

REVISIONS

BW 103036  
 RE-DOCUMENTED, SHT. 1 SECTION 9, TEST CONDITION "I" WAS "1".  
 DP, 1-DEC-2014

# AM-345

- THIS SPECIFICATION COVERS AIRPAX IAL/IUL/IEL MAGNETIC CIRCUIT BREAKERS WITH INVERSE TIME DELAY AND TRIP FREE FEATURES.
- DELAY TIME:** SEE APPLICABLE TABLE
- RESISTANCE AND IMPEDANCE:** AS SHOWN IN TABLE. THIS IS BASED ON UNITS OPERATING AT 100% OF RATED CURRENT.
- ELECTRICAL CHARACTERISTICS:** DC, 60Hz AND 400 Hz.
- HIGH - LOW TEMPERATURE OPERATION:** CIRCUIT BREAKERS SHALL OPERATE IN THE RANGE FROM -40°C TO +85°C.
- DIELECTRIC STRENGTH:** CIRCUIT BREAKERS SHALL WITHSTAND AC VOLTAGE 60 HERTZ FOR 60 SECONDS BETWEEN ALL ELECTRICALLY ISOLATED TERMINALS AS DESCRIBED BELOW:  
 SERIES, SHUNT, SWITCH ONLY, THREE TERMINAL DUAL COIL & ADJACENT POLES - 3750 VAC  
 RELAY & FOUR TERMINAL DUAL COIL -1500 VAC.  
 AUXILIARY SWITCHES - 600 VAC  
 SERIES W/AUX. SW.- 3750 VAC BETWEEN MAIN CIRCUIT BREAKER TERMINAL AND AUX. SWITCH TERMINAL
- INSULATION RESISTANCE:** SHALL NOT BE LESS THAN 100 MEGOHMS AT 500 VOLTS DC.
- VIBRATION:** CIRCUIT BREAKERS SHALL NOT TRIP WHEN VIBRATED PER MIL-STD-202, METHOD 204, TEST CONDITION A WITH 100% RATED CURRENT APPLIED TO DELAYED UNITS AND 80% RATED CURRENT TO INSTANTANEOUS UNITS.
- SHOCK:** CIRCUIT BREAKERS SHALL NOT TRIP WHEN TESTED PER MIL-STD-202, METHOD 213, TEST CONDITION I WITH 100 RATED CURRENT APPLIED TO DELAYED UNITS, EXCEPT 90% CURRENT IN PLANE 4, (I.E. HANDLE DOWN). INSTANTANEOUS UNITS SHALL HAVE 80% RATED CURRENT APPLIED IN ALL PLANES.
- ENDURANCE:** CIRCUIT BREAKERS SHALL OPERATE A MINIMUM OF 10,000 OPERATIONS WITH RATED CURRENT AT A MAXIMUM RATE OF 6 OPERATIONS PER MINUTE.
- AUXILIARY SWITCH:** (WHEN SUPPLIED) SHALL BE S.P.D.T. CONFIGURATION WITH A MAXIMUM RATING OF 10.1 AMPERES 250 VOLTS, 60 HERTZ: 3.0 AMPERES 50 VOLTS DC (REC TYPE) OR .1 AMPERES 125 VOLTS AC (REG TYPE).
- IEL - SHORT CIRCUIT INTERRUPTING CAPACITIES:**

RATING	VOLTAGE RATING	A.I.C.	SERIES FUSE
100A MAX.	240 50/60 Hz	2000	NONE
50A MAX.	250 50/60 Hz	5000	125 AMPS MAX.
50A MAX.	250 400 Hz	1500	NONE
70A MAX.	80 DC	7500	NONE
100A MAX.	80 DC	5000	NONE

- PULSE TOLERANCE:** THE FOLLOWING TABLE PROVIDES A COMPARISON OF INRUSH PULSE TOLERANCE WITH AND WITHOUT THE INERTIAL DELAY FEATURE FOR EACH OF THE 50/60Hz DELAYS. PULSE TOLERANCE IS DEFINED AS A SINGLE PULSE OF HALF SINE WAVE PEAK CURRENT AMPLITUDE OF 8 MILLISECONDS DURATION THAT WILL NOT TRIP THE CIRCUIT BREAKER.

DELAY	PULSE TOLERANCE
61, 62, 63, 71, 72, 73	10 X (APPROX.) RATED CURRENT
61F, 62F, 63F, 71F, 72F, 73F	12 X (APPROX.) RATED CURRENT
64, 65, 66 ( 0-50A)	25 X RATED CURRENT
64, 65, 66 (>50-80A)	20 X RATED CURRENT
64, 65, 66 (>80-100A)	18 X RATED CURRENT

THIS TABLE PROVIDES A GUIDE TO DECISION REGARDING NEED FOR INERTIAL DELAY FEATURE. CONSULT FACTORY FOR FURTHER ASSISTANCE.

- SALT SPRAY:** CIRCUIT BREAKERS MEET THE REQUIREMENTS OF MIL-C-55629 WHEN TESTED IN ACCORDANCE WITH METHOD 101 OF MIL-STD-202.
- MOISTURE:** CIRCUIT BREAKERS MEET THE REQUIREMENTS OF MIL-C-55629 WHEN TESTED IN ACCORDANCE WITH METHOD 106 OF MIL-STD-202.
- IEL FAMILY CIRCUIT BREAKERS** ARE DESIGNED TO MEET 8MM CREEPAGE AND CLEARANCE REQUIREMENTS FOR INSTALLATION CATEGORY 111, POLLUTION DEGREE 3, CASE A AS MEASURED IN IEC 60664, INTENDED FOR USE IN EQUIPMENT DESIGNED TO COMPLY WITH IEC 60950 & 60601.
- IUL TYPE CIRCUIT BREAKERS** ARE UL RECOGNIZED AND CSA CERTIFIED. SEE AIRPAX SPECIFICATION AM 327 FOR SPECIFIC RATINGS.
- RECOMMENDED TORQUE SPECIFICATIONS:** 6-32 MOUNTING INSERTS 6 - 8 INCH POUNDS. M3 MOUNTING INSERTS 4 - 5 INCH POUNDS. 10-32 AND M5 STUD TERMINALS 13 - 14 INCH POUNDS. 1/4-20 & M6 STUD TERMINALS 40 - 45 INCH POUNDS, AND 1/4-28 STUD TERMINALS 25 - 30 INCH POUNDS. 10-32 AND M5 SCREW TERMINALS 14 - 15 INCH POUNDS. (NOTE: WHERE APPLICABLE, MECHANICAL SUPPORT MUST BE PROVIDED TO TERMINALS WHILE APPLYING TORQUE.)


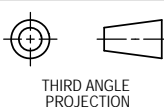
- RECOMMENDED DISTANCE FROM VENT AREA OF BREAKER TO GROUNDED METAL OR UNINSULATED BUS BARS OR CONDUCTORS TO BE 1.5 INCHES.
- ALL CIRCUIT BREAKER TESTS PER UL ARE CONDUCTED WITH WIRE SIZED BY THE 60 DEGREE C TABLE IN THE NATIONAL ELECTRICAL CODE. FOR APPLICATIONS AT TEMPERATURES ABOVE 25°C, IT IS RECOMMENDED THAT THE 60 DEGREE C TABLE BE USED. IF A HIGHER TEMPERATURE WIRE AND REDUCED WIRE SIZE IS USED IT SHOULD BE INVESTIGATED IN THE ACTUAL APPLICATION. IN ALL CASES THE WIRE OR CURRENT CARRYING BUS MUST BE SIZED SUCH THAT AT THE HIGHEST OPERATING TEMPERATURE AND HIGHEST CURRENT THE BREAKER TERMINALS DO NOT EXCEED 100 DEGREE C.
- ANY LINKAGE USED TO ACTUATE A CIRCUIT BREAKER MUST ACCOMMODATE FULL, UNRESTRICTED HANDLE TRAVEL AT BOTH HANDLE EXTREMES (ON-OFF,OFF-ON). IF NOT, OVERLOAD PROTECTION COULD BE COMPROMISED.

CURRENT RATING (AMPS)	DC RESISTANCE-OHMS	50/60 Hz IMPEDANCE-OHMS	400 Hz IMPEDANCE-OHMS
	51, 52, 53, 59	61, 62, 63, 64, 65, 66, 69	41, 42, 43, 49
.200	45.8	28.5	71.94
1.0	1.38	1.10	2.85
2.0	.371	.29	.76
5.0	.055	.051	.12
10.0	.017	.016	.032
20.0	.006	.006	.010
30.0	.003	.004	.006
50.0	.0019	.0018	.0019
60.0	.00157	.00134	
70.0	.00147	.00133	
80.0	.00146	.00123	
90.0	.00135	.00114	
100.0	.00135	.00114	

DCR AND IMPEDANCE VALUES ARE BASED ON MEASUREMENTS BY THE VOLTMETER AMMETER METHOD, RATED CURRENT APPLIED FOR ONE HOUR AND AT A VOLTAGE NO LESS THAN 20 VOLTS.  
 TOLERANCE: .05-2.5 AMPS ±20%, 2.6-20 AMPS ±25%, 21-100 ±50%  
 \*CONSULT FACTORY FOR SPECIAL VALUES AND FOR COIL IMPEDANCE OF DELAYS NOT SHOWN.

DELAY	100 %	125 % *	150 %	200 %	400 %	600 %	800 %	1000 %
41	NO TRIP	MAY TRIP	.5-8	.15-1.9	.02-.4	.006-.25	.004-.1	.004-.05
42	NO TRIP	MAY TRIP	5-70	2.2-25	.40-5	.012-2	.006-.2	.006-.15
43	NO TRIP	MAY TRIP	35-350	12-120	1.5-20	.012-2.2	.01-.22	.01-.1
49	NO TRIP	MAY TRIP	.100 MAX.	.050 MAX.	.020 MAX.	.020 MAX.	.020 MAX.	.020 MAX.
51	NO TRIP	.5-6.5	.3-3	.1-1.2	.031-5	.011-.25	.004-.1	.004-.08
52	NO TRIP	2-60	1.8-30	1-10	.15-2	.015-1	.008-.5	.006-.1
53	NO TRIP	80-700	40-400	15-150	2-20	.015-9	.015-.55	.012-.2
59	NO TRIP	.120 MAX.	.100 MAX.	.050 MAX.	.022 MAX.	.017 MAX.	.017 MAX.	.017 MAX.
61	NO TRIP	.7-12	.35-7	.130-3	.030-1	.015-.3	.01-.15	.008-.1
62	NO TRIP	10-120	6-60	2-20	.2-3	.015-2	.015-.8	.01-.25
63	NO TRIP	50-700	30-400	10-150	1.5-20	.015-10	.013-.85	.013-.5
64	NO TRIP	.7-12	.35-7	.13-3	.03-1	.017-.3	.01-.16	.008-.1
65	NO TRIP	10-120	6-60	2-20	.2-3	.02-2	.017-.76	.01-.6
66	NO TRIP	50-700	30-400	10-150	1.5-20	.4-10	.014-.5	.014-.3
69	NO TRIP	.120 MAX.	.100 MAX.	.050 MAX.	.022 MAX.	.017 MAX.	.017 MAX.	.017 MAX.
71	NO TRIP	.44-10	.3-7	.1-3	.03-1	.012-.3	.004-.15	.004-.1
72	NO TRIP	1.8-100	1.7-60	1-20	1.5-3	.015-2	.008-.79	.006-.28
73	NO TRIP	50-600	30-400	10-150	1.8-20	.015-10	.015-.88	.011-.5
79	NO TRIP	.120 MAX.	.100 MAX.	.050 MAX.	.023 MAX.	.016 MAX.	.015 MAX.	.015 MAX.

NOTE: RATINGS ABOVE 30 AMPS MAY DEVIATE FROM THE ABOVE LIMITS BY APPROX. 10%.  
 \* 135% FOR DELAY 71, 72, 73, & 79

SENSATA TECHNOLOGIES PROPRIETARY AND CONFIDENTIAL. NEITHER THIS PRINT NOR THE INFORMATION CONTAINED HEREON IS TO BE USED AGAINST THE INTERESTS OF SENSATA TECHNOLOGIES OR AGAINST THE INTERESTS OF ANY OF ITS AFFILIATED COMPANIES OR WHOLLY OWNED SUBSIDIARIES.		FOR REFERENCE ONLY, CHECK LATEST REVISION BEFORE USE.	
			
<b>POWER PROTECTION PRODUCTS</b> CAMBRIDGE, MD USA		<b>IAL / IUL / IEL CIRCUIT BREAKER SPECIFICATION</b>	
INTERPRET DRAWING PER ANSI Y14.5M - 1982		MATERIAL	
INCH [MM]		FINISH	
TOLERANCE UNLESS NOTED		SCALE	
DRAWN E.C.	APPROVED R.C.	INCH ± .015	SIZE <b>B</b>
CHECKED B.H.	DATE 2-OCT-1995	MM ± .38	
ANGLES ± 5°			
		REVISION <b>BW</b>	

# AM-345

REVISIONS
BW 103036

# AM-345

SECOND DECISION POLES	
1	SINGLE POLE
11	TWO POLE
111	THREE POLE
1111	FOUR POLE

THIRD DECISION	
-0	SWITCH ONLY (SEE FOURTH DECISION)
-1	SERIES
-1REC4	SERIES WITH AUXILIARY SWITCH * .110 QUICK CONNECT
-1RLS4	SERIES WITH ALARM AUXILIARY SWITCH * .110 QUICK CONNECT USED WITH MID-TRIP CONSTRUCTION ONLY
-1REC5	SERIES WITH AUXILIARY SWITCH * .187 QUICK CONNECT
-1RS4	SERIES WITH ALARM AUXILIARY SWITCH .110 QUICK CONNECT
-1REG4	SERIES WITH AUXILIARY SWITCH * .110 QUICK CONNECT (GOLD CONTACTS)
-3	SHUNT
-4	RELAY (NOT AVAILABLE IN IEL/IELH)

\* ONLY ONE AUXILIARY SWITCH IS NORMALLY SUPPLIED ON TWO AND THREE POLE UNITS. SWITCH IS LOCATED IN THE RIGHT HAND POLE. (VIEWED FROM TERMINAL END) UNLESS OTHERWISE SPECIFIED.

FOURTH DECISION FREQUENCY AND DELAY	
-SW	SWITCH ONLY(SEE NOTE)
-41	400 Hz SHORT DELAY
-42	400 Hz LONG DELAY
-43	400 Hz MOTOR START / EXTRA LONG DELAY
-49	400 Hz 150 INSTANT TRIP
-51	DC SHORT DELAY
-52	DC LONG DELAY
-53	DC MOTOR START / EXTRA LONG DELAY
-59	DC 125% INSTANT TRIP
-61	50/60 Hz SHORT DELAY
-62	50/60 Hz LONG DELAY
-63	50/60 Hz MOTOR START / EXTRA LONG DELAY
-64	50/60 Hz SHORT DELAY
-65	50/60 Hz LONG DELAY
-66	50/60 Hz MOTOR START / EXTRA LONG DELAY
-69	50/60 Hz 125% INSTANT TRIP
-71	DC/60 Hz SHORT DELAY
-72	DC/60 Hz LONG DELAY
-73	DC/60 Hz MOTOR START / EXTRA LONG DELAY
-79	DC/60 Hz 135% INSTANT TRIP

NOTE: SW OPTION IN FOURTH DECISION IS AVAILABLE WITH THIRD DECISION OPTIONS 0, 1REC4, 1REC5 and 1REG4.

FOR ADDITION OF INERTIAL DELAY, ADD AN F TO ANY DELAY NUMERAL.

FIFTH DECISION RATED CURRENT	
USE THREE NUMBERS TO PRINT REQUIRED VALUE BETWEEN .050 (UL & CSA); 0.10 (VDE) AMPS MINIMUM AND 150 (UL & CSA); 100 (VDE) AMPS MAXIMUM. CHECK AM-327 FOR AVAILABLE RATINGS AT SPECIFIC VOLTAGE AND FREQUENCY.	
FOR SWITCH ONLY UNITS USE 50.0, 70.0, OR 100 (SEE NOTE 3)	

FIRST DECISION		TERMINAL	
TYPE	DESCRIPTION		
IAL	ONE HANDLE PER UNIT		STANDARD SCREW TERMINAL. NO DESIGNATION REQUIRED.
IALH	ONE HANDLE PER POLE		
IUL	ONE HANDLE PER UNIT UL RECOGNIZED, CSA CERTIFIED *	K	STUD TERMINAL (SEE NOTE 2)
IULH	ONE HANDLE PER POLE UL RECOGNIZED, CSA CERTIFIED *	C	CLIP TERMINALS (SINGLE POLE ONLY)
IEL	ONE HANDLE PER UNIT UL RECOGNIZED, CSA CERTIFIED * (SEE NOTE 1)	B	BULLET TERMINALS (VDE APPROVAL ON DC SINGLE POLE ONLY)
IELH	ONE HANDLE PER POLE UL RECOGNIZED, CSA CERTIFIED * (SEE NOTE 1)		
IML	SINGLE POLE ONLY MID-TRIP CONSTRUCTION UL RECOGNIZED, CSA CERTIFIED * (SEE NOTE 1)		
IMLH	ONE HANDLE PER POLE MID-TRIP CONSTRUCTION UL RECOGNIZED, CSA CERTIFIED * (SEE NOTE 1)		

\* REFERENCE AM-372-6 FOR SPECIFIC CSA APPLICABILITY.

**IUL 1 - 1REC5 - 61 - 20 . 0 - A - 00**  
**IEL 1 - 1REC4 - 61 - 20 . 0 - A - 01 - V**

- NOTES:
- ONE OR MORE DESCRIPTIONS MAY BE USED AS REQUIRED.
  - WHEN THIS TABLE IS NOT USED TABLE 7 MAY BE SUBSTITUTED AND U.S. THREAD AND TWO LOCK WASHERS WILL BE SUPPLIED. UNIT WILL BE RATED AT 250 V (50/60 Hz ONLY) AND 10/32 STUDS WILL BE SUPPLIED ON AN IELK RATED 70 AMPS OR LESS.
  - IF M5 STUDS ARE REQUIRED, USE "A" ONLY ON AN IELK.
  - 415 VAC (VDE ONLY).
  - "K" NOT REQUIRED IF UNIT IS GREATER THAN 70 AMPS.
  - MULTI-POLE UNIT 1/4-20 OR M6 STUD WILL BE SUPPLIED WITH INTERPOLE BARRIER ON AC RATINGS. (SEE SHEET 14)
  - Q HANDLES WILL BE NORMALLY MARKED ON-OFF. IF -V IN FINAL DECISION IS PRESENT, -Q HANDLES WILL BE MARKED WITH COMBINATION ON-OFF/O-I.

SIXTH DECISION	
-A	METRIC THREAD MOUNTING AND TERMINATIONS
-B	BARRIER (SEE SHEET 14)
-C	277 V (50/60 Hz ONLY) (VDE APPROVED AT 250 VAC)(REQUIRES THE USE OF BARRIERS, SEE SHEET 14)
-D	240/415 VAC (50/60 Hz ONLY) (SEE NOTE 4) (REQUIRES THE USE OF BARRIERS, SEE SHEET 14)
-E	277/480 VAC (50/60 Hz ONLY) (VDE APPROVED AT 415 VAC) (REQUIRES THE USE OF VENT PLATES (EXCEPT VDE) & BARRIERS) (SEE SHEETS 3 & 14)
-G	SNAP-IN MOUNTING PLATE ADAPTER WITH HANDLE GUARDS (SEE SHEET 12)
-K	1/4-20 STUD (M6 WHEN METRIC DESIGNATOR "A" IS USED)(SEE NOTE 5 & 6)
-L	HANDLE LOCK (SEE SHEET 13)
-M	HANDLE IN OPPOSITE POLE
-P	SNAP-IN MOUNTING PLATE ADAPTER (SEE SHEET 12)
-Q	APL STYLE "FAT" HANDLE (SEE SHEET 8)(SEE NOTE 7)
-U	120/240 V, 50/60 Hz (BARRIER SUPPLIED, SEE SHEET 14)
-V	125 VDC (BARRIER SUPPLIED, SEE SHEET 14)
-W	WIRE CLAMP SUPPLIED (VDE APPROVED 16A MAX., UL APPROVED 20A MAX. WITH PREPARED WIRE) (SEE SHEET 6)
-Y	"C" BARRIER (SEE SHEET 14)
-Z	"Z" BARRIER (SEE SHEET 14)
-1	SILVER BULLET TERMINAL SPRING (STD) ("B" TERMINAL DECISION ONLY)
-2	GOLD BULLET TERMINAL SPRING ("B" TERMINAL DECISION ONLY)

SEVENTH DECISION HANDLE COLOR SELECTION			
UNMARKED		MARKED (COMBINATION ON-OFF/O-I)	
-00	BLACK	-01	BLACK W/WHITE MARKINGS
-10	YELLOW	-11	YELLOW W/BLACK MARKINGS
-20	RED	-21	RED W/WHITE MARKINGS
-30	BLUE	-31	BLUE W/WHITE MARKINGS
-40	GREEN	-41	GREEN W/WHITE MARKINGS
-60	ORANGE	-61	ORANGE W/BLACK MARKINGS
-90	WHITE	-91	WHITE W/BLACK MARKINGS

AGENCY APPROVALS		
(NONE)		
-C	CCC	IEL ONLY. (THIS UNIT WILL NOT BE VDE APPROVED.)
-U	U3	IUL SERIES CONSTRUCTION ONLY. (SEE SHEET 5)
-UC	U3 & CCC	IEL SERIES CONSTRUCTION ONLY.
-UV	U3 & VDE	IEL SERIES CONSTRUCTION ONLY.
-V	VDE	IEL ONLY. (INCLUDES ALL CCC RATINGS)

AREAS ENCLOSED WITH BOLD LINES DENOTE APPROVAL OPTIONS. THIS APPROVAL REQUIRES THE ADDITION OF A -V OR -C AT THE END OF THE PART NUMBER. THE -V OR -C WILL BE ADDED TO ANY PART NUMBER FORMED ENTIRELY FROM BOLD OUTLINED DECISIONS. IF NON-BOLD OUTLINED AREAS ARE SELECTED, THE UNIT WILL NOT BE VDE OR CCC APPROVED. BUT OTHER APPROVALS STILL APPLY.

- NOTES:
- THE IEL & IML FAMILIES OF CIRCUIT BREAKERS ARE DESIGNED TO MEET 8 MM CREEPAGE AND CLEARANCE REQUIREMENTS FOR INSTALLATION CATEGORY III, POLLUTION DEGREE 3, CASE A AS MEASURED IN IEC 60664, INTENDED FOR USE IN EQUIPMENT DESIGNED TO COMPLY WITH IEC 60950 & 60601. BUILDS MAY ALSO BE NON-AGENCY APPROVED.
  - "K" IS REQUIRED IN THE FIRST DECISION FOR ALL STUD TERMINAL BUILDS (1/4-20 OR M6 RECOMMENDED FOR 51-100 AMPS/ REQUIRED FOR 71-100 AMPS)
  - SWITCH ONLY CONSTRUCTION IS RATED AT 50A/250VAC/80VDC, 70A/240VAC/80VDC, OR 100A/240VAC/65VDC. VDE RATINGS ARE ALL 50A/250VAC. CONSULT FACTORY FOR OTHER RATINGS.

SENSATA TECHNOLOGIES PROPRIETARY AND CONFIDENTIAL. NEITHER THIS PRINT NOR THE INFORMATION CONTAINED HEREON IS TO BE USED AGAINST THE INTERESTS OF SENSATA TECHNOLOGIES OR AGAINST THE INTERESTS OF ANY OF ITS AFFILIATED COMPANIES OR WHOLLY OWNED SUBSIDIARIES.		FOR REFERENCE ONLY, CHECK LATEST REVISION BEFORE USE.	
		IAL / IUL / IEL CIRCUIT BREAKER SPECIFICATION	
POWER PROTECTION PRODUCTS CAMBRIDGE, MD USA		THIRD ANGLE PROJECTION	
DRAWN E.C.		APPROVED R.C.	
CHECKED B.H.		DATE 2-OCT-1995	
IAG/IUG/IEG/IEGS		MATERIAL	
TOLERANCE UNLESS NOTED		FINISH	
INCH ± .015		SCALE	
MM ± .38		SIZE	
ANGLES ± 5°		B	
		AM-345	
		REVISION BW	

FIRST DECISION	
TYPE	DESCRIPTION
IDL*	ONE HANDLE PER UNIT MARINE IGNITION PROTECTION CONSTRUCTION UL RECOGNIZED PER UL 1077, C22.2 NO. 235 COMPLIANT TO UL 1500 OR SAE J1171 IGNITION PROTECTION (SEE NOTES)
IDLH*	ONE HANDLE PER POLE MARINE IGNITION PROTECTION CONSTRUCTION UL RECOGNIZED PER UL 1077, C22.2 NO. 235 COMPLIANT TO UL 1500 OR SAE J1171 IGNITION PROTECTION (SEE NOTES)

\* FOR AVAILABLE TERMINAL OPTIONS, SEE SHEET 2, 1st DECISION.

SECOND DECISION	
POLES	
1	SINGLE POLE
11	TWO POLE
111	THREE POLE
1111	FOUR POLE

THIRD DECISION	
-1	SERIES

FOURTH DECISION	
FREQUENCY AND DELAY	
-51	DC SHORT DELAY
-52	DC LONG DELAY
-53	DC MOTOR START / EXTRA LONG DELAY
-59	DC 125% INSTANT TRIP
-61	50/60 Hz SHORT DELAY
-62	50/60 Hz LONG DELAY
-63	50/60 Hz MOTOR START / EXTRA LONG DELAY
-64	50/60 Hz SHORT DELAY
-65	50/60 Hz LONG DELAY
-66	50/60 Hz MOTOR START / EXTRA LONG DELAY
-69	50/60 Hz 125% INSTANT TRIP
-71	DC/60 Hz SHORT DELAY
-72	DC/60 Hz LONG DELAY
-73	DC/60 Hz MOTOR START / EXTRA LONG DELAY
-79	DC/60 Hz 135% INSTANT TRIP

FOR ADDITION OF INERTIAL DELAY, ADD AN F TO ANY DELAY NUMERAL.

FIFTH DECISION	
RATED CURRENT	
USE THREE NUMBERS TO PRINT REQUIRED VALUE BETWEEN .050 AMPS MINIMUM AND 100 AMPS MAXIMUM.	

IDL/IDLH  
UL1500 SHORT CIRCUIT INTERRUPTING CAPACITIES

RATING	VOLTAGE RATING	A.I.C.	SERIES FUSE
60A MAX.	250	1000	NONE
100A MAX.	80	1500	NONE

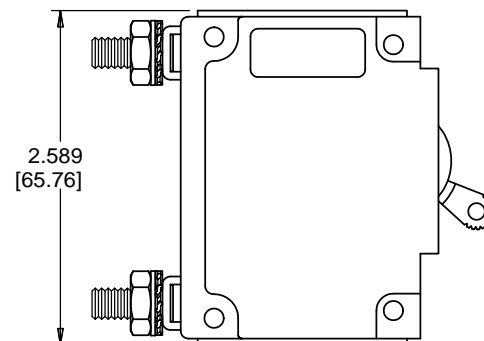
SAE J1171 SHORT CIRCUIT INTERRUPTING CAPACITIES

RATING	VOLTAGE	AIC
70A	125 VAC	5000

NOTES:

- IDL BREAKERS REQUIRE THE USE OF VENT PLATES.
- IDL/IDLH: SAE J1171 IGNITION PROTECTION MUST USE NON-DESCRIPT P/N FORMAT (SEE AM-300-214)

VENT PLATE DETAIL



IDL 1 - 1 - 61 - 20 . 0 - A - 00

SIXTH DECISION	
-A	METRIC THREAD MOUNTING AND TERMINATIONS

NOTES:  
1. ONE OR MORE DESCRIPTIONS MAY BE USED AS REQUIRED.  
2. WHEN THIS TABLE IS NOT USED TABLE 7 MAY BE SUBSTITUTED AND U.S. THREAD AND TWO LOCK WASHERS WILL BE SUPPLIED.

SEVENTH DECISION			
HANDLE COLOR SELECTION			
UNMARKED	MARKED (COMBINATION ON-OFF/O-I)		
-00	BLACK	-01	BLACK W/WHITE MARKINGS
-10	YELLOW	-11	YELLOW W/BLACK MARKINGS
-20	RED	-21	RED W/WHITE MARKINGS
-30	BLUE	-31	BLUE W/WHITE MARKINGS
-40	GREEN	-41	GREEN W/WHITE MARKINGS
-60	ORANGE	-61	ORANGE W/BLACK MARKINGS
-90	WHITE	-91	WHITE W/BLACK MARKINGS

SENSATA TECHNOLOGIES PROPRIETARY AND CONFIDENTIAL. NEITHER THIS PRINT NOR THE INFORMATION CONTAINED HEREON IS TO BE USED AGAINST THE INTERESTS OF SENSATA TECHNOLOGIES OR AGAINST THE INTERESTS OF ANY OF ITS AFFILIATED COMPANIES OR WHOLLY OWNED SUBSIDIARIES.

FOR REFERENCE ONLY, CHECK LATEST REVISION BEFORE USE.

				<b>IAL / IUL / IEL CIRCUIT BREAKER SPECIFICATION</b>		
<b>POWER PROTECTION PRODUCTS</b> CAMBRIDGE, MD USA		INTERPRET DRAWING PER ANSI Y14.5M - 1982		MATERIAL		
		INCH [MM]		FINISH		
		TOLERANCE UNLESS NOTED				
DRAWN	E.C.	APPROVED	R.C.	INCH	± .015	
CHECKED	B.H.	DATE	2-OCT-1995	MM	± .38	
IAG/IUG/IEG/IEGS				ANGLES	± 5°	
				SCALE	SIZE	B
				<b>AM-345</b>		REVISION <b>BW</b>

FIRST DECISION	
TYPE	DESCRIPTION
IULD*	ONE HANDLE PER UNIT DUST PROTECTION CONSTRUCTION UL RECOGNIZED PER UL 1077, C22.2 NO. 235
IULDH*	ONE HANDLE PER POLE DUST PROTECTION CONSTRUCTION UL RECOGNIZED PER UL 1077, C22.2 NO. 235
* FOR AVAILABLE TERMINAL OPTIONS, SEE SHEET 2, 1st DECISION.	

SECOND DECISION	
POLES	
1	SINGLE POLE
11	TWO POLE
111	THREE POLE
1111	FOUR POLE

THIRD DECISION	
-1	SERIES
-1*	SERIES WITH AUXILIARY SWITCH
* FOR AVAILABLE AUXILIARY SWITCH OPTIONS, SEE SHEET 2, 3rd DECISION.	

FOURTH DECISION	
FREQUENCY AND DELAY	
-61	50/60 Hz SHORT DELAY
-62	50/60 Hz LONG DELAY
-63	50/60 Hz MOTOR START / EXTRA LONG DELAY
-64	50/60 Hz SHORT DELAY
-65	50/60 Hz LONG DELAY
-66	50/60 Hz MOTOR START / EXTRA LONG DELAY
-69	50/60 Hz 125% INSTANT TRIP
FOR ADDITION OF INERTIAL DELAY, ADD AN F TO ANY DELAY NUMERAL.	

FIFTH DECISION	
RATED CURRENT	
USE THREE NUMBERS TO PRINT REQUIRED VALUE BETWEEN .050 AMPS MINIMUM AND 60 AMPS MAXIMUM.	

IULD - SHORT CIRCUIT INTERRUPTING CAPACITIES

RATING	VOLTAGE RATING	A.I.C.	SERIES FUSE
60A MAX.	250	5000	100 MAX
30A MAX.	277	5000	100 MAX

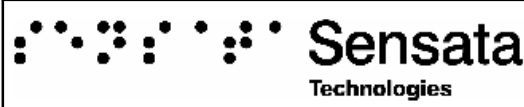
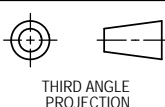
IULD 1 - 1 - 61 - 20 . 0 - A - 00

SIXTH DECISION	
-A	METRIC THREAD MOUNTING AND TERMINATIONS
-C	277 V (50/60 Hz ONLY)
NOTES: 1. ONE OR MORE DESCRIPTIONS MAY BE USED AS REQUIRED. 2. WHEN THIS TABLE IS NOT USED TABLE 7 MAY BE SUBSTITUTED AND U.S. THREAD AND TWO LOCK WASHERS WILL BE SUPPLIED.	

SEVENTH DECISION			
HANDLE COLOR SELECTION			
UNMARKED	MARKED (COMBINATION ON-OFF/O-I)		
-00	BLACK	-01	BLACK W/WHITE MARKINGS
-10	YELLOW	-11	YELLOW W/BLACK MARKINGS
-20	RED	-21	RED W/WHITE MARKINGS
-30	BLUE	-31	BLUE W/WHITE MARKINGS
-40	GREEN	-41	GREEN W/WHITE MARKINGS
-60	ORANGE	-61	ORANGE W/BLACK MARKINGS
-90	WHITE	-91	WHITE W/BLACK MARKINGS

SENSATA TECHNOLOGIES PROPRIETARY AND CONFIDENTIAL. NEITHER THIS PRINT NOR THE INFORMATION CONTAINED HEREON IS TO BE USED AGAINST THE INTERESTS OF SENSATA TECHNOLOGIES OR AGAINST THE INTERESTS OF ANY OF ITS AFFILIATED COMPANIES OR WHOLLY OWNED SUBSIDIARIES.

FOR REFERENCE ONLY, CHECK LATEST REVISION BEFORE USE.

 <p><b>Sensata Technologies</b></p> <p>POWER PROTECTION PRODUCTS CAMBRIDGE, MD USA</p>	 <p>THIRD ANGLE PROJECTION</p>	<p><b>IAL / IUL / IEL CIRCUIT BREAKER SPECIFICATION</b></p>		
		<p>INTERPRET DRAWING PER ANSI Y14.5M - 1982</p>	<p>MATERIAL</p>	
		<p>INCH [MM]</p>	<p>FINISH</p>	
<p>TOLERANCE UNLESS NOTED</p>	<p>INCH ± .015</p>	<p>SCALE</p>	<p>SIZE</p>	
<p>DRAWN E.C.</p>	<p>APPROVED R.C.</p>	<p>MM ± .38</p>	<p>B</p>	
<p>CHECKED B.H.</p>	<p>DATE 2-OCT-1995</p>	<p>ANGLES ± 5°</p>	<p>AM-345</p>	
<p>IAG/IUG/IEG/IEGS</p>			<p>REVISION BW</p>	

FIRST DECISION	
TYPE	DESCRIPTION
IUL*	ONE TOGGLE HANDLE PER UNIT MEETS U3,TC1,OL REQUIREMENTS CSA22.2 NO.100-04(SEPT.2004) AIRPAX PART NUMBER MUST BE SPECIFIED WITH -U AT END OF PART NUMBER.
IULH*	ONE TOGGLE HANDLE PER POLE MEETS U3,TC1,OL REQUIREMENTS CSA22.2 NO.100-04(SEPT.2004) AIRPAX PART NUMBER MUST BE SPECIFIED WITH -U AT END OF PART NUMBER.

\* FOR AVAILABLE TERMINAL OPTIONS, SEE SHEET 2, 1st DECISION.

SECOND DECISION	
POLES	
1	SINGLE POLE
11	TWO POLE
111	THREE POLE

THIRD DECISION	
-1	SERIES
-1*	SERIES WITH AUXILIARY SWITCH

\* FOR AVAILABLE AUXILIARY SWITCH OPTIONS, SEE SHEET 2, 3rd DECISION.

FOURTH DECISION	
FREQUENCY AND DELAY	
-61	50/60 Hz SHORT DELAY
-62	50/60 Hz LONG DELAY
-63	50/60 Hz MOTOR START / EXTRA LONG DELAY
-69	50/60 Hz 125% INSTANT TRIP

FOR ADDITION OF INERTIAL DELAY, ADD AN F TO ANY DELAY NUMERAL.

FIFTH DECISION	
RATED CURRENT	
USE THREE NUMBERS TO PRINT REQUIRED VALUE BETWEEN .050 AMPS MINIMUM AND 100.0 AMPS MAXIMUM.	

IUL 1 - 1 - 61 - 20 . 0 - A - 00 - U

SIXTH DECISION	
-A	METRIC THREAD MOUNTING AND TERMINATIONS

NOTES:  
1. ONE OR MORE DESCRIPTIONS MAY BE USED AS REQUIRED.


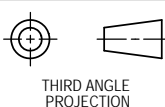
SEVENTH DECISION			
HANDLE COLOR SELECTION			
UNMARKED		MARKED (COMBINATION ON-OFF/O-I)	
-00	BLACK	-01	BLACK W/WHITE MARKINGS
-10	YELLOW	-11	YELLOW W/BLACK MARKINGS
-20	RED	-21	RED W/WHITE MARKINGS
-30	BLUE	-31	BLUE W/WHITE MARKINGS
-40	GREEN	-41	GREEN W/WHITE MARKINGS
-60	ORANGE	-61	ORANGE W/BLACK MARKINGS
-90	WHITE	-91	WHITE W/BLACK MARKINGS

EIGHTH DECISION	
INDICATES U3 APPROVAL	

SHORT CIRCUIT INTERRUPTING CAPACITIES

RATING	VOLTAGE RATING (AC)	A.I.C.	CONFIG.
100A MAX.	125	1500	1 POLE
	250(2 POLE BREAK)	1500	2 POLE
	250	2000	3 POLE

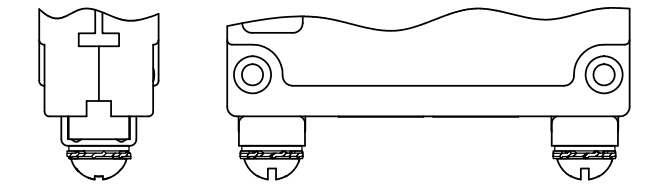
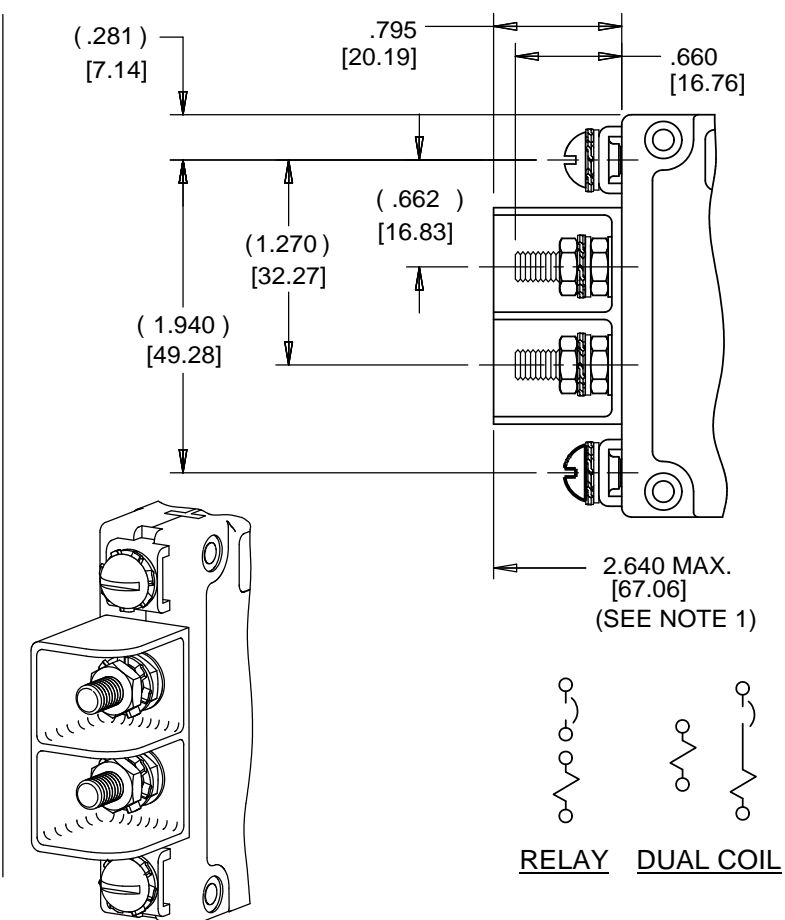
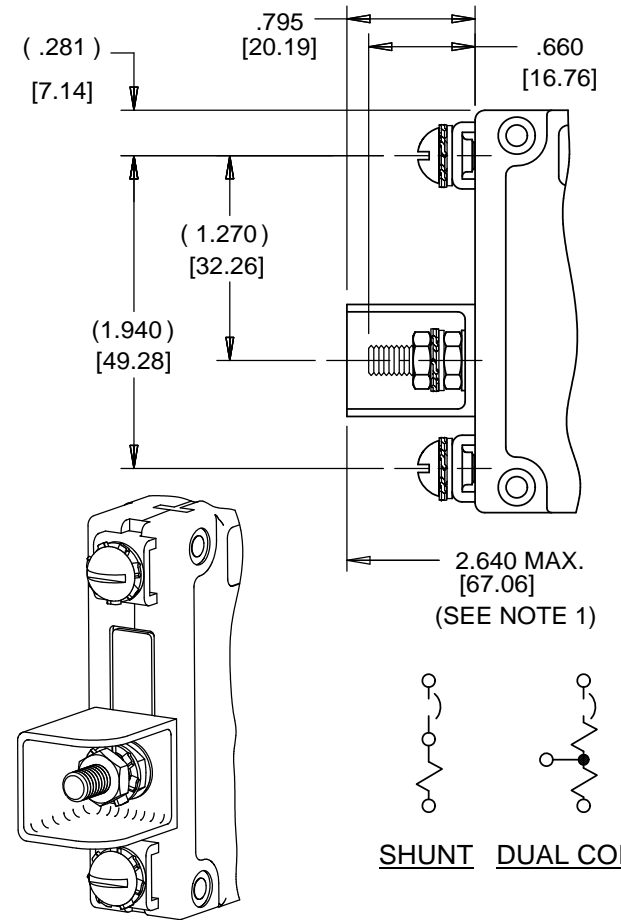
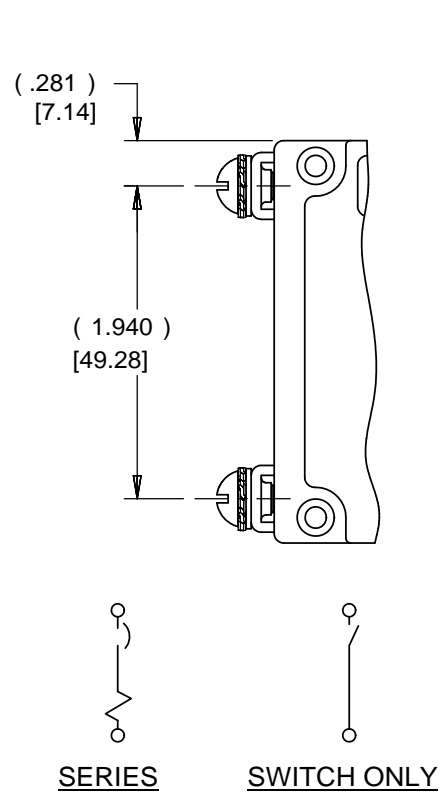
NOTE:  
MULTIPOLE BUILD SUPPLIED WITH INTERPOLE BARRIER. (SEE SHEET 14)

SENSATA TECHNOLOGIES PROPRIETARY AND CONFIDENTIAL. NEITHER THIS PRINT NOR THE INFORMATION CONTAINED HEREON IS TO BE USED AGAINST THE INTERESTS OF SENSATA TECHNOLOGIES OR AGAINST THE INTERESTS OF ANY OF ITS AFFILIATED COMPANIES OR WHOLLY OWNED SUBSIDIARIES.		FOR REFERENCE ONLY, CHECK LATEST REVISION BEFORE USE.	
			
<b>POWER PROTECTION PRODUCTS</b> CAMBRIDGE, MD USA		<b>IAL / IUL / IEL CIRCUIT BREAKER SPECIFICATION</b>	
INTERPRET DRAWING PER ANSI Y14.5M - 1982 INCH [MM]		MATERIAL	
TOLERANCE UNLESS NOTED		FINISH	
DRAWN E.C. CHECKED B.H.	APPROVED R.C. DATE 2-OCT-1995	INCH ± .015 MM ± .38 ANGLES ± 5°	SCALE SIZE B
IAG/IUG/IEG/IEGS		AM-345	
		REVISION BW	

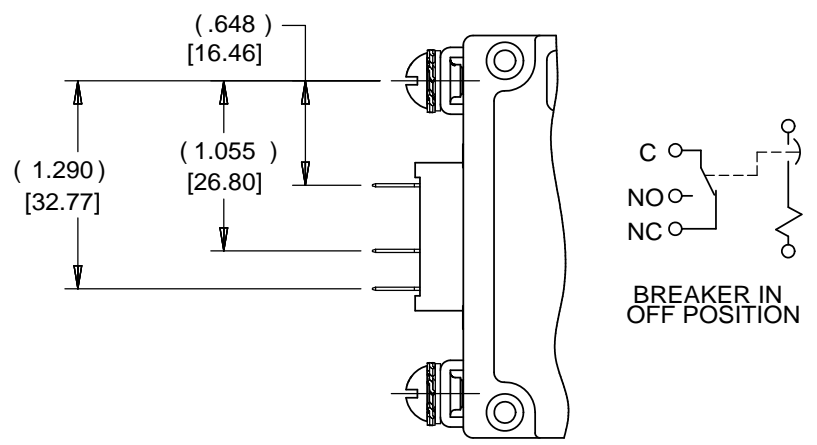
REVISIONS	
BW	103036

# AM-345

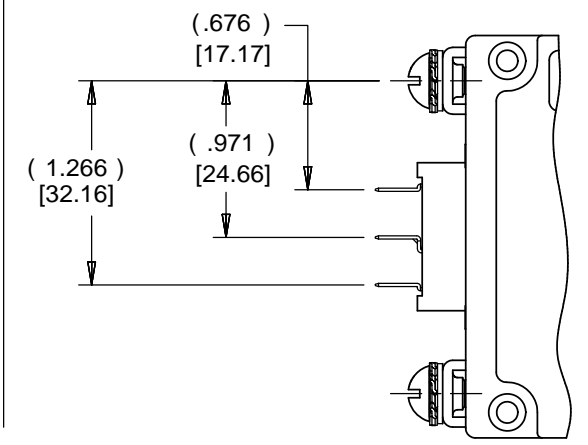
SHEET 6 OF 14



WIRE CLAMP



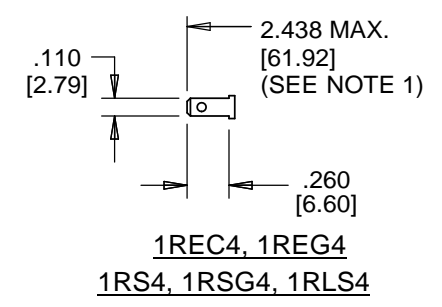
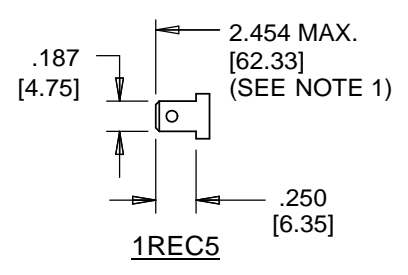
SERIES WITH AUXILIARY SWITCH



SPACING FOR VDE SWITCH (RXX4 ONLY)

- NOTES:**
1. DIMENSIONS THAT REFERENCE THIS NOTE ARE TAKEN FROM BACK OF MOUNTING PANEL.
  2. EACH TERMINAL IS SUPPLIED WITH A 10-32 X .312 [7.92] OR M5 X 8mm SCREW, FLAT WASHER, AND EXTERNAL TOOTH LOCK WASHER. MIDDLE TERMINAL IS A 10-32 OR M5 STUD SUPPLIED WITH A NUT, FLAT WASHER & TOOTH LOCK WASHER.

## SCREW TERMINAL CONFIGURATIONS



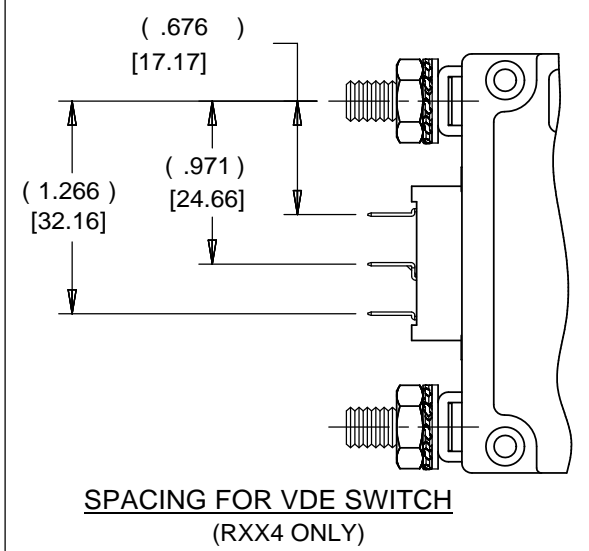
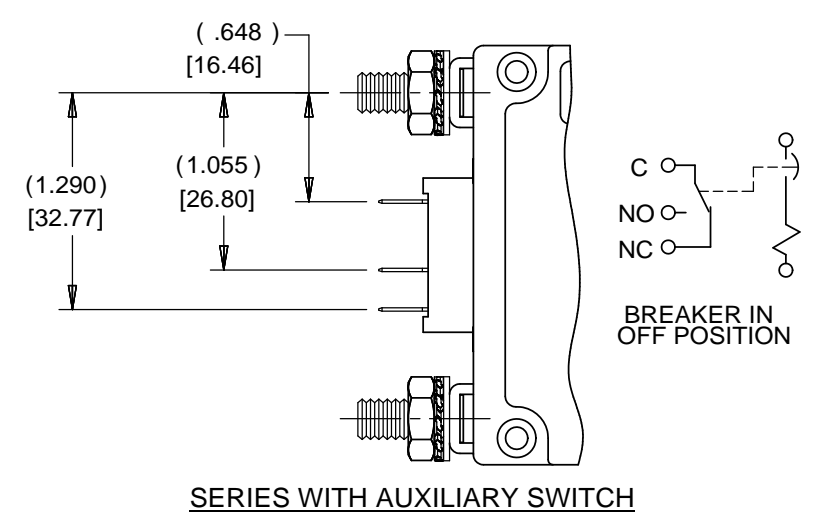
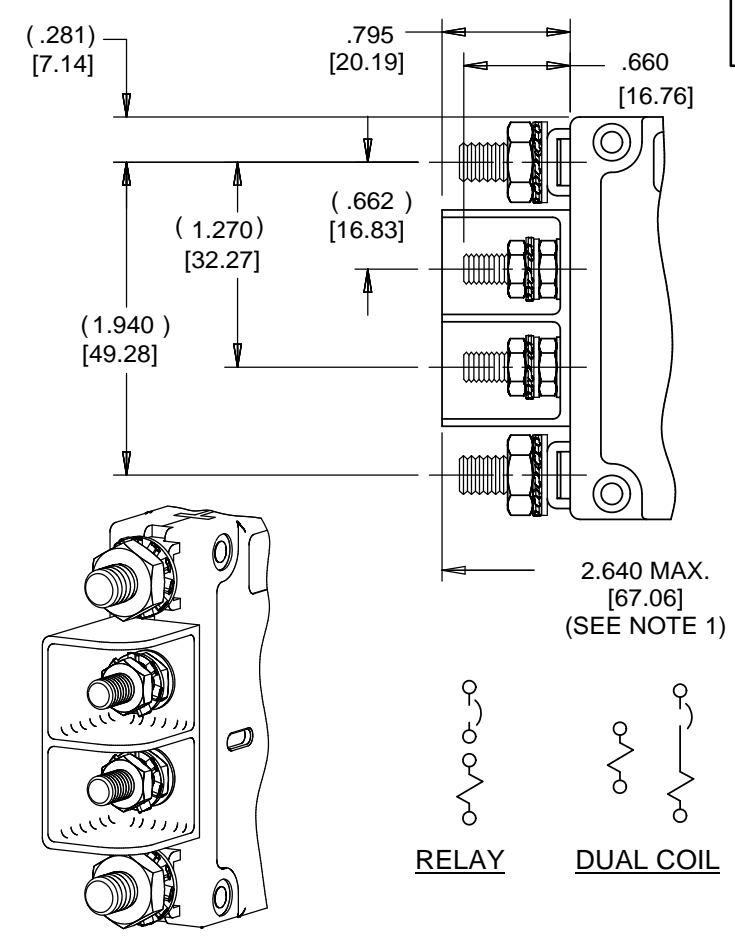
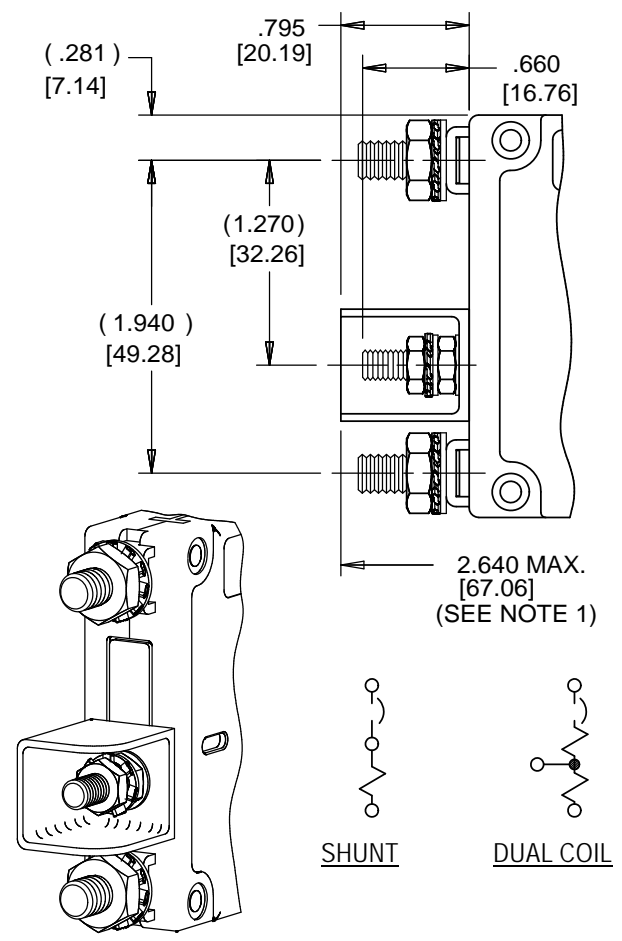
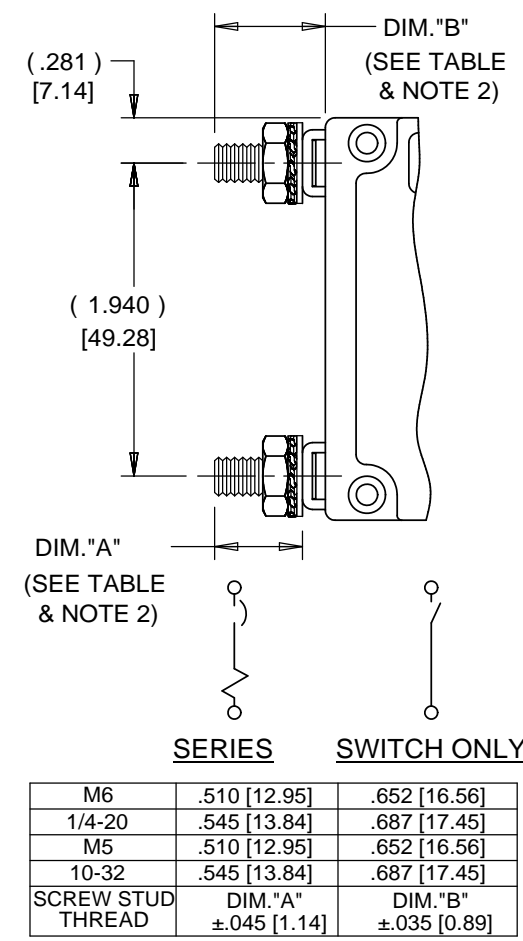
SENSATA TECHNOLOGIES PROPRIETARY AND CONFIDENTIAL. NEITHER THIS PRINT NOR THE INFORMATION CONTAINED HEREON IS TO BE USED AGAINST THE INTERESTS OF SENSATA TECHNOLOGIES OR AGAINST THE INTERESTS OF ANY OF ITS AFFILIATED COMPANIES OR WHOLLY OWNED SUBSIDIARIES. FOR REFERENCE ONLY, CHECK LATEST REVISION BEFORE USE.

				<h3>IAL / IUL / IEL CIRCUIT BREAKER SPECIFICATION</h3>		
		POWER PROTECTION PRODUCTS CAMBRIDGE, MD USA		INTERPRET DRAWING PER ANSI Y14.5M - 1982		MATERIAL
DRAWN E.C.		APPROVED R.C.		INCH ± .015		FINISH
CHECKED B.H.		DATE 2-OCT-1995		MM ± .38		SCALE
IAG/IUG/IEG/IEGS				ANGLES ± 5°		SIZE <b>B</b>
						REVISION <b>BW</b>

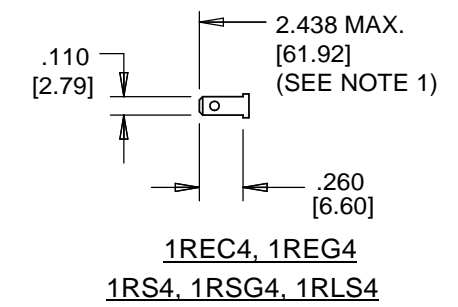
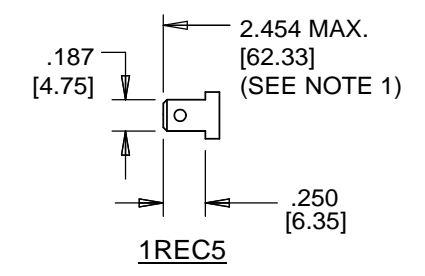
# AM-345

REVISIONS	
BW	103036

# AM-345



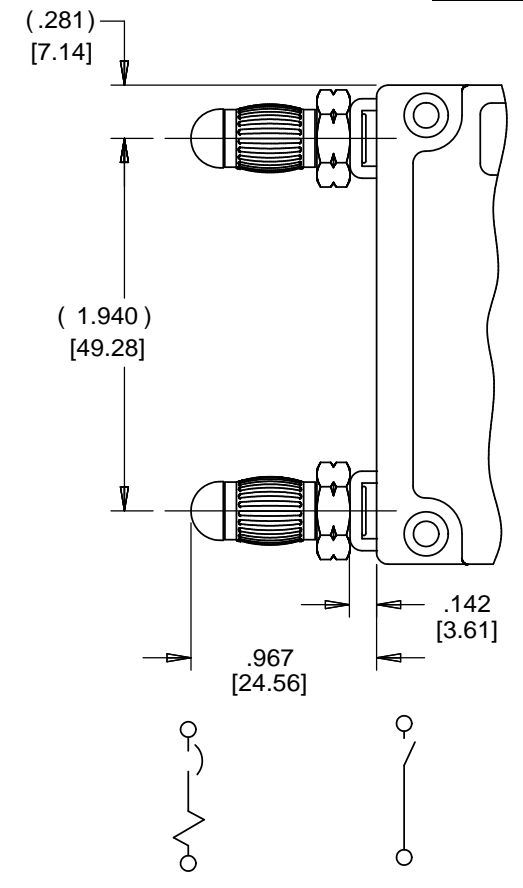
- NOTES:
1. DIMENSIONS THAT REFERENCE THIS NOTE ARE TAKEN FROM BACK OF MOUNTING PANEL.
  2. EACH OUTER TERMINAL STUD IS SUPPLIED WITH A FLAT WASHER, TOOTH LOCK WASHER, AND A HEX NUT.
  3. MIDDLE TERMINAL IS A 10-32 OR M5 STUD, SUPPLIED WITH A NUT, FLAT WASHER & TOOTH LOCK WASHER.



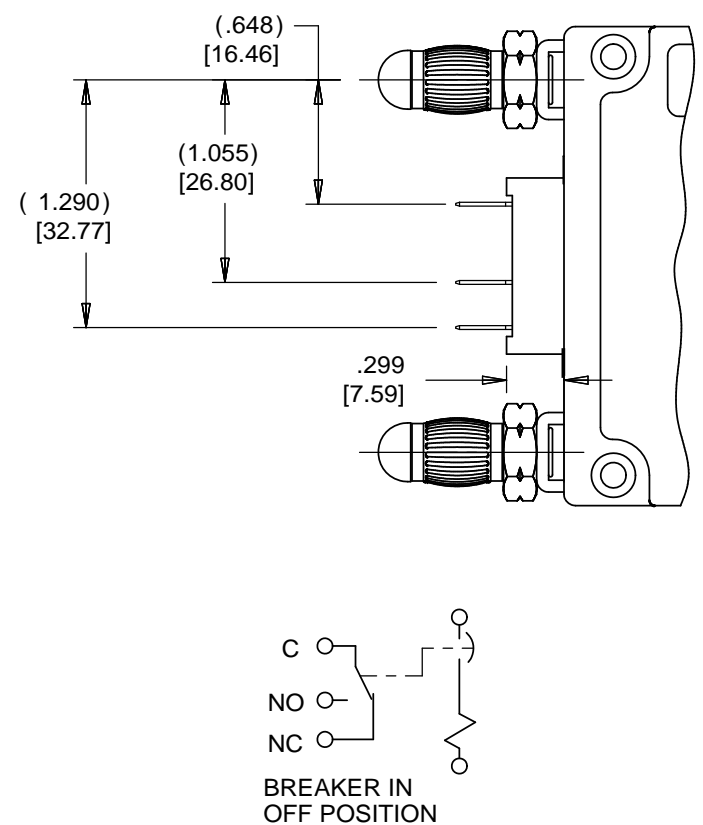
## STUD TERMINAL CONFIGURATIONS

SENSATA TECHNOLOGIES PROPRIETARY AND CONFIDENTIAL. NEITHER THIS PRINT NOR THE INFORMATION CONTAINED HEREON IS TO BE USED AGAINST THE INTERESTS OF SENSATA TECHNOLOGIES OR AGAINST THE INTERESTS OF ANY OF ITS AFFILIATED COMPANIES OR WHOLLY OWNED SUBSIDIARIES.		FOR REFERENCE ONLY, CHECK LATEST REVISION BEFORE USE.	
<p><b>Sensata Technologies</b></p> <p>POWER PROTECTION PRODUCTS CAMBRIDGE, MD USA</p>	<p>THIRD ANGLE PROJECTION</p>	<p><b>IAL / IUL / IEL CIRCUIT BREAKER SPECIFICATION</b></p>	
	<p>INTERPRET DRAWING PER ANSI Y14.5M - 1982</p>	<p>MATERIAL</p>	
	<p>INCH [MM]</p>	<p>FINISH</p>	
<p>TOLERANCE UNLESS NOTED</p>	<p>INCH ±.015</p>	<p>SCALE</p>	<p>SIZE</p>
<p>DRAWN E.C.</p>	<p>APPROVED R.C.</p>	<p>MM ±.38</p>	<p>B</p>
<p>CHECKED B.H.</p>	<p>DATE 2-OCT-1995</p>	<p>ANGLES ± 5°</p>	<p>AM-345</p>
<p>IAG/IUG/IEG/IEGS</p>			<p>REVISION BW</p>

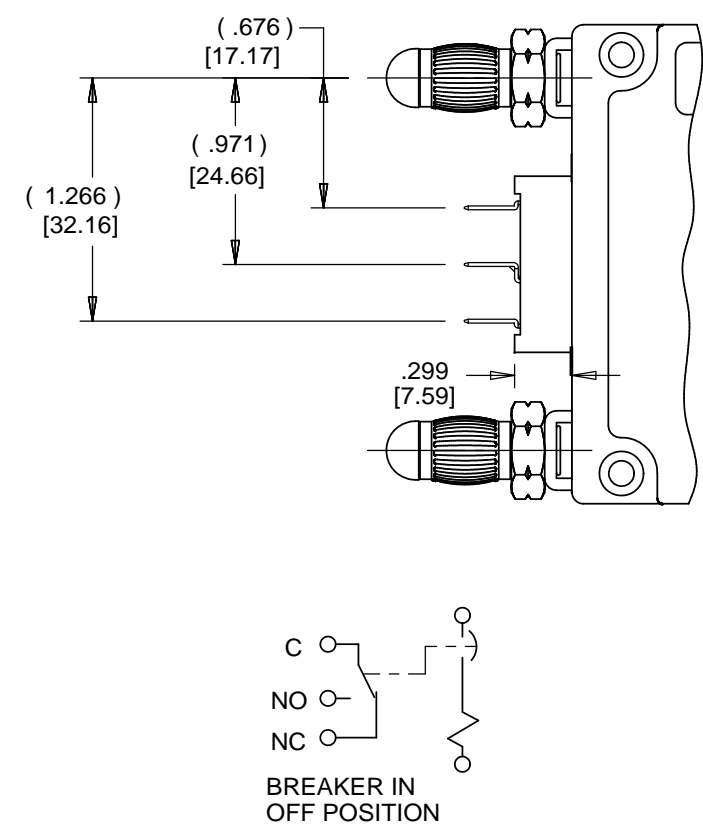
**5/16" BULLET TERMINAL CONFIGURATIONS**



**SERIES SWITCH ONLY**



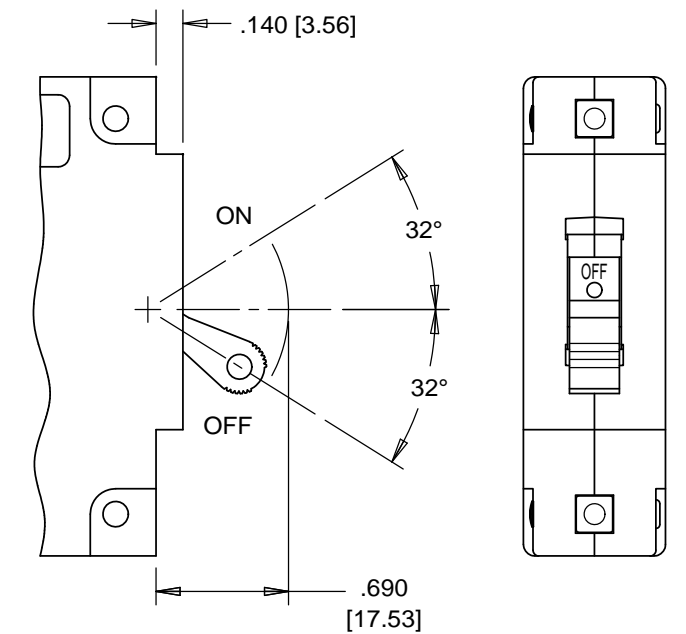
**SERIES WITH AUXILIARY SWITCH**



**SPACING FOR VDE SWITCH (RXX4 ONLY)**

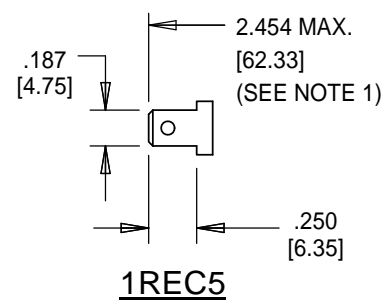
**APL STYLE "FAT" HANDLE OPTION**

(SEE SHEET 2, SIXTH DECISION, -Q)

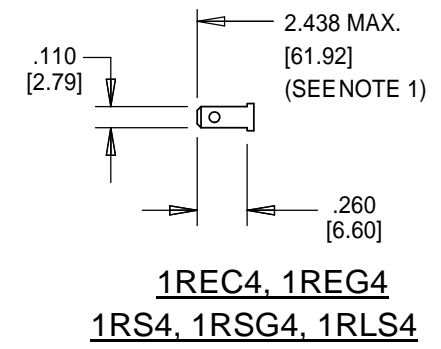


BULLET RECEIVING HOLE DIMENSION:  $.312 \pm .001$  [7.92 ± 0.03]  
WITH  $.050$  [1.27] X 45° CHAMFER ON ENTRY EDGE.  
CONSULT FACTORY FOR BUSS BAR APPLICATION.

- NOTES:
- 1/4" DIAMETER BULLET TERMINALS ARE AVAILABLE, USE A NON-DESCRIPT PART NUMBER. CONSULT FACTORY FOR DIMENSIONAL DETAILS.
  - MAXIMUM POLES PER UNIT PERMITTED TO USE BULLET TERMINAL.  
2 POLE - UL/CSA TYPE UNITS.  
1 POLE - VDE TYPE UNITS

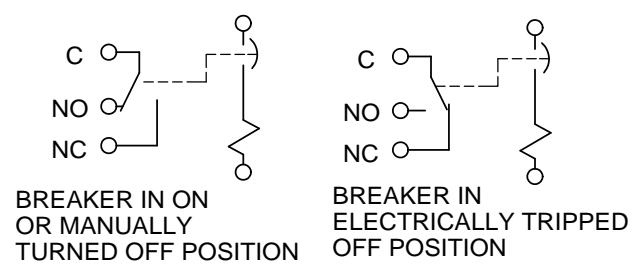


**1REC5**



**1REC4, 1REG4  
1RS4, 1RSG4, 1RLS4**

**AUXILIARY ALARM SWITCH (1RS4, 1RSG4)**

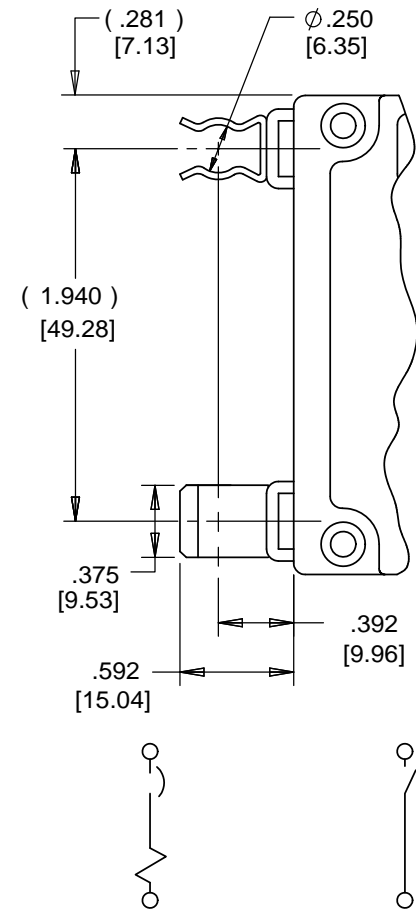


SENSATA TECHNOLOGIES PROPRIETARY AND CONFIDENTIAL. NEITHER THIS PRINT NOR THE INFORMATION CONTAINED HEREON IS TO BE USED AGAINST THE INTERESTS OF SENSATA TECHNOLOGIES OR AGAINST THE INTERESTS OF ANY OF ITS AFFILIATED COMPANIES OR WHOLLY OWNED SUBSIDIARIES.				FOR REFERENCE ONLY, CHECK LATEST REVISION BEFORE USE.	
				<b>IAL / IUL / IEL CIRCUIT BREAKER SPECIFICATION</b>	
POWER PROTECTION PRODUCTS		INTERPRET DRAWING PER ANSI Y14.5M - 1982		MATERIAL	
CAMBRIDGE, MD USA		INCH [MM]		FINISH	
DRAWN E.C.		APPROVED R.C.		TOLERANCE UNLESS NOTED	
CHECKED B.H.		DATE 2-OCT-1995		SCALE	
IAG/IUG/IEG/IEGS		INCH ± .015		SIZE	
		MM ± .38		B	
		ANGLES ± 5°		AM-345	
				REVISION BW	

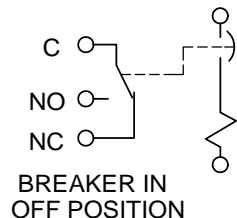
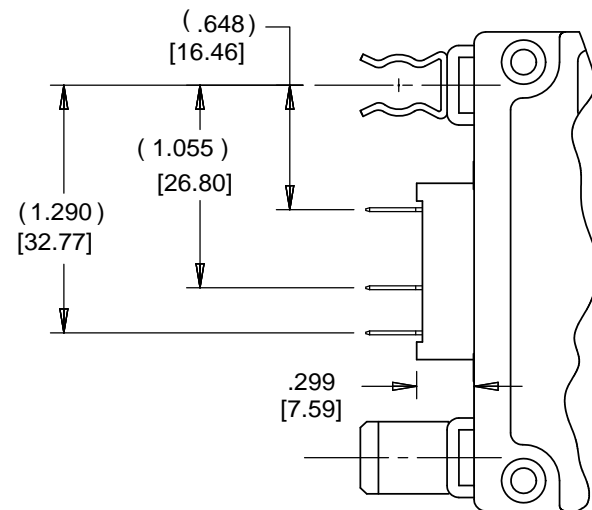


REVISIONS	
BW	103036

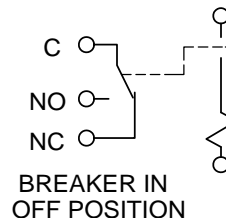
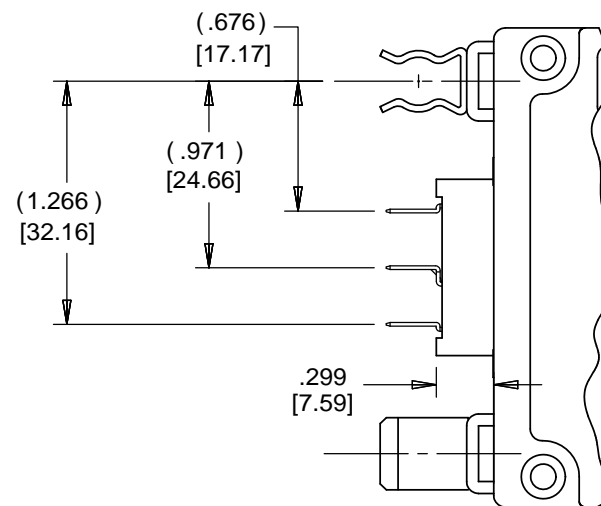
# FUSE CLIP TERMINAL CONFIGURATIONS



**SERIES**      **SWITCH ONLY**

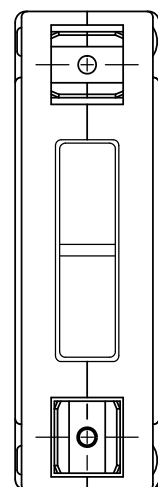


**SERIES WITH AUXILIARY SWITCH**

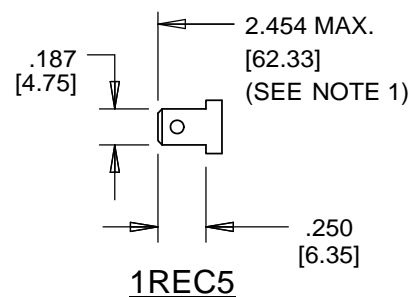
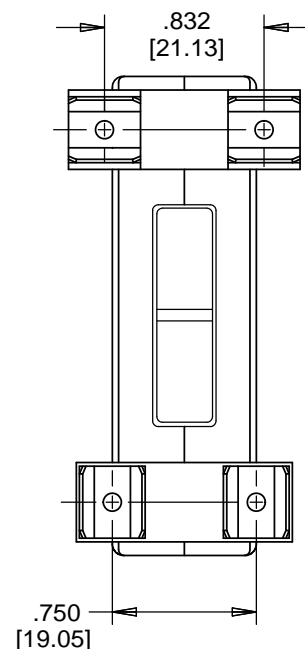


**SPACING FOR VDE SWITCH**  
(RXX4 ONLY)

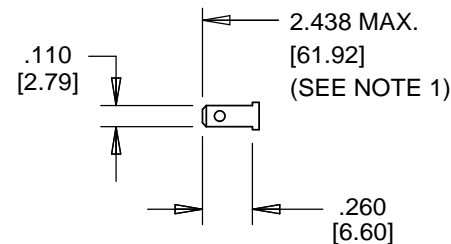
**SINGLE FUSE CLIP < 50 AMPS**



**DOUBLE FUSE CLIP > 50 AMPS**

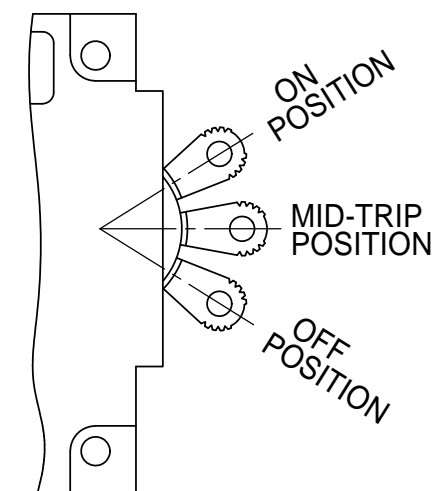


**1REC5**

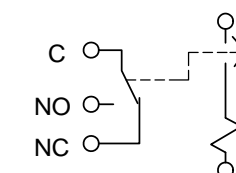


**1REC4, 1REG4  
1RS4, 1RSG4, 1RLS4**

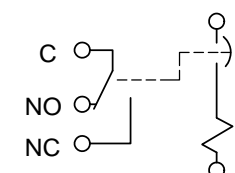
**MID-TRIP**



IN THIS TYPE OF BUILD, THE HANDLE POSITION INDICATES THE STATUS OF THE CIRCUIT BREAKER. IN ADDITION TO THE FULL ON AND FULL OFF POSITIONS, THERE IS A MIDDLE POSITION INDICATING THAT THE BREAKER HAS ELECTRICALLY TRIPPED FROM AN OVERLOAD. IT IS AVAILABLE IN SINGLE POLE AND MULTIPOLE (HANDLE PER POLE ONLY); SERIES, SHUNT, OR RELAY CONSTRUCTIONS. SWITCH ONLY CONFIGURATION IS NOT AVAILABLE IN MID-TRIP BUILD. AN AUXILIARY SWITCH CAN BE FURNISHED AS AN INTEGRAL PART OF THE MID-TRIP BREAKER. THE SWITCH PROVIDES AN INDICATION AT A REMOTE LOCATION WHEN THE CIRCUIT BREAKER HAS ELECTRICALLY TRIPPED AND HANDLE IS IN THE MID-TRIP POSITION. (SEE ILLUSTRATIONS BELOW)



**BREAKER IN ON OR MANUALLY TURNED OFF POSITION**



**BREAKER IN MID-TRIP POSITION (ELECTRICALLY TRIPPED)**

**SERIES MID-TRIP WITH AUXILIARY SWITCH (1RLS4)**

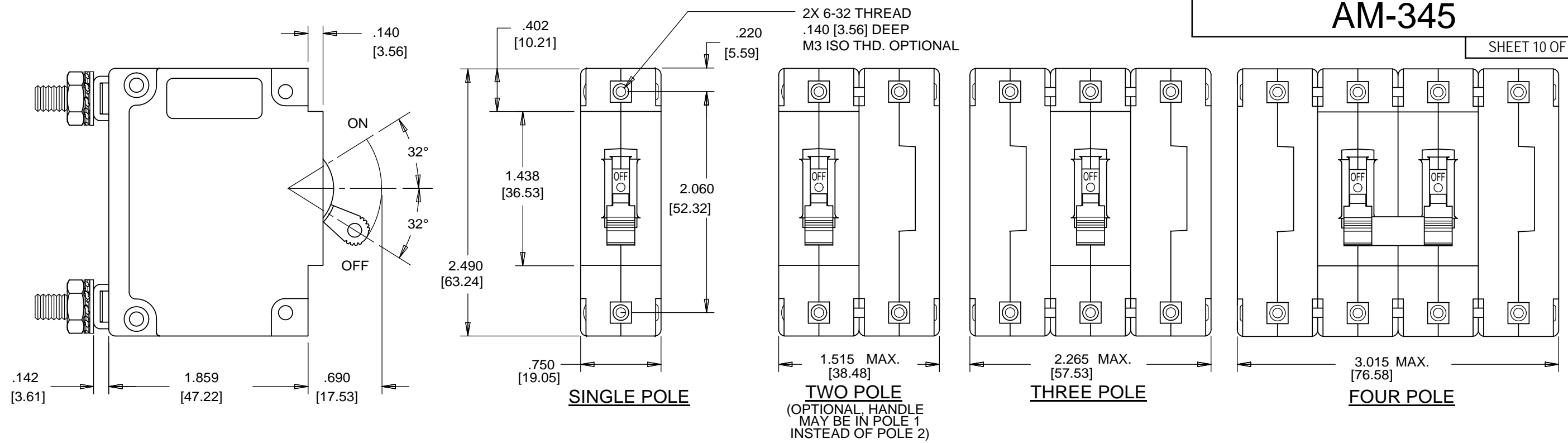
SENSATA TECHNOLOGIES PROPRIETARY AND CONFIDENTIAL. NEITHER THIS PRINT NOR THE INFORMATION CONTAINED HEREON IS TO BE USED AGAINST THE INTERESTS OF SENSATA TECHNOLOGIES OR AGAINST THE INTERESTS OF ANY OF ITS AFFILIATED COMPANIES OR WHOLLY OWNED SUBSIDIARIES.

FOR REFERENCE ONLY, CHECK LATEST REVISION BEFORE USE.

				<b>IAL / IUL / IEL CIRCUIT BREAKER SPECIFICATION</b>		
		INTERPRET DRAWING PER ANSI Y14.5M - 1982		MATERIAL		
<b>POWER PROTECTION PRODUCTS</b> CAMBRIDGE, MD USA		INCH [MM]		FINISH		
TOLERANCE UNLESS NOTED		INCH ± .015		SCALE		
DRAWN E.C.	APPROVED R.C.	MM ± .38		SIZE B	<b>AM-345</b>	
CHECKED B.H.	DATE 2-OCT-1995	ANGLES ± 5°		REVISION BW		
IAG/IUG/IEG/IEGS						

REVISIONS	
BW	103036

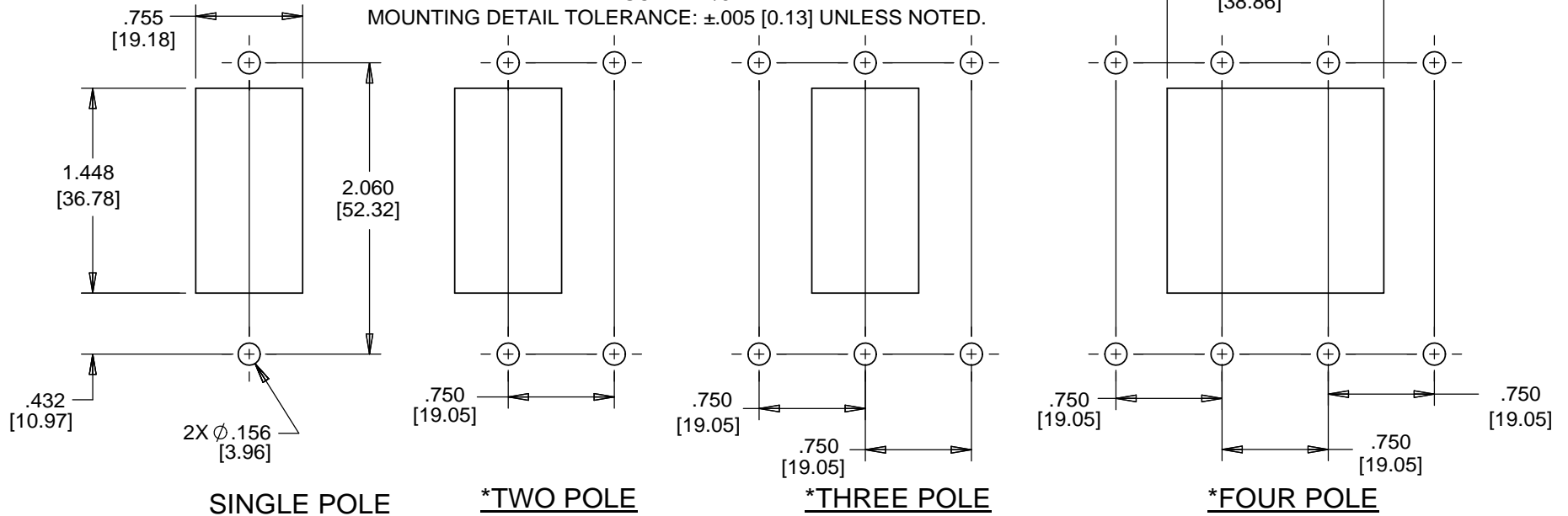
# AM-345



NOTE: STUD TERMINAL STYLE SHOWN

### PANEL MOUNTING DETAILS

SCALE: 7/8



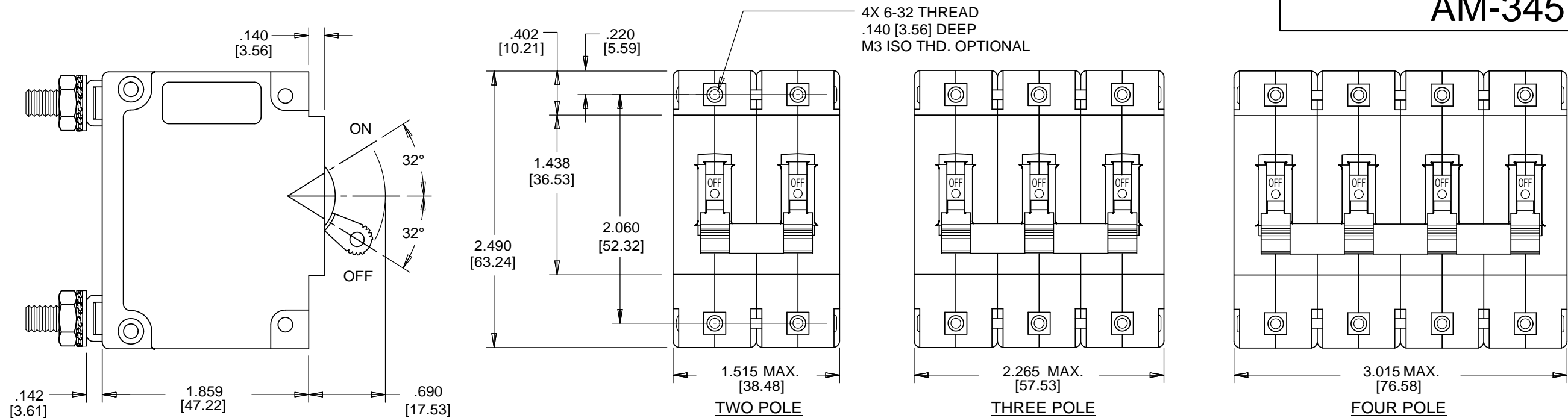
#### MOUNTING NOTES:

1. ALL MOUNTING INSERTS SHALL BE UTILIZED WHEN PANEL MOUNTING CIRCUIT BREAKERS. PANEL MOUNTING SCREWS SHALL HAVE RECOMMENDED TORQUE APPLIED PER NOTE 18 ON SHEET 1.
2. PANEL MOUNTING SCREWS SHALL NOT EXTEND BEYOND BACK OF MOUNTING PANEL MORE THAN SPECIFIED MOUNTING INSERT DEPTH.

\* SEE SINGLE POLE MOUNTING DETAIL FOR HOLE SIZES AND LOCATIONS.

ONE HANDLE PER UNIT

SENSATA TECHNOLOGIES PROPRIETARY AND CONFIDENTIAL. NEITHER THIS PRINT NOR THE INFORMATION CONTAINED HEREON IS TO BE USED AGAINST THE INTERESTS OF SENSATA TECHNOLOGIES OR AGAINST THE INTERESTS OF ANY OF ITS AFFILIATED COMPANIES OR WHOLLY OWNED SUBSIDIARIES.		FOR REFERENCE ONLY, CHECK LATEST REVISION BEFORE USE.	
<b>POWER PROTECTION PRODUCTS</b> CAMBRIDGE, MD USA		<b>IAL / IUL / IEL CIRCUIT BREAKER SPECIFICATION</b>	
DRAWN E.C.		APPROVED R.C.	
CHECKED B.H.		DATE 2-OCT-1995	
IAG/IUG/IEG/IEGS		INTERPRET DRAWING PER ANSI Y14.5M - 1982	
		MATERIAL	
		FINISH	
		SCALE	
		SIZE	
		REVISION	
		B	
		AM-345	
		BW	

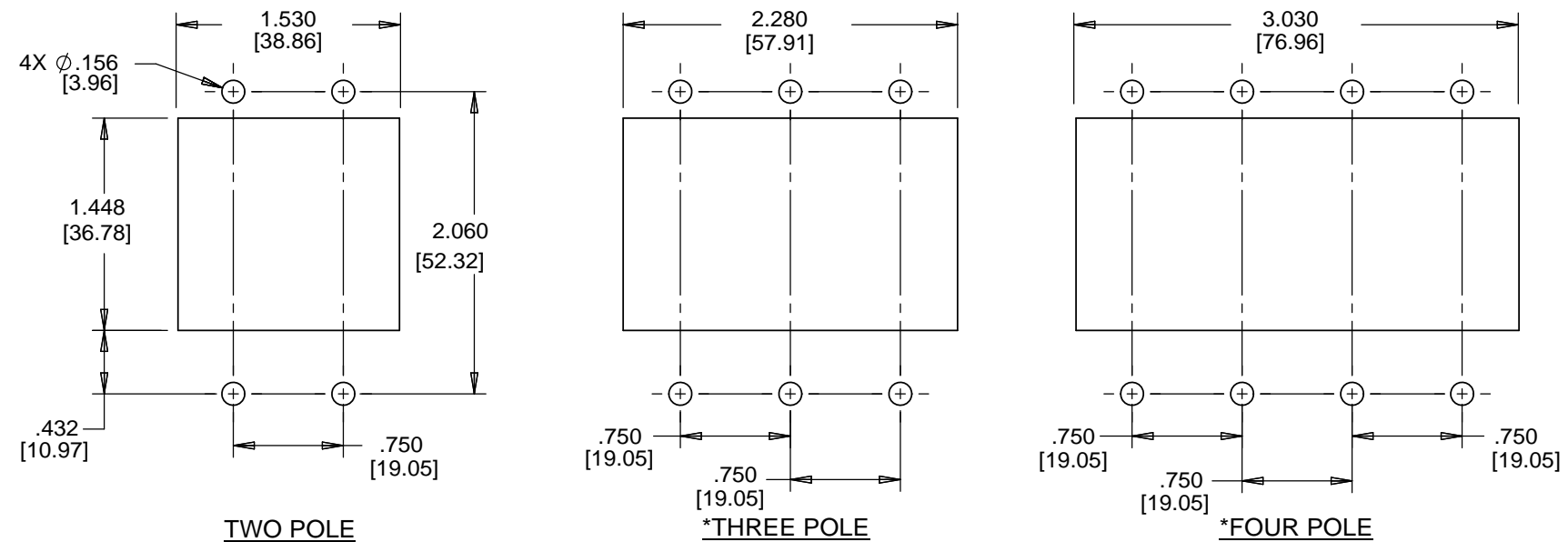


**PANEL MOUNTING DETAILS**

SCALE: 7/8

MOUNTING DETAIL TOLERANCE: ±.005 [0.13] UNLESS NOTED.

NOTE: STUD TERMINAL STYLE SHOWN



\* SEE TWO POLE MOUNTING DETAIL FOR HOLE SIZES AND LOCATIONS

ONE HANDLE PER POLE

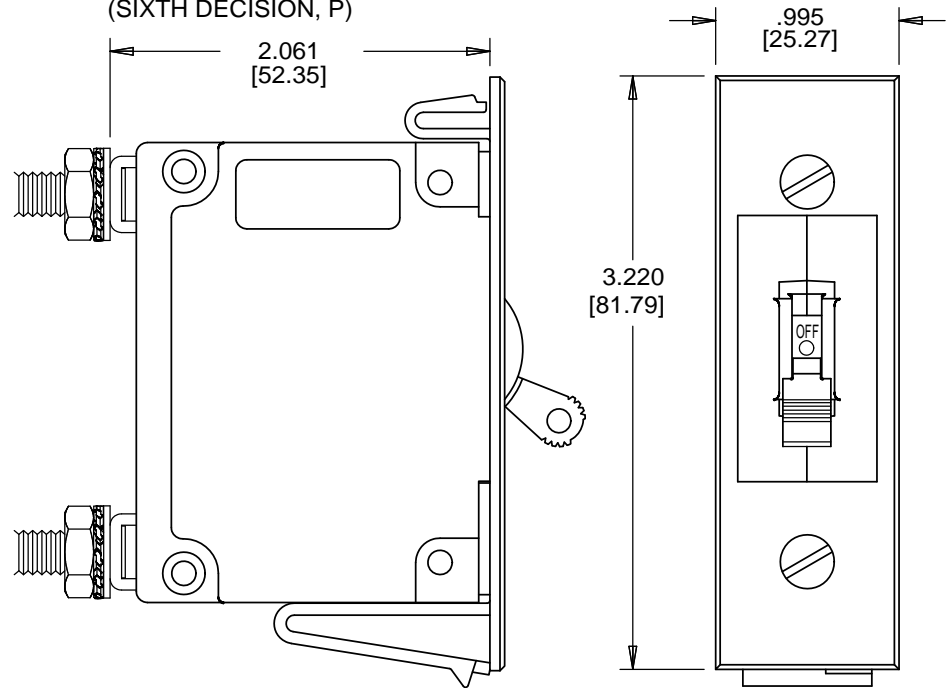
**MOUNTING NOTES:**

1. ALL MOUNTING INSERTS SHALL BE UTILIZED WHEN PANEL MOUNTING CIRCUIT BREAKERS. PANEL MOUNTING SCREWS SHALL HAVE RECOMMENDED TORQUE APPLIED PER NOTE 18 ON SHEET 1.
2. PANEL MOUNTING SCREWS SHALL NOT EXTEND BEYOND BACK OF MOUNTING PANEL MORE THAN SPECIFIED MOUNTING INSERT DEPTH.

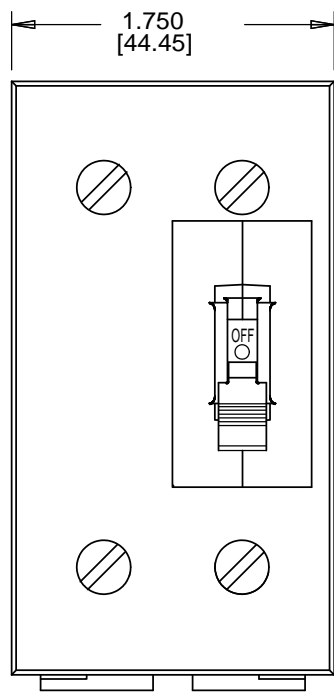
SENSATA TECHNOLOGIES PROPRIETARY AND CONFIDENTIAL. NEITHER THIS PRINT NOR THE INFORMATION CONTAINED HEREON IS TO BE USED AGAINST THE INTERESTS OF SENSATA TECHNOLOGIES OR AGAINST THE INTERESTS OF ANY OF ITS AFFILIATED COMPANIES OR WHOLLY OWNED SUBSIDIARIES.		FOR REFERENCE ONLY, CHECK LATEST REVISION BEFORE USE.	
<p><b>Sensata Technologies</b></p>		<p>THIRD ANGLE PROJECTION</p>	
<p>POWER PROTECTION PRODUCTS</p> <p>CAMBRIDGE, MD USA</p>		<p>IAL / IUL / IEL CIRCUIT BREAKER SPECIFICATION</p>	
DRAWN E.C.		APPROVED R.C.	
CHECKED B.H.		DATE 2-OCT-1995	
IAG/IUG/IEG/IEGS		INTERPRET DRAWING PER ANSI Y14.5M - 1982	
		MATERIAL	
		FINISH	
		TOLERANCE UNLESS NOTED	
		INCH ±.015	
		MM ±.38	
		SCALE	
		SIZE	
		B	
		AM-345	
		REVISION	
		BW	

REVISIONS	
BW	103036

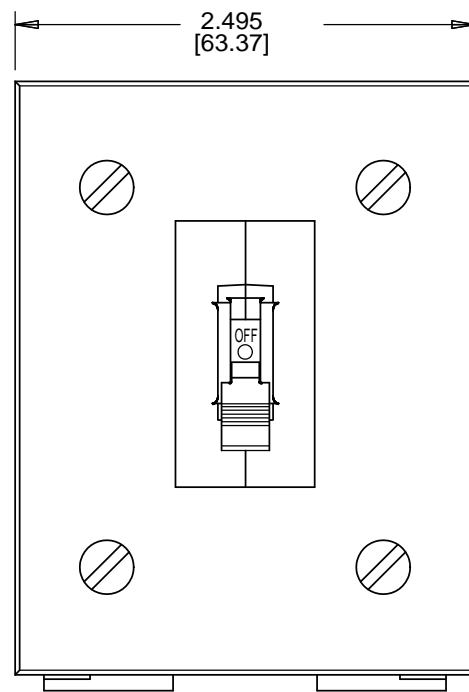
**SNAP-IN MOUNTING PLATE ADAPTER**  
(SIXTH DECISION, P)



**SINGLE POLE**

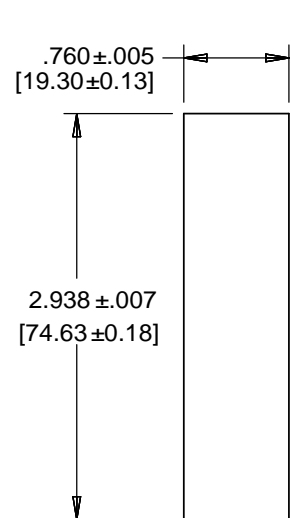


**TWO POLE**

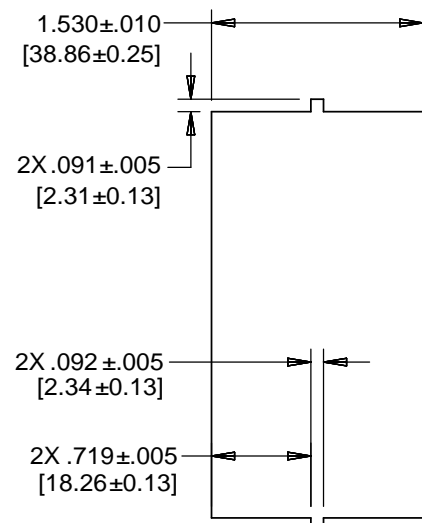


**THREE POLE**

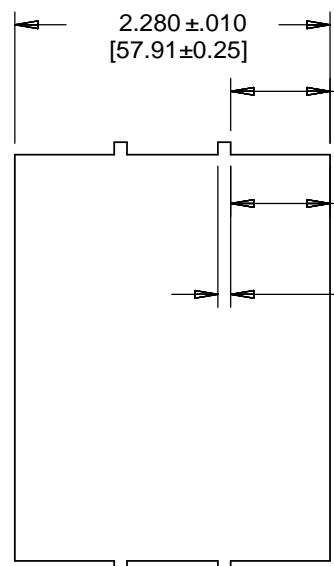
**PANEL MOUNTING DETAILS**  
SCALE: 3/4



**SINGLE POLE**



**TWO POLE**



**THREE POLE**

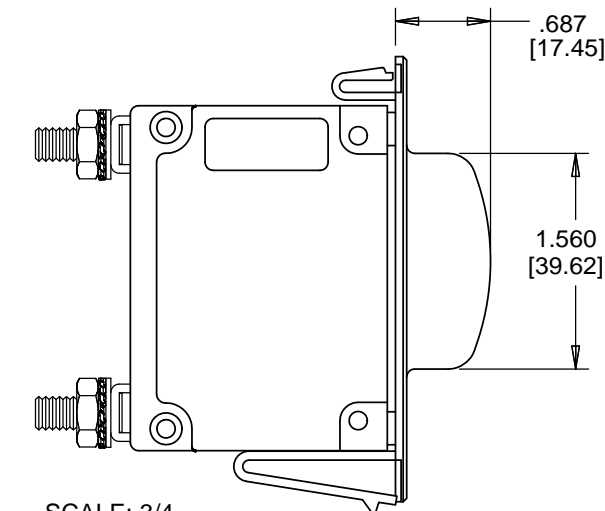
PANEL THICKNESS
.062 ± 0.005 [1.57 ± 0.13]

SEE NOTE 1

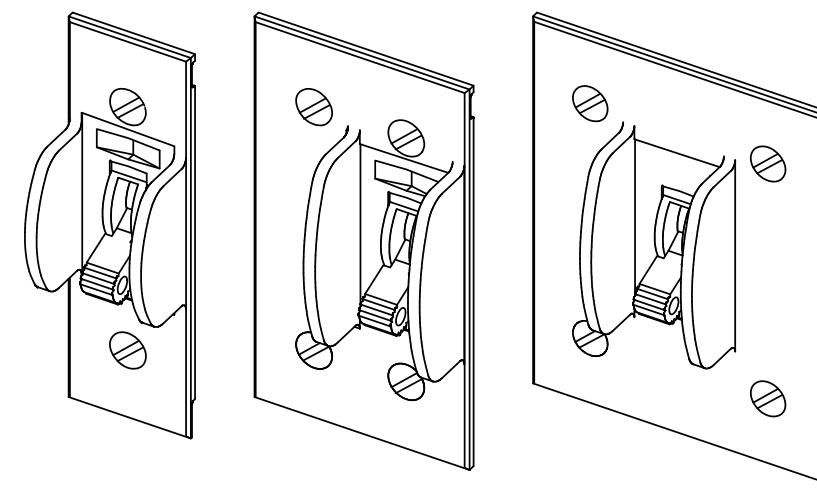
SEE NOTE 1

**AM-345**

**SNAP-IN MOUNTING PLATE ADAPTER WITH GUARDS**  
(SIXTH DECISION, G)



SCALE: 3/4

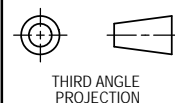
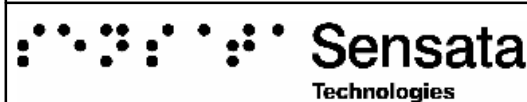


**SNAP-IN MOUNTING PLATE ADAPTER**

NOTES:  
1. NOTCHES REQUIRED WHEN BARRIERS ARE SUPPLIED FOR SIXTH DECISION OPTIONS -U & -V.

SENSATA TECHNOLOGIES PROPRIETARY AND CONFIDENTIAL. NEITHER THIS PRINT NOR THE INFORMATION CONTAINED HEREON IS TO BE USED AGAINST THE INTERESTS OF SENSATA TECHNOLOGIES OR AGAINST THE INTERESTS OF ANY OF ITS AFFILIATED COMPANIES OR WHOLLY OWNED SUBSIDIARIES.

FOR REFERENCE ONLY, CHECK LATEST REVISION BEFORE USE.



**IAL / IUL / IEL CIRCUIT BREAKER SPECIFICATION**

**POWER PROTECTION PRODUCTS**  
CAMBRIDGE, MD USA

INTERPRET DRAWING PER ANSI Y14.5M - 1982

INCH [MM]

TOLERANCE UNLESS NOTED

MATERIAL

FINISH

DRAWN E.C.

APPROVED R.C.

INCH ± .015

CHECKED B.H.

DATE 2-OCT-1995

MM ± .38

SCALE ----

SIZE B

IAL/IUG/IEG/IEGS

ANGLES ± 5°

**AM-345**

REVISION

BW

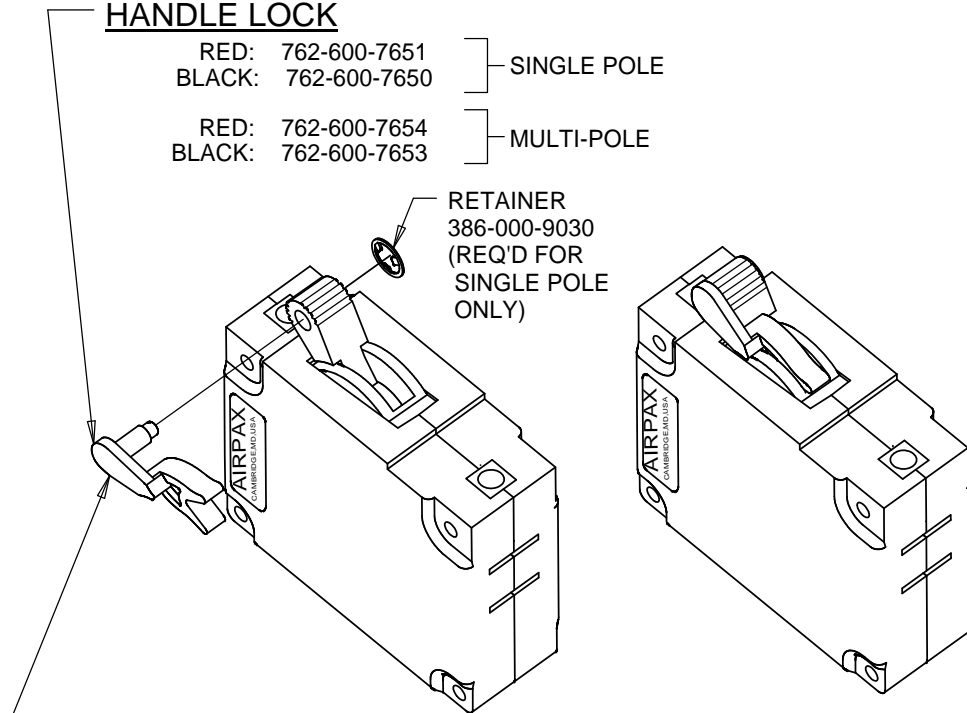
**HANDLE LOCK**

A HANDLE LOCK OPTION IS AVAILABLE TO PREVENT ACCIDENTAL ACTUATION OF THE HANDLE. THE HANDLE LOCK MAY BE USED IN THE ON OR OFF POSITION. USE OF HANDLE LOCK ON BREAKERS WITH ALARM STYLE AUXILIARY SWITCHES (RS & RLS) MAY DEFEAT THE ALARM FEATURE ON ELECTRICAL TRIP. THIS OPTION IS AVAILABLE SEPARATELY OR PRE-ASSEMBLED (ON SINGLE POLE CONSTRUCTIONS ONLY). MULTI-POLE CONSTRUCTION WILL REQUIRE FACTORY INSTALLATION.

**HANDLE LOCK**

- RED: 762-600-7651
- BLACK: 762-600-7650
- SINGLE POLE
- RED: 762-600-7654
- BLACK: 762-600-7653
- MULTI-POLE

RETAINER  
386-000-9030  
(REQ'D FOR  
SINGLE POLE  
ONLY)



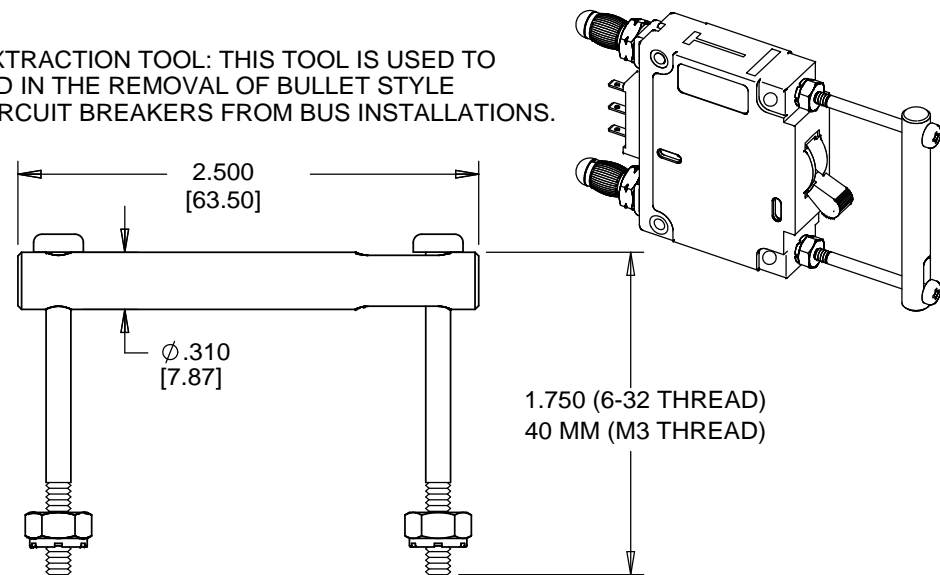
HANDLE LOCK INSTALLED IN FACTORY WILL BE MOUNTED FROM THE LOGO CASE SIDE ON SINGLE POLE. ON TWO AND THREE POLE UNITS, HANDLE LOCK WILL LATCH INTO POLE 2. ON 4 OR MORE POLES, A HANDLE LOCK WILL BE INSTALLED ON EACH OUTSIDE POLE.

**EXTRACTION TOOL**

ORDER NUMBER FOR 6-32 INSERTS: 121-450-5060  
ORDER NUMBER FOR M3 INSERTS: 121-450-5061

NOTE: USE ONE EXTRACTION TOOL PER POLE.

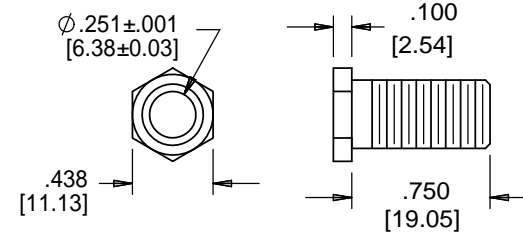
EXTRACTION TOOL: THIS TOOL IS USED TO AID IN THE REMOVAL OF BULLET STYLE CIRCUIT BREAKERS FROM BUS INSTALLATIONS.



**BULLET HARDWARE OPTIONS**

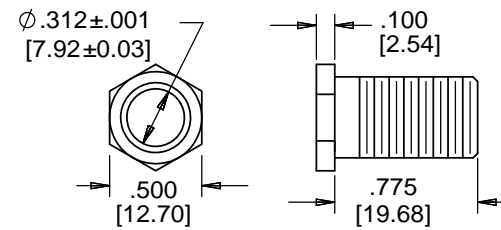
**SOCKET 3/8-24 UNF-2A**

ORDER NUMBER 641-480-5040 (SILVER PLATED BRASS)  
ORDER NUMBER 641-480-5042 (SILVER PLATED COPPER)



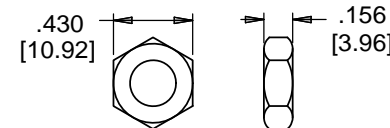
**SOCKET 7/16-20 UNF-2A**

ORDER NUMBER 641-480-5050 (SILVER PLATED BRASS)  
ORDER NUMBER 641-480-5052 (SILVER PLATED COPPER)



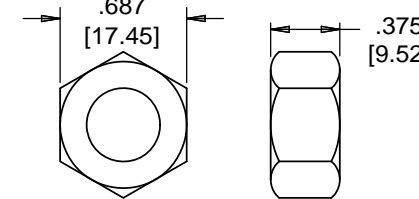
**NUT 1/4-20 UNC-2B**

ORDER NUMBER 388-899-5010  
(SILVER PLATED COPPER)



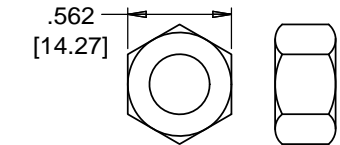
**NUT 7/16-20 UNF-2B**

ORDER NUMBER 388-803-7042  
(SILVER PLATED COPPER)



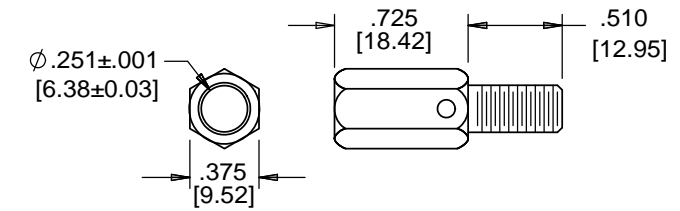
**NUT 3/8-24 UNF-2B**

ORDER NUMBER 388-803-7032  
(SILVER PLATED COPPER)



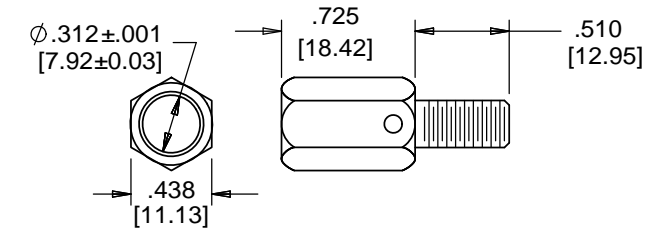
**SOCKET 1/4-20 UNC-2A**

ORDER NUMBER 641-480-5032 (SILVER PLATED COPPER)



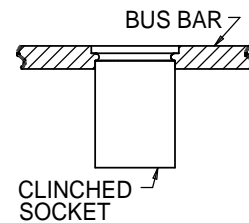
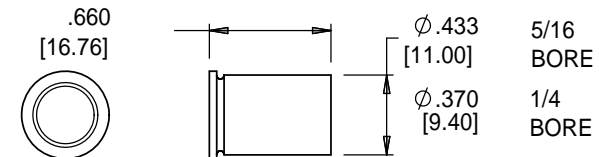
**SOCKET 1/4-20 UNC-2A**

ORDER NUMBER 641-480-5022 (SILVER PLATED COPPER)



**CLINCHED SOCKET**

ORDER NUMBER 641-100-5070, 5/16 BORE (SILVER PLATED BRASS)  
ORDER NUMBER 641-100-5080, 1/4 BORE (SILVER PLATED BRASS)



**NOTES:**

1. CLINCHED SOCKETS ARE DESIGNED TO BE PRESSED INTO PREPARED HOLES IN 1/4 HARD CDA 110 COPPER BUS BARS.
2. MINIMUM BUS BAR THICKNESS IS .093 [2.36].
3. 5/16 BORE CLINCHED SOCKETS CAN TRANSMIT 100 AMPS MAX.
4. CONSULT FACTORY FOR OTHER LENGTHS & PLATING OPTIONS.
5. REFER TO AIRPAX DOCUMENT AIS-1010 FOR DETAILED INSTALLATION INSTRUCTIONS.

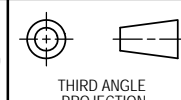
**NOTES:**

1. SOCKET TORQUE SPECIFICATIONS  
1/4-20 THREAD: 20-25 IN LB.  
3/8-24 THREAD: 50-55 IN LB.  
7/16-20 THREAD: 85-90 IN LB.  
(NOT TO BE USED WITH STEEL NUTS)
2. SOCKETS TO BE USED WITH COPPER BUS PLATED WITH SILVER, GOLD, OR NICKEL.

**ACCESSORIES**

SENSATA TECHNOLOGIES PROPRIETARY AND CONFIDENTIAL. NEITHER THIS PRINT NOR THE INFORMATION CONTAINED HEREON IS TO BE USED AGAINST THE INTERESTS OF SENSATA TECHNOLOGIES OR AGAINST THE INTERESTS OF ANY OF ITS AFFILIATED COMPANIES OR WHOLLY OWNED SUBSIDIARIES.

FOR REFERENCE ONLY, CHECK LATEST REVISION BEFORE USE.



**IAL / IUL / IEL CIRCUIT BREAKER SPECIFICATION**

POWER PROTECTION PRODUCTS  
CAMBRIDGE, MD USA

INTERPRET DRAWING PER  
ANSI Y14.5M - 1982

MATERIAL

INCH  
[MM]

FINISH

TOLERANCE  
UNLESS NOTED

DRAWN E.C.

APPROVED R.C.

INCH ± .005

CHECKED B.H.

DATE 2-OCT-1995

MM ± .13

SCALE

SIZE

REVISION

IAG/IUG/IEG/IEGS

ANGLES ± 1°

B

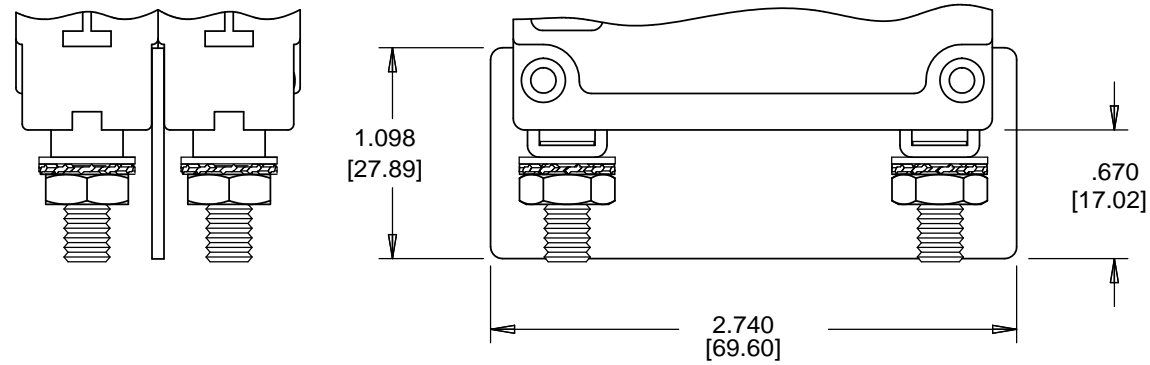
**AM-345**

**BW**

REVISIONS	
BW	103036

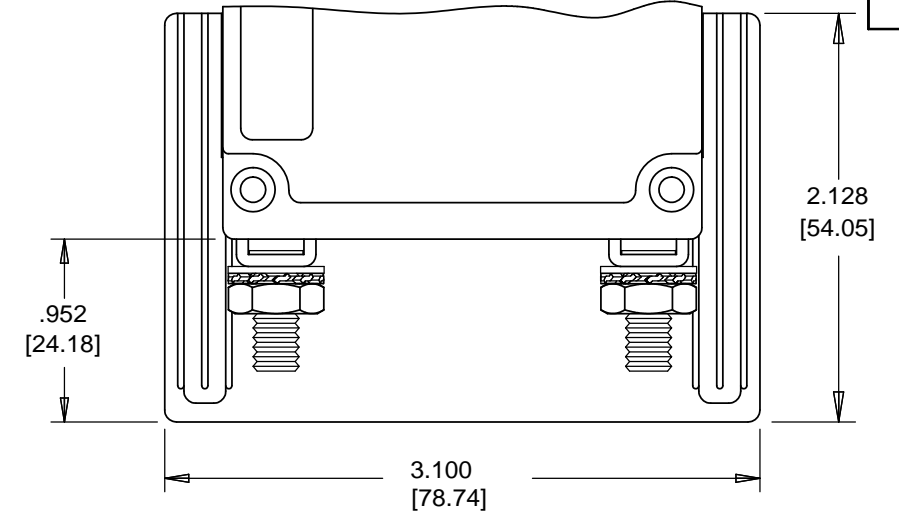
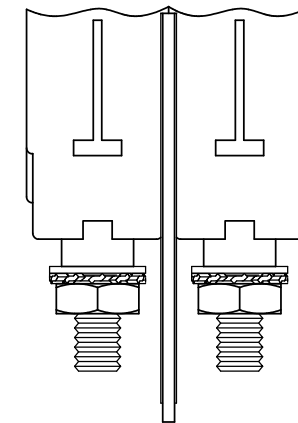
AM-345

SHEET 14 OF 14



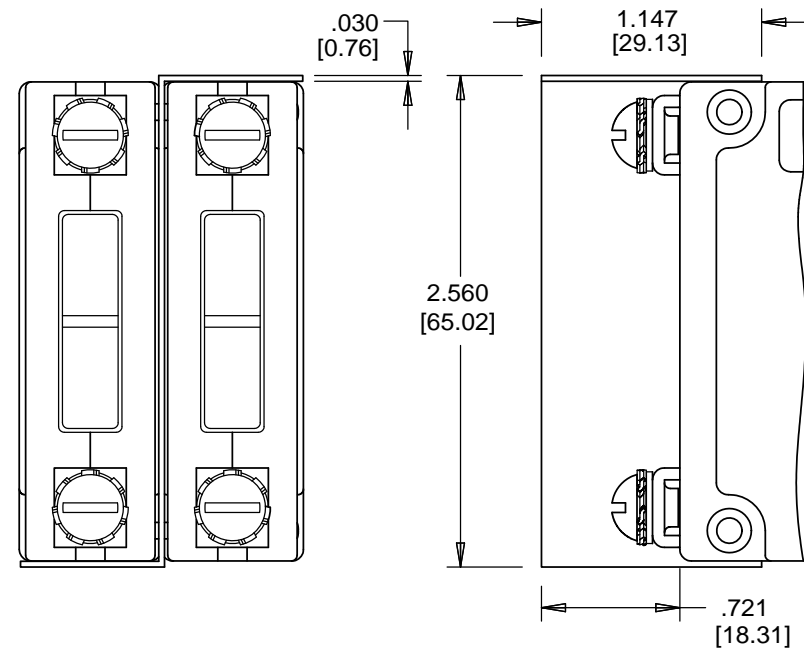
**BARRIER**

SUPPLIED WITH 6th DECISION OPTIONS -B, -C, -D, -E AND -K



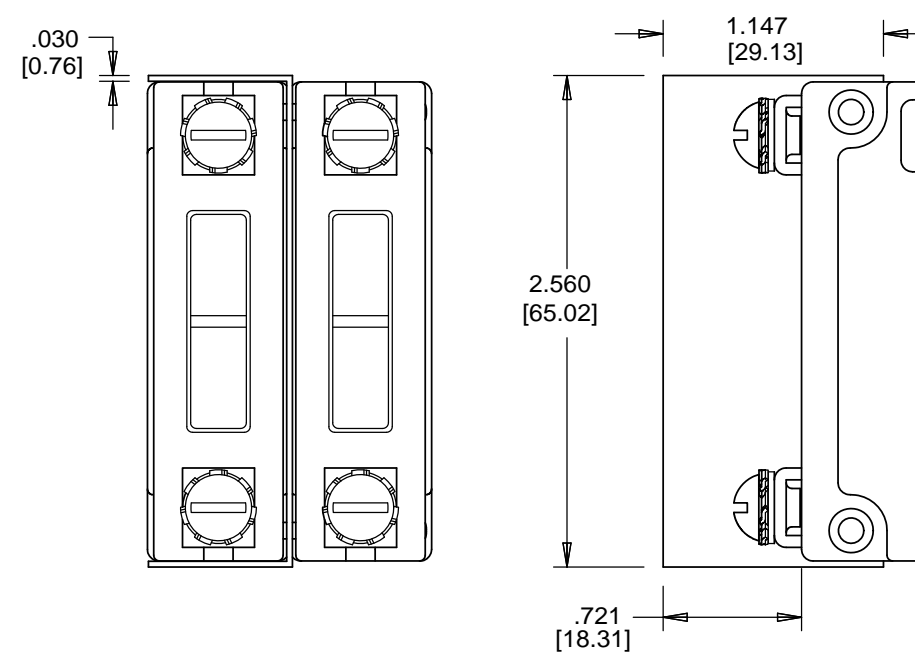
**BARRIER**

SUPPLIED WITH 6th DECISION OPTIONS -U AND -V  
OR -U AGENCY APPROVAL SUFFIX



**"Z" BARRIER**

SUPPLIED WITH 6th DECISION OPTION -Z



**"C" BARRIER**

SUPPLIED WITH 6th DECISION OPTION -Y

(SEE SHEET 2, SIXTH DECISION)

**BARRIERS**

NOTE: TERMINAL STYLE MAY VARY FROM THOSE SHOWN.

SENSATA TECHNOLOGIES PROPRIETARY AND CONFIDENTIAL. NEITHER THIS PRINT NOR THE INFORMATION CONTAINED HEREON IS TO BE USED AGAINST THE INTERESTS OF SENSATA TECHNOLOGIES OR AGAINST THE INTERESTS OF ANY OF ITS AFFILIATED COMPANIES OR WHOLLY OWNED SUBSIDIARIES.

FOR REFERENCE ONLY, CHECK LATEST REVISION BEFORE USE.

<p><b>Sensata Technologies</b></p>		<p>THIRD ANGLE PROJECTION</p>		<p><b>IAL / IUL / IEL CIRCUIT BREAKER SPECIFICATION</b></p>		
		<p>POWER PROTECTION PRODUCTS CAMBRIDGE, MD USA</p>		<p>INTERPRET DRAWING PER ANSI Y14.5M - 1982</p>		<p>MATERIAL</p>
		<p>INCH [MM]</p>				
		<p>TOLERANCE UNLESS NOTED</p>		<p>FINISH</p>		
DRAWN	E.C.	APPROVED	R.C.	INCH	± .005	
CHECKED	B.H.	DATE	2-OCT-1995	MM	± .13	
IAG/IUG/IEG/IEGS				ANGLES	± 1°	
				SCALE	SIZE	B
				<p><b>AM-345</b></p>		<p>REVISION <b>BW</b></p>