| MDS2 SERIES
MODULAR DISTRIBUTION SYSTEMS

Introduction

Sensata Technologies provides circuit-on-demand from a pre-wired power bus. The Airpax™ modular distribution system utilizes "plug 'n play" capabilities to simplify the design of your power bus system.

The module design simplifies line/load interface, saving both money and valuable time by eliminating the need for shutdown when expanding the equipment. Additionally, this flexible interface allows for adjacent circuits to be fused or protected, while parallel alarm conductors simplify signal wiring. By specifying the number of protected circuits, the MDS2 can be designed to meet your application requirements.

Sensata, known for our high quality products and outstanding customer service, once again sets the standard in innovative and precision technology with our new MDS2.

Features

- Lightweight, space-saving modular distribution system specifically designed for flexibility in DC power distribution
- Building-block concept allows users the flexibility to specify units in blocks of 2 positions up to 24 positions
- Modules allow for equipment expansion without power shutdown
- Mounts horizontally or vertically directly to the bus bar or mounting rail
- Unique alarm conductors simplify signal wiring
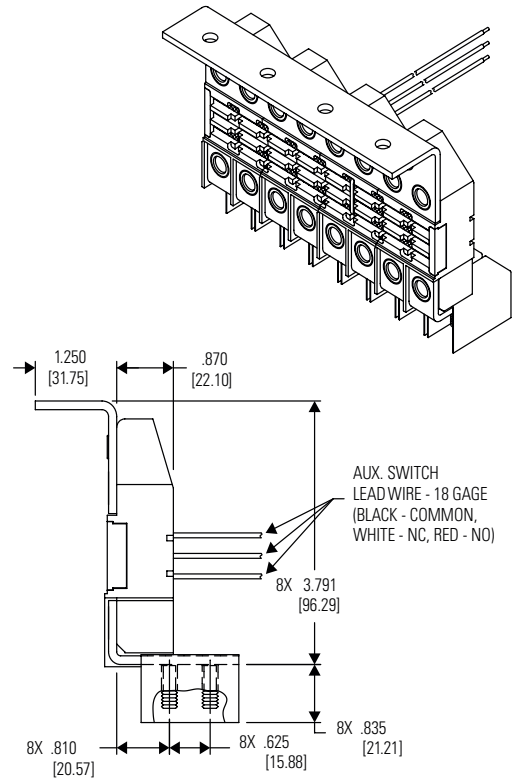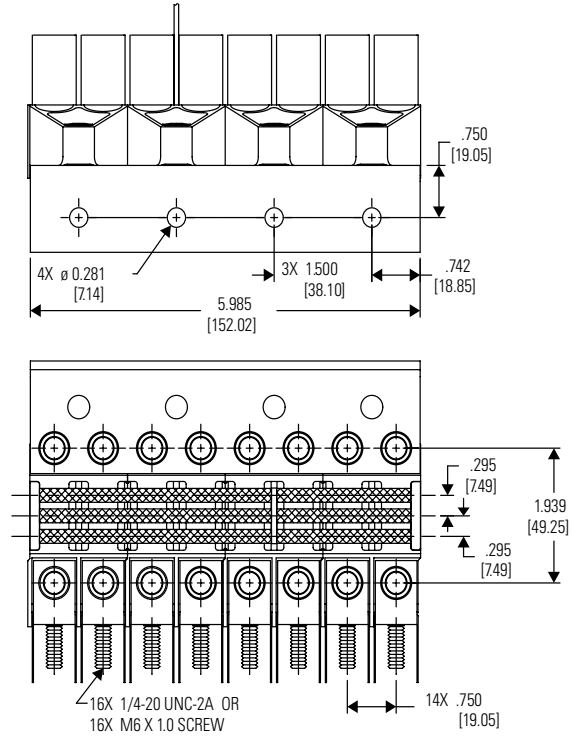- Modular load terminals available with front or rear access

SPECIFICATIONS

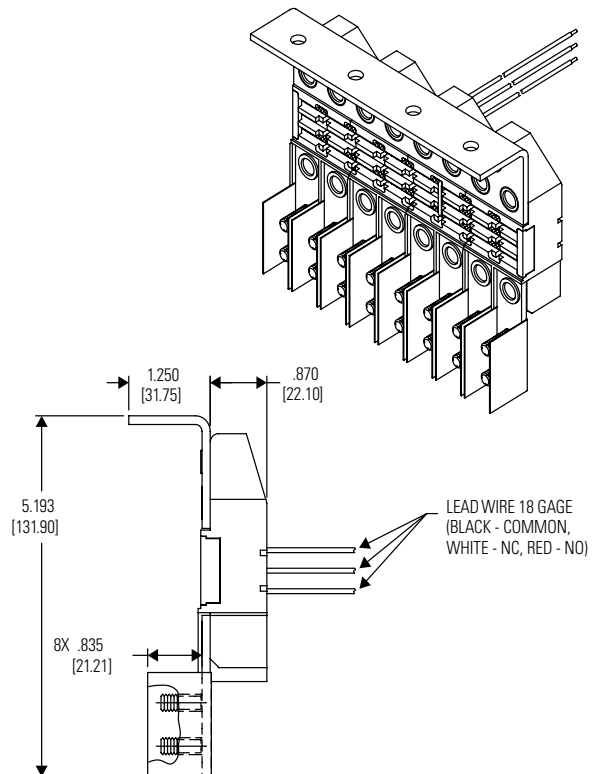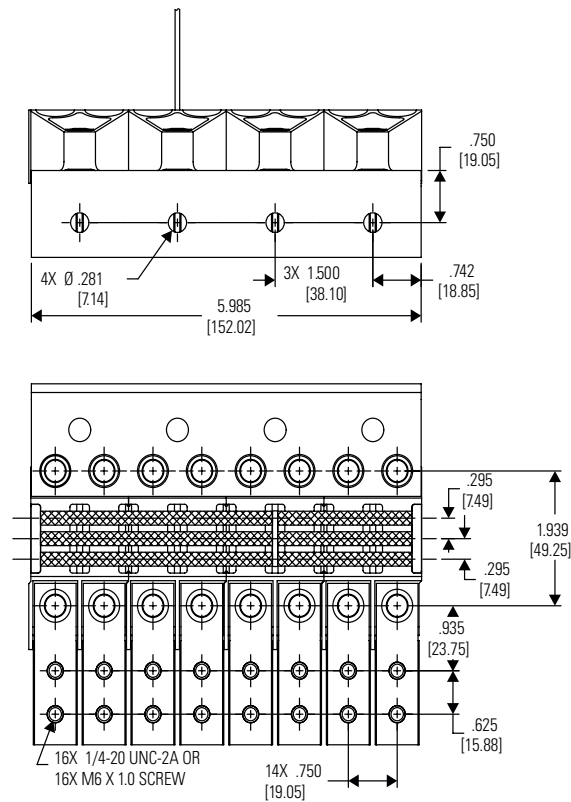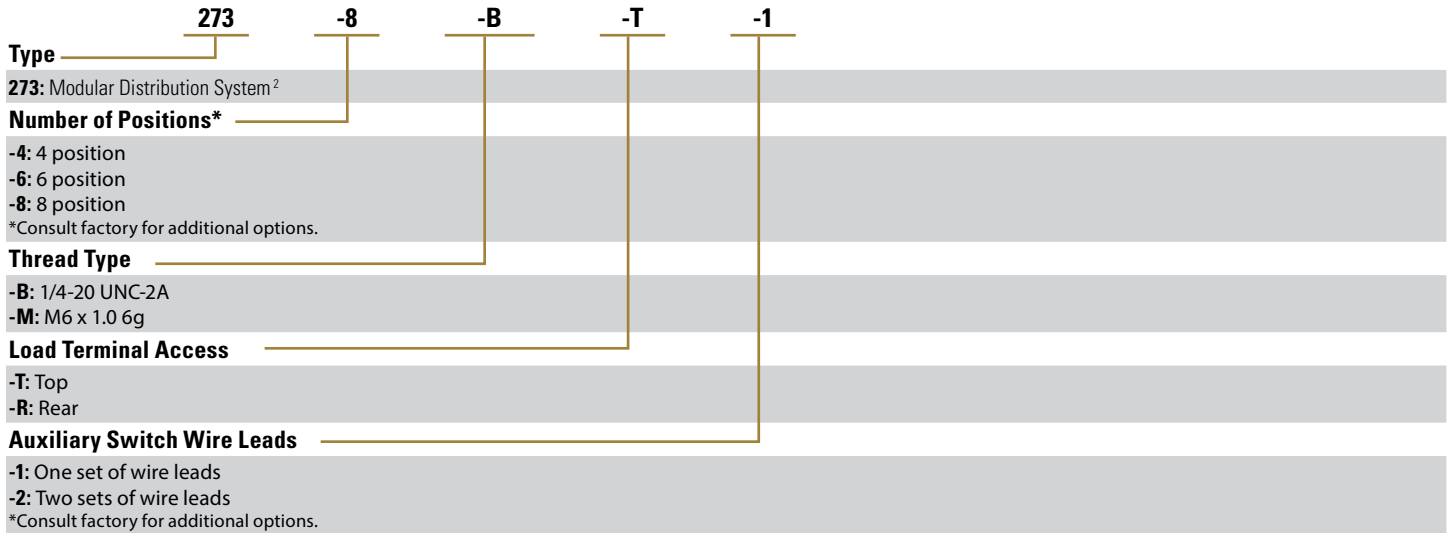|	
Application	For use with Airpax™ IEL, IML, LEL and LML type circuit protectors and breakers using 5/16 inch diameter bullet terminals
Electrical Ratings	100 amperes max. load bus rating per position max. common bus of the 8 position system is 600 amperes. Voltage rating is 125 vdc
Flammability	All modular distribution system parts have UL 94 V0 flammability rating
Insulation Resistance	Min. 100 megohms @ 500 vdc
High-Low Temperature Operation	-40ºC to +85ºC
Dielectric Strength	2000 VDC
Recommended Torque Specifications	Load bus 1/4-20 UNC: 40 to 45 inch pounds Load bus m6 x 1.0: 4 to 5 Nm Mechanical support must be provided to terminals while applying torque.
Auxiliary Switch Wire	18 awg (ul 1213)
Ampacity	Line bus 600 amperes: 800 amps/sq. inch Load bus 100 amperes: 1250 amps/sq. inch

EIGHT-POSITION REAR CONNECT

4X ø 0.281 [7.14]

3X 1.500 [38.10]

.742 [18.85]

.750 [19.05]

5.985 [152.02]

.295 [7.49]

.295 [7.49]

1.939 [49.25]

16X 1/4-20 UNC-2A OR
16X M6 X 1.0 SCREW

14X .750 [19.05]

1.250 [31.75]

.870 [22.10]

AUX. SWITCH
LEAD WIRE - 18 GAGE
(BLACK - COMMON,
WHITE - NC, RED - NO)

8X 3.791 [96.29]

8X .810 [20.57]

8X .625 [15.88]

8X .835 [21.21]

EIGHT-POSITION FRONT CONNECT

4X Ø .281 [7.14]

3X 1.500 [38.10]

.742 [18.85]

.750 [19.05]

5.985 [152.02]

.295 [7.49]

.295 [7.49]

1.939 [49.25]

16X 1/4-20 UNC-2A OR
16X M6 X 1.0 SCREW

14X .750 [19.05]

.935 [23.75]

.625 [15.88]

1.250 [31.75]

.870 [22.10]

5.193 [131.90]

LEAD WIRE 18 GAGE
(BLACK - COMMON,
WHITE - NC, RED - NO)

8X .835 [21.21]

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AIRPAX®

| 273 | -8 | -B | -T | -1 |

Type

273: Modular Distribution System [2]

Number of Positions*

-4: 4 position
-6: 6 position
-8: 8 position
*Consult factory for additional options.

Thread Type

-B: 1/4-20 UNC-2A
-M: M6 x 1.0 6g

Load Terminal Access

-T: Top
-R: Rear

Auxiliary Switch Wire Leads

-1: One set of wire leads
-2: Two sets of wire leads
*Consult factory for additional options.

Notes:

1. This specification covers Airpax four and eight position Modular Distribution Systems for LEL, LML, IEL, IML type circuit protectors using 5/16 inch diameter bullet terminals.

2. High-Low Temperature Operation: The Modular Distribution System shall operate in a range from −40°C to +85°C.

3. Dielectric Strength: The Modular Distribution System shall withstand DC voltage for 60 seconds between all electrically isolated parts as follows:
Between line and load bus bars: Minimum 2000 VDC
Between line and load bus bars and aux. switch contact strips: Minimum 2000 VDC
Between line and load bus bars and clamp up rods: Minimum 2000 VDC

4. Insulation Resistance: Shall not be less than 100 megohms at 500 volts DC.

5. Flammability: All Modular Distribution System parts have an U.L. 94 V-0 flammability rating.

6. Electrical Ratings:
Current Ratings:
Maximum load bus rating per position is 100 amps.
Maximum common bus rating of the eight position Modular Distribution system is 600 amps.
Maximum common bus rating of the four position Modular Distribution System is 300 amps.
Voltage Rating: 125 VDC max.

7. Recommended Torque Specifications:
Load bus 1/4 - 20 UNC 72 inch pounds
Line bus 3/8 - 16 UNC 192 inch pounds

Mounting channel #10 x 0.750 long 20 inch pounds

8. Auxiliary Switch Wire Rating: 200° C; 600 volts; UL recognized (UL 1199)

9. Ampacity:
Line bus @ 600 amps: 850 amps/sq inch
Line bus @ 300 amps: 850 amps/sq inch
Load bus @ 100 amps: 1140 amps/sq inch

10. Plating: Common and load bus bars are available with either silver or tin plating.
Silver Plating: The plating of the louvertec bands of the Airpax circuit breakers used in the Modular distribution System are silver plated.
Silver plated bus bars on the Airpax Modular Distribution System product significantly reduce the possibility of galvanic corrosion.
Tin Plating: The use of tin plated bus bars with the silver plated louvertec bands on the circuit breaker increases the possibility of galvanic corrosion at the joint interface.
The use of a conductive polymer such as Stabilant 22 or CAIG 100 is recommended with both silver plated and tin plated bus bars in order to negate galvanic corrosion and to improve the conductivity of the joint interface.

11. Beryllium Copper Contact Strip: Beryllium copper strips are used to conduct current to and from the terminals of the circuit breaker auxiliary switch. The beryllium copper strips have a minimum compression set and will return to their original size with as much as a 30% deflection.
Repeated insertion and removal of the circuit breaker in this application will have an insignificant effect on the contact force between the auxiliary switch terminals and the beryllium copper strips.

⊙ WARNINGS

DANGER

RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE
- The product's side panels may be hot, allow the product to cool before touching
- Follow proper mounting instructions including torque values
- Do not allow liquids or foreign objects to enter this product

Failure to follow these instructions can result in serious injury, or equipment damage.

⚡ Danger Electric shock risk

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH
- Disconnect all power before installing or working with this equipment
- Verify all connections and replace all covers before turning on power

Failure to follow these instructions can result in death or serious injury.

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