (pending), an electronic arc suppressor to quickly quench the arc, and prolong the life of the contactor
- 9. Recommended lug MS20659-157 or equivalent lug with hole size 5 / 16"
- 10. Mechanical electrical interface
  - A. Maximum allowable connection resistance:  $3\mu\Omega$  per connection
  - B. Minimum connection area recommended for 400 A rating is 0.062  $\ensuremath{\text{in}}^2$
  - C. Recommended electrical connection fastener 17-4PH 5 / 16-24 UNF, IAW AMS 5604 or equivalent
- 11. Recommended electrical power cable for busbar: 4 / 0 awg
- 12. Connector M24308 / 24-2f or commercial equivalent
- 13. Low current application will be lost once >100 mA current is switched by AUX contact. The NO or NC AUX of each Form C shall be used on the same current application. Either High current (>100 mA) or Low Current (<100 mA) Only.



#### PART NUMBER CONFIGURATION

	A270	)-500-l	37YN	- XXX
1. Basic Series Designation				
2. Power Rating (400 A, 500 A)				
3. Configuration				
4. Variant Identifier*				

\* -XXX denotes customer or application-specific requirements.

Part number example: A270-400-B7YN-011 (400A) A270-500-B7YN-014 (500A) indicating a COTS product

# Leach International Corporation designs and manufactures relays, electronic control devices, and power systems primarily for the aerospace and defense industries. Since 1919, Leach has been known for design excellence and commitment to quality and reliability.

Our 100-year legacy includes the invention of the electrical relay for aircraft systems. Worldwide, our equipment and components are used in the most severe conditions where reliability and high performance are critical, in thousands of aerospace, military, rail and highend industrial applications.

#### Contact

6900 Orangethorpe Ave. Buena Park, CA 90620

+1 714 736 7598

relayed@leachcorp.com
www.leachcorp.com