

|   |
|---|
| REVISIONS   |
| AJ 29118  |
| REDRAWN.<br>REVISED TRIP TIME IN TABLE 1, SHEET 1.<br>JG 7-12-94                              |
| AK 31784  |
| ON SHEET 5,<br>REVISED NOTE D.<br>RC TB 9-2-97  |
| AL 32515  |
| ON SHEET 2,<br>REVISED V-A NOTE ON TABLE.<br>RC EC 8-12-98                                    |
| AM 33939  |
| ADDED LINKAGE NOTE 13 ON SHEET 1<br>BH.CW.6/3/99  |
| AN 33682  |
| REVISED NOTE *D* ON SHEET 5.<br>RGS.EC.10/24/00   |
| AP 41527  |
| *SUPPLEMENTARY PROTECTOR* WAS *CIRCUIT BREAKER* OR *BREAKER* IN ENTIRE AM-SPEC PAY.CH.5/13/05 |

- THIS SPECIFICATION COVERS AIRPAX TYPE 203 MAGNETIC SUPPLEMENTARY PROTECTORS WITH INVERSE TIME DELAY, TRIP FREE AND ILLUMINATED HANDLE FEATURES.
- DELAY TIME; SEE TABLE 1.
- RESISTANCE AND IMPEDANCE: SEE TABLE 2, SHEET 2.
- ELECTRICAL CHARACTERISTICS: CURRENT RATINGS FROM 20 MILLIAMPERES TO 20 AMPERES AT 32 VDC, 120 VAC 50/60 Hz AND 400 Hz FROM 20 MILLIAMPERES TO 10 AMPERES 50 VDC, 250 VAC 50/60 Hz AND 400 Hz. RELAY UNITS 5.0 AMPERE COIL RATING MAX.
- SHORT CIRCUIT RUPTURE CAPACITY:

| AMPS      | VOLTAGE   | Hz       | SHORT CIRCUIT | SERIES FUSE |
|-----------|-----------|----------|---------------|-------------|
| .020 - 10 | 250V MAX. | 50/60 Hz | 2000A         | 40 MAX.     |
| 11 - 20   | 120V MAX. | 50/60 Hz | 2000A         | 80 MAX.     |
| .050 - 10 | 50V MAX.  | DC       | 1000A         | NONE        |
| .050 - 20 | 32V MAX.  | DC       | 1000A         | NONE        |
| .020 - 10 | 250V MAX. | 400 Hz   | 2000A         | NONE        |
| 11 - 20   | 120V MAX. | 400 Hz   | 2000A         | NONE        |

- HIGH-LOW TEMPERATURE OPERATION: OPERATE NORMALLY IN RANGE FROM -40°C TO +85°C.
- DIELECTRIC STRENGTH: WITHSTANDS 1500 VOLTS 60 Hz FOR 60 SECONDS BETWEEN ALL ELECTRICALLY ISOLATED TERMINALS, EXCEPT AUXILIARY SWITCH TERMINALS SHALL WITHSTAND 600 VOLTS 60 Hz.
- INSULATION RESISTANCE: SHALL NOT BE LESS THAN 100 MEGOHMS AT 500 VOLTS DC.
- ENDURANCE: OPERATING LIFE EXCEEDS 10,000 OPERATIONS WHEN OPERATED AS A SWITCH AT A RATE NOT TO EXCEED 6 OPERATIONS PER MINUTE (6,000 AT FULL RATED CURRENT, 4,000 WITHOUT POWER).
- PULSE TOLERANCE: WITHSTANDS WITHOUT TRIPPING A SINGLE PULSE OF 8 MILLISECONDS DURATION, HALF SINE WAVE CONFIGURATION AND A PEAK AMPLITUDE AS DESCRIBED BELOW.

| DELAY                   | PEAK AMPLITUDE      | DELAY         | PEAK AMPLITUDE     |
|-------------------------|---------------------|---------------|--------------------|
| 61, 62, 63, 71, 72      | 4 X RATED CURRENT   | 64, 65, 66    | 10 X RATED CURRENT |
| 61F, 62F, 63F, 71F, 72F | 6.5 X RATED CURRENT | 64F, 65F, 66F | 13 X RATED CURRENT |


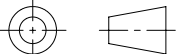
- SHOCK: WITHSTANDS SHOCKS OF 100G OR MORE WITHOUT TRIPPING WHILE CARRYING FULL RATED CURRENT PER MIL-STD 202, METHOD 213, TEST CONDITION 1. SUPPLEMENTARY PROTECTORS HAVING DELAY 1 ARE TESTED AT 90% OF RATED CURRENT IN PLANE 4 (HANDLE DOWN). INSTANTANEOUS TYPES (DELAY 0 AND 9) ARE TESTED AT 80% OF RATED CURRENT IN ALL PLANES.
- VIBRATION: TESTS ARE PERFORMED IN ACCORDANCE WITH MIL-STD 202, METHOD 204, TEST CONDITION A. TIME DELAY SUPPLEMENTARY PROTECTORS WITHSTAND 10G WITHOUT TRIPPING WHILE CARRYING FULL RATED CURRENT. INSTANTANEOUS TYPES (DELAY 0 AND 9) ARE TESTED AT 80% OF RATED CURRENT.
- ANY LINKAGE USED TO ACTUATE A SUPPLEMENTARY PROTECTOR MUST ACCOMODATE FULL, UNRESTRICTED HANDLE TRAVEL AT BOTH HANDLE EXTREMES (ON-OFF, OFF-ON). IF NOT, OVERLOAD PROTECTION COULD BE COMPROMISED.

TABLE 1

| MINIMUM TRIP POINTS AND % OF RATED CURRENT VS. TRIP TIME IN SECONDS |         |            |            |            |            |           |
|---|---------|------------|------------|------------|------------|-----------|
| DELAY   | 100%    | 125% *     | 200%       | 400%       | 600%       | 800%      |
| 40-50-60  | NO TRIP | .100 MAX.  | .050 MAX.  | .020 MAX.  | .015 MAX.  | .015 MAX. |
| 49-59-69  | 1 HOUR  |            |            |            |            |           |
| 41-51-61  | NO TRIP | .2 - 7.0   | .05 - .95  | .01 - .240 | .008-.130  | .003-.060 |
| 71  | 1 HOUR  |            |            |            |            |           |
| 42-52-62  | NO TRIP | 3.0 - 60.0 | .5 - 9.0   | .01 - 1.75 | .008-.600  | .003-.100 |
| 72  | 1 HOUR  |            |            |            |            |           |
| 43-53-63  | NO TRIP | 25 - 450   | 3.0 - 30.0 | .2 - 4.0   | .013 - .3  | .008-.080 |
| 1 HOUR  |         |            |            |            |            |           |
| 64  | NO TRIP | .9 - 10.0  | .2 - 1.7   | .04 - .5   | .019 - .15 | .008-.100 |
| 1 HOUR  |         |            |            |            |            |           |
| 65  | NO TRIP | 9.0 - 60.0 | 1.15 - 7.0 | .11 - 1.0  | .018 - .5  | .008-.190 |
| 1 HOUR  |         |            |            |            |            |           |
| 66  | NO TRIP | 30 - 130   | 4.0 - 18.0 | .6 - 4.0   | .02 - 1.5  | .008-.300 |
| 1 HOUR  |         |            |            |            |            |           |

\* 150% FOR DELAYS 40, 50, 60  
135% FOR DELAYS 41, 42, 43, 49, 71, 72, 79

NOTE: WHEN MEASURING TRIP TIMES, THE SUPPLEMENTARY PROTECTORS SHOULD NOT BE ENERGIZED PRIOR TO APPLYING THE OVERLOAD CURRENT, TRIP TIMES ARE SPECIFIED WITH THE SUPPLEMENTARY PROTECTOR MOUNTED IN THE NORMAL VERTICAL POSITION AT AN AMBIENT TEMPERATURE OF 25°C.

|   |                      |   |              |   |                 |   |  |               |  |
|---|----------------------|---|--------------|---|-----------------|---|--|---------------|--|
|  <p>www.airpax.net</p> |                      |  <p>THIRD ANGLE PROJECTION</p> |              | <p>TOLERANCE UNLESS NOTED</p> <p>INCH ± .015</p> <p>MM ± .38</p> <p>ANGLES ± 5°</p> |                 | <p>TYPE 203 SUPPLEMENTARY PROTECTOR SPEC.</p> |  |               |  |
| <p>POWER PROTECTION PRODUCTS CAMBRIDGE, MD USA</p>  |                      | <p>INTERPRET DRAWING PER ANSI Y14.5M-1982</p>   |              | <p>SCALE</p>  |                 | <p>MATERIAL</p>                               |  | <p>FINISH</p> |  |
| <p>DRAWN J.G.</p>   | <p>APPROVED R.C.</p> | <p>DATE 9-23-70</p>   |              | <p>INCH [MM]</p>  |                 | <p>AM-328 SHEET 1 OF 10</p>                   |  |               |  |
| <p>CHECKED R.C.</p>   | <p>REVISION AP</p>   |   | <p>SCALE</p> |   | <p>REVISION</p> |   |  |               |  |

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| A | B | C | D | E | F | G | H | J | K | L | M | N | P | R | S | U | V | Mx | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|

| REVISIONS |       |
|-----------|-------|
| AJ        | 29118 |
| AK        | 31784 |
| AL        | 32515 |
| AM        | 33939 |
| AN        | 33682 |
| AP        | 41527 |

Property of  
Seneca Technologies


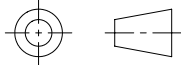
TABLE 2

| CURRENT RATING (AMPS) | DC RESISTANCE             |                   | 60 Hz IMPEDANCE               |                   | 400 Hz IMPEDANCE              |
|-----------------------|---------------------------|-------------------|-------------------------------|-------------------|-------------------------------|
|                       | DELAYS 51, 52, 53, 71, 72 | DELAYS 40, 50, 60 | DELAYS 71, 72, 61, 62, 63, 69 | DELAYS 64, 65, 66 | DELAYS 71, 72, 41, 42, 43, 44 |
|                       | .02                       | 2700.00           | 675.00                        | 2800.00           | 2550.00                       |
| .05                   | 470.00                    | 105.00            | 480.00                        | 440.00            | 650.00                        |
| .50                   | 4.30                      | 1.00              | 4.40                          | 4.50              | 5.30                          |
| 1.00                  | 1.15                      | .230              | 1.17                          | 1.10              | 1.40                          |
| 2.00                  | .298                      | .060              | .310                          | .270              | .360                          |
| 3.00                  | .130                      | .033              | .130                          | .104              | .150                          |
| 4.00                  | .081                      | .016              | .081                          | .077              | .092                          |
| 5.00                  | .052                      | .012              | .052                          | .050              | .062                          |
| 6.00                  | .034                      | .010              | .034                          | .032              | .040                          |
| 7.00                  | .0275                     | .007              | .0275                         | .026              | .032                          |
| 8.00                  | .020                      | .005              | .020                          | .018              | .023                          |
| 9.00                  | .017                      | .004              | .017                          | .014              | .021                          |
| 10.00                 | .016                      | .0038             | .017                          | .012              | .019                          |
| 12.00                 | .008                      | .0034             | .008                          | .009              | .011                          |
| 15.00                 | .006                      | .002              | .006                          | .006              | .008                          |
| 20.00                 | .005                      | .002              | .005                          | .005              | .007                          |

DCR AND IMPEDANCE VALUES ARE BASED ON MEASUREMENTS BY THE VOLTMETER AMMETER METHOD, RATED CURRENT APPLIED FOR ONE HOUR AND AT A VOLTAGE NOT LESS THAN 20 VOLTS.

TOLERANCE ±25%

CONSULT FACTORY FOR VALUES NOT SHOWN

|  |  |   |  |   |  |  |  |
|--|--|---|--|---|--|--|--|
| <br>www.airpax.net<br>POWER PROTECTION PRODUCTS CAMBRIDGE, MD USA |  | <br>THIRD ANGLE PROJECTION<br>INTERPRET DRAWING PER ANSI Y14.5M-1982 |  | TOLERANCE UNLESS NOTED<br>INCH ±.015<br>MM ±.38<br>ANGLES ±5° |  | TYPE 203 SUPPLEMENTARY PROTECTOR SPEC. |  |
| DRAWN J.G.   |  | APPROVED R.C.   |  | MATERIAL  |  | FINISH                                 |  |
| CHECKED R.C.   |  | DATE 9-23-70  |  | SCALE   |  | AM-328                                 |  |
|  |  | INCH [MM]   |  |   |  | SHEET 2 OF 10                          |  |
|  |  |   |  |   |  | REVISION AP                            |  |

A B C D E F G H J K L M N P R S U V Mx T

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| FIRST DECISION |  |
|----------------|--|
| TYPE           |  |
| 203            | ROCKER HANDLE<br>UL/CSA CONSTRUCTION     |
| 293            | ROCKER HANDLE<br>NON UL/CSA CONSTRUCTION |

| THIRD DECISION |                                 |
|----------------|---------------------------------|
| CONSTRUCTION   |                                 |
| -1             | SERIES                          |
| -2             | AUXILIARY SWITCH (NOTE B)       |
| -3             | SHUNT                           |
| -4             | RELAY (5 AMP. MAX. COIL RATING) |
| -5             | SWITCH ONLY (NOTE G)            |
| -6             | CENTER TAP                      |

| FIFTH DECISION (NOTES 4 & 15) |             |      |         |
|-------------------------------|-------------|------|---------|
| CURRENT                       |             |      |         |
| CODE                          | AMPERES     | CODE | AMPERES |
| -021                          | .020        | -252 | 2.500   |
| -051                          | .050        | -502 | 5.000   |
| -101                          | .100        | -752 | 7.500   |
| -251                          | .250        | -103 | 10.000  |
| -501                          | .500        | -153 | 15.000  |
| -751                          | .750        | -203 | 20.000  |
| -102                          | 1.000       |      |         |
| -0                            | SWITCH ONLY |      |         |

203-222-4-61-102-4-1-1

| SECOND DECISION |                                   |
|-----------------|-----------------------------------|
| POLES           |                                   |
| -1              | SINGLE POLE                       |
| -11             | TWO POLE                          |
| -111            | THREE POLE                        |
| -2              | SINGLE POLE<br>ILLUMINATED HANDLE |
| -22             | TWO POLE<br>ILLUMINATED HANDLE    |
| -222            | THREE POLE<br>ILLUMINATED HANDLE  |

| FOURTH DECISION (NOTE 15) |   |
|---------------------------|---|
| HERTZ AND DELAY           |   |
| -0                        | SWITCH ONLY (NOTE G)                              |
| -40                       | 400 Hz 0 DELAY (150% TRIP)                        |
| -41                       | 400 Hz SHORT DELAY                                |
| -42                       | 400 Hz LONG DELAY                                 |
| -43                       | 400 Hz MOTOR START DELAY                          |
| -49                       | 400 Hz 0 DELAY (125% TRIP)                        |
| -50                       | DC 0 DELAY (150% TRIP)                            |
| -51                       | DC SHORT DELAY                                    |
| -52                       | DC LONG DELAY                                     |
| -53                       | DC MOTOR START DELAY                              |
| -59                       | DC 0 DELAY (125% TRIP)                            |
| -60                       | 50/60 Hz 0 DELAY (150% TRIP)                      |
| -61                       | 50/60 Hz SHORT DELAY                              |
| -62                       | 50/60 Hz LONG DELAY                               |
| -63                       | 50/60 Hz MOTOR START DELAY                        |
| -64                       | 50/60 Hz HIGH PULSE TOLERANT<br>SHORT DELAY       |
| -65                       | 50/60 Hz HIGH PULSE TOLERANT<br>LONG DELAY        |
| -66                       | 50/60 Hz HIGH PULSE TOLERANT<br>MOTOR START DELAY |
| -69                       | 50/60 Hz 0 DELAY (125% TRIP)                      |
| -71                       | MULTI-FREQUENCY SHORT DELAY                       |
| -72                       | MULTI-FREQUENCY LONG DELAY                        |

EIGHTH DECISION  
ILLUMINATED HANDLE  
(SEE SHEET 4)

SEVENTH DECISION  
BODY COLOR  
(SEE SHEET 4)

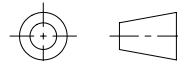
SIXTH DECISION  
HANDLE COLOR  
(SEE SHEET 4)

NOTES

1. FOR OPTIONAL FLUSH MOUNTING HARDWARE ADD THE LETTER "A" AFTER THE LAST DECISION.
2. SEE SHEET 5 FOR REFERENCE NOTES.
3. AN "F" AFTER DELAY DENOTES INERTIA DELAY ADDED TO SPECIFIED TIME DELAY.

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POWER PROTECTION PRODUCTS CAMBRIDGE, MD USA



THIRD ANGLE  
PROJECTION

TOLERANCE  
UNLESS NOTED

INCH ±.015

MM ±.38

ANGLES ±5°

TYPE 203 SUPPLEMENTARY PROTECTOR SPEC.

MATERIAL

FINISH

DRAWN J.G. APPROVED R.C.

CHECKED R.C. DATE 9-23-70

INTERPRET DRAWING PER  
ANSI Y14.5M-1982

INCH  
[MM]

SCALE

AM-328

SHEET 3  
OF 10

REVISION  
AP

A B C D E F G H J K L M N P R S U V Mx T

| REVISIONS |       |
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| SIXTH DECISION<br>HANDLE COLOR |   |          |
|--------------------------------|---|----------|
| CODE                           | HANDLE COLOR  | MARKINGS |
| 1                              | WHITE - NON ILLUMINATED                               | FIG. 1   |
| 2                              | BLACK - NON ILLUMINATED                               |          |
| 3                              | RED - NON ILLUMINATED                                 |          |
| 4                              | WHITE - TRANSLUCENT, INCANDESCENT OR NEON ILLUMINATED |          |
| 5                              | WHITE - LED ILLUMINATED                               |          |
| 6                              | BLACK - LED ILLUMINATED                               |          |
| 7                              | RED - LED ILLUMINATED                                 |          |
| A                              | WHITE - TRANSLUCENT, INCANDESCENT OR NEON ILLUMINATED | FIG. 4   |
| B                              |   | FIG. 2   |
| C                              |   | FIG. 5   |
| D                              |   | UNMARKED |
| E                              |   | FIG. 3   |
| F                              |   | FIG. 6   |
| G                              |   | FIG. 4   |
| H                              | WHITE   | FIG. 2   |
| J                              |   | FIG. 5   |
| K                              |   | UNMARKED |
| L                              |   | FIG. 3   |
| M                              |   | FIG. 6   |
| N                              |   | FIG. 4   |
| P                              |   | FIG. 2   |
| Q                              | BLACK   | FIG. 5   |
| R                              |   | UNMARKED |
| S                              |   | FIG. 3   |
| T                              |   | FIG. 6   |
| U                              |   | FIG. 4   |
| V                              |   | FIG. 2   |
| W                              |   | RED      |
| X                              | UNMARKED  |          |
| Y                              | FIG. 3  |          |
| Z                              | FIG. 6  |          |

DECISIONS G - Z WILL BE NON ILLUMINATED UNLESS TABLE 8 IS COMPLETED BY CUSTOMER.

| SEVENTH DECISION<br>BODY COLOR |       |
|--------------------------------|-------|
| 1                              | BLACK |
| 2                              | WHITE |
| 3                              | GREY  |

| EIGHTH DECISION<br>ILLUMINATED HANDLE |   |
|---------------------------------------|---|
| 1                                     | NEON - 120 OR 250 VAC (NOTE C)            |
| 2                                     | INCANDESCENT 3 - 5 VAC - DC WHITE         |
| 3                                     | INCANDESCENT 6 - 11 VAC - DC WHITE        |
| 4                                     | LED (NOTE D) RED                          |
| 5                                     | LED 4 - 8 VDC (NOTE E) RED                |
| 6                                     | LED 8 - 16 VDC (NOTE E) RED               |
| 7                                     | LED 16 - 24 VDC (NOTE E) RED              |
| 8                                     | LED 24 - 32 VDC (NOTE E) RED              |
| 9                                     | LED 6.3 VAC (NOTE E) RED                  |
| 10                                    | LED 12.6 VAC (NOTE E) RED                 |
| 13                                    | NEON - 120 OR 250 VAC GREEN GLOW (NOTE C) |
| 14                                    | LED (NOTE D) GREEN                        |
| 15                                    | LED 4 - 8 VDC (NOTE E) GREEN              |
| 16                                    | LED 8 - 16 VDC (NOTE E) GREEN             |
| 17                                    | LED 16 - 24 VDC (NOTE E) GREEN            |
| 18                                    | LED 24 - 32 VDC (NOTE E) GREEN            |
| 19                                    | LED 6.3 VAC (NOTE E) GREEN                |
| 20                                    | LED 12.6 VAC (NOTE E) GREEN               |
| 21                                    | INCANDESCENT 3 - 5 VAC - DC RED           |
| 22                                    | INCANDESCENT 3 - 5 VAC - DC AMBER         |
| 23                                    | INCANDESCENT 3 - 5 VAC - DC GREEN         |
| 24                                    | INCANDESCENT 3 - 5 VAC - DC BLUE          |
| 25                                    | INCANDESCENT 3 - 5 VAC - DC YELLOW        |
| 31                                    | INCANDESCENT 6 - 11 VAC - DC RED          |
| 32                                    | INCANDESCENT 6 - 11 VAC - DC AMBER        |
| 33                                    | INCANDESCENT 6 - 11 VAC - DC GREEN        |
| 34                                    | INCANDESCENT 6 - 11 VAC - DC BLUE         |
| 35                                    | INCANDESCENT 6 - 11 VAC - DC YELLOW       |

SEE NOTE F FOR ALL INCANDESCENT NUMBERS.

SEE SHEET 5 FOR REFERENCE NOTES.

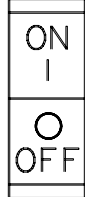
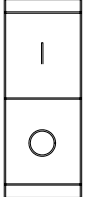
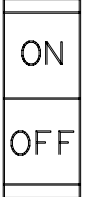


FIG. 1 FIG. 2 FIG. 3



FIG. 4

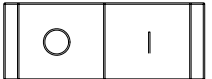


FIG. 5



FIG. 6

HANDLE MARKINGS

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|         |      |          |         |
|---------|------|----------|---------|
| DRAWN   | J.G. | APPROVED | R.C.    |
| CHECKED | R.C. | DATE     | 9-23-70 |

THIRD ANGLE PROJECTION

INTERPRET DRAWING PER ANSI Y14.5M-1982

INCH [MM]

TOLERANCE UNLESS NOTED

INCH ±.015

MM ±.38

ANGLES ±5°

SCALE

TYPE 203 SUPPLEMENTARY PROTECTOR SPEC.

|          |        |
|----------|--------|
| MATERIAL | FINISH |
|----------|--------|

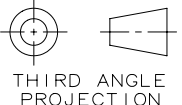
AM-328 SHEET 4 OF 10 REVISION AP

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| A | B | C | D | E | F | G | H | J | K | L | M | N | P | R | S | U | V | Mx | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|

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NOTES:

- A. NOMINAL CURRENT VALUES FOR 100% OF RATED CURRENT ARE THOSE LISTED. OTHER VALUES CAN BE SUPPLIED, IN GENERAL, WITHOUT DELAYED DELIVERY.
- B. BECAUSE OF SPACE LIMITATIONS, A SINGLE POLE AUXILIARY SWITCH ILLUMINATED HANDLE (203-2-2) IS PROVIDED WITH 2 INCH LEADS FOR LAMP CONNECTIONS. THESE LEADS EXIT THE CASE ON THE BOTTOM ADJACENT TO THE AUXILIARY SWITCH.
- C. A NEON BULB IS PROVIDED WHEN SPECIFIED FOR 120VAC AND 250VAC OPERATION. FOR OPERATIONS AT AT 120VAC A 33,000 OHM, 1/2 WATT EXTERNAL RESISTOR IS REQUIRED. AT 250VAC, A 100,000 OHM, 1 WATT EXTERNAL RESISTOR IS REQUIRED.
- D. AN EXTERNAL DROPPING RESISTOR IS REQUIRED TO LIMIT THE POWER DISSIPATION IN THE LED. THE MAXIMUM POWER DISSIPATION IS 135 mW (RED)(GREEN) AT 25 DEGREE C. FOR OPERATION AT AMBIENT TEMPERATURES ABOVE 25 DEGREE C DERATE THE MAXIMUM POWER DISSIPATION BY 5 mW/10°C.
- E. THE LED DESCRIBED IN NOTE D IS PROVIDED TOGETHER WITH THE NECESSARY CURRENT LIMITING RESISTOR, MOUNTED INTERNALLY TO PERMIT OPERATION AT THE VOLTAGE SHOWN. IF OPERATING VOLTAGES OTHER THAN THOSE SHOWN ARE DESIRED, CONSULT FACTORY.
- F. LONG-LIFE, T-1 SIZE SUBMINIATURE INCANDESCENT LAMPS ARE PROVIDED FOR VOLTAGE RANGES SHOWN. IF OTHER VOLTAGES ARE REQUIRED, CONSULT FACTORY. LAMP FILTERS TO PROVIDE COLOR ARE AVAILABLE IN RED, AMBER, GREEN, BLUE, AND YELLOW. PLEASE STATE COLOR DESIRED. UNLESS NOTED, A CLEAR (NO FILTER) LAMP WILL BE SUPPLIED, THEREBY, PROVIDING A WHITE HANDLE GLOW.
- G. WHEN SWITCH ONLY IS SPECIFIED, USE "0" FOR 4th AND 5th DECISION FACTORS.
- H. CHEMICAL RESISTANCE: PLASTIC HANDLE AND CASE MAY BE CLEANED WITH DETERGENTS OR ALCOHOLS. ORGANIC SOLVENTS ARE NOT RECOMMENDED, AS THEY ATTACK PLASTICS. CLEANING SOLUTIONS SHOULD BE EXPOSED TO OUTSIDE SURFACES ONLY.



TOLERANCE UNLESS NOTED

INCH ±.015

MM ±.38

ANGLES ±5°

TYPE 203 SUPPLEMENTARY PROTECTOR SPEC.

MATERIAL

FINISH

|         |      |          |         |
|---------|------|----------|---------|
| DRAWN   | J.G. | APPROVED | R.C.    |
| CHECKED | R.C. | DATE     | 9-23-70 |

INTERPRET DRAWING PER ANSI Y14.5M-1982

INCH [MM]

SCALE

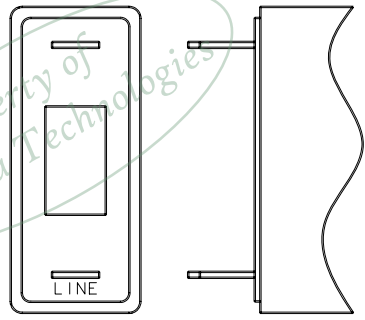
AM-328

SHEET 5 OF 10

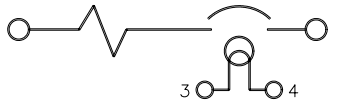
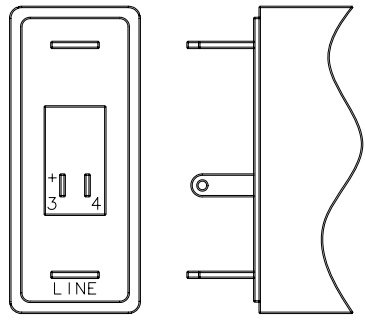
REVISION AP

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| A | B | C | D | E | F | G | H | J | K | L | M | N | P | R | S | U | V | Mx | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|

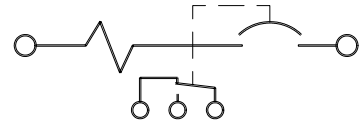
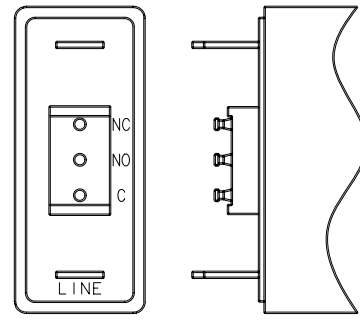
| REVISIONS |       |
|-----------|-------|
| AJ        | 29118 |
| AK        | 31784 |
| AL        | 32515 |
| AM        | 33939 |
| AN        | 33682 |
| AP        | 41527 |



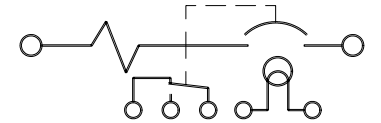
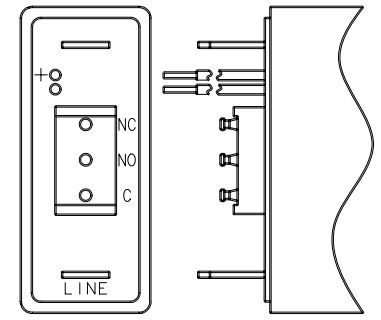
SERIES  
203-1-1



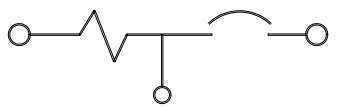
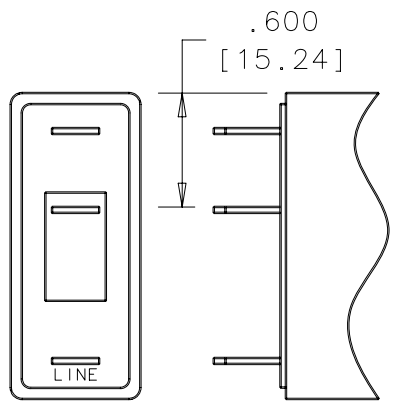
SERIES WITH  
ILLUMINATED HANDLE  
203-2-1



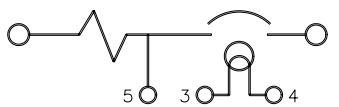
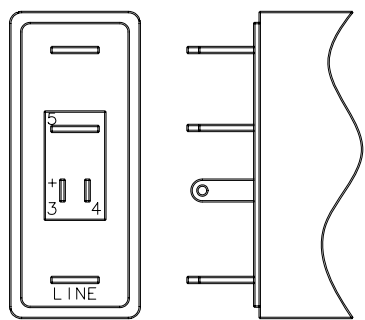
SERIES WITH  
AUXILIARY SWITCH  
203-1-2



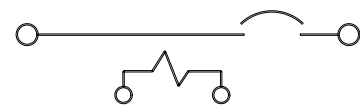
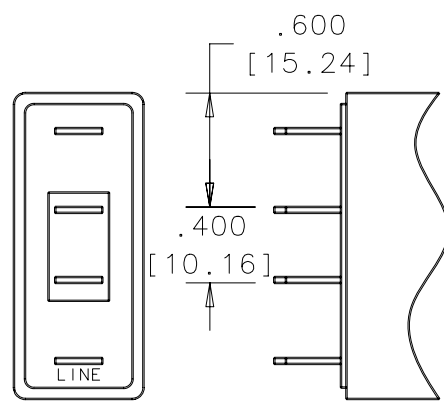
SERIES WITH AUX. SWITCH  
AND ILLUMINATED HANDLE  
203-2-2



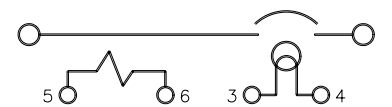
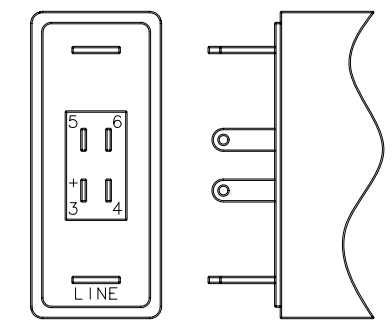
SHUNT  
203-1-3



SHUNT WITH  
ILLUMINATED HANDLE  
203-2-3



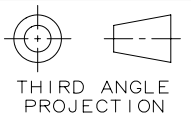
RELAY  
203-1-4



RELAY WITH  
ILLUMINATED HANDLE  
203-2-4

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POWER PROTECTION PRODUCTS CAMBRIDGE, MD USA



|                           |
|---------------------------|
| TOLERANCE<br>UNLESS NOTED |
| INCH ± .015               |
| MM ± .38                  |
| ANGLES ± 5°               |

TYPE 203 SUPPLEMENTARY PROTECTOR SPEC.

|         |      |          |         |
|---------|------|----------|---------|
| DRAWN   | J.G. | APPROVED | R.C.    |
| CHECKED | R.C. | DATE     | 9-23-70 |

|   |
|---|
| INTERPRET DRAWING PER<br>ANSI Y14.5M-1982 |
| INCH<br>[MM]                              |

SCALE

MATERIAL

FINISH

AM-328

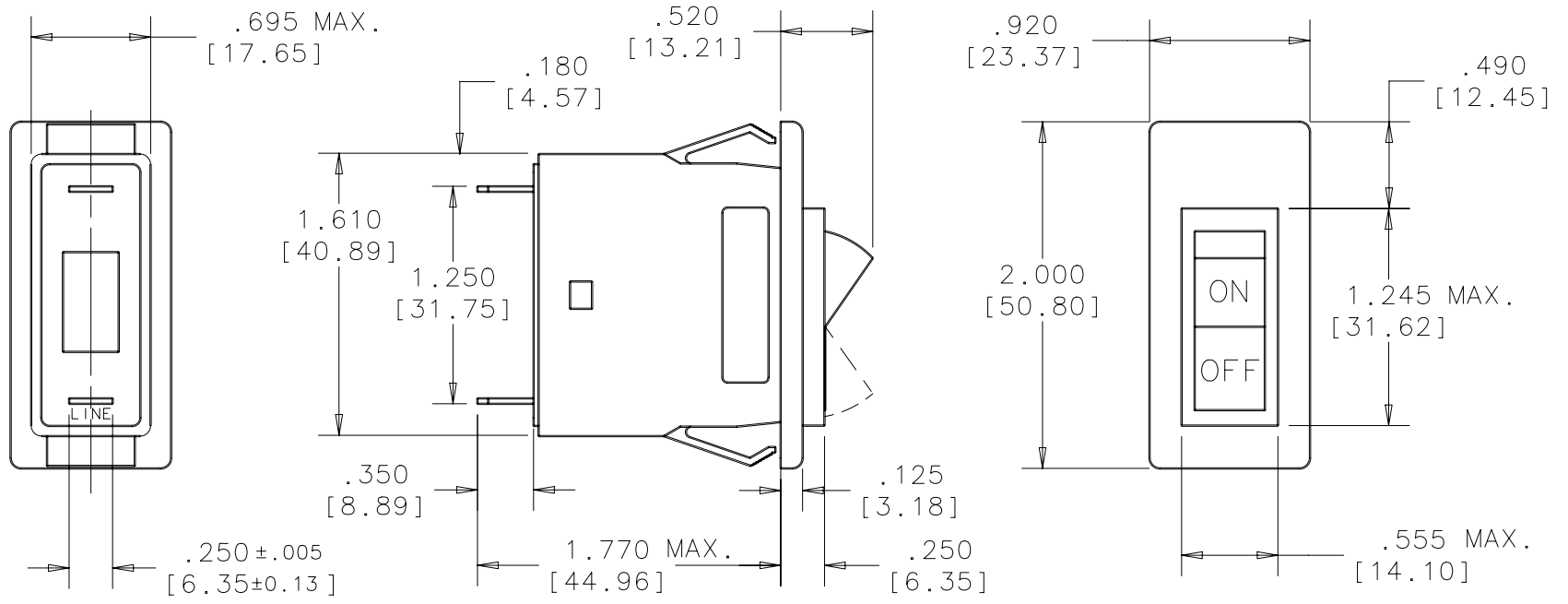
SHEET 6  
OF 10

REVISION  
AP

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| A | B | C | D | E | F | G | H | J | K | L | M | N | P | R | S | U | V | Mx | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|

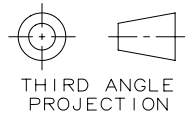
| REVISIONS |       |
|-----------|-------|
| AJ        | 29118 |
| AK        | 31784 |
| AL        | 32515 |
| AM        | 33939 |
| AN        | 33682 |
| AP        | 41527 |

Property of  
Sensata Technologies



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TOLERANCE UNLESS NOTED  
INCH ± .015  
MM ± .38  
ANGLES ± 5°

TYPE 203 SUPPLEMENTARY PROTECTOR SPEC.

DRAWN J.G. APPROVED R.C.  
CHECKED R.C. DATE 9/23/70

INTERPRET DRAWING PER ANSI Y14.5M-1982

INCH [MM] SCALE

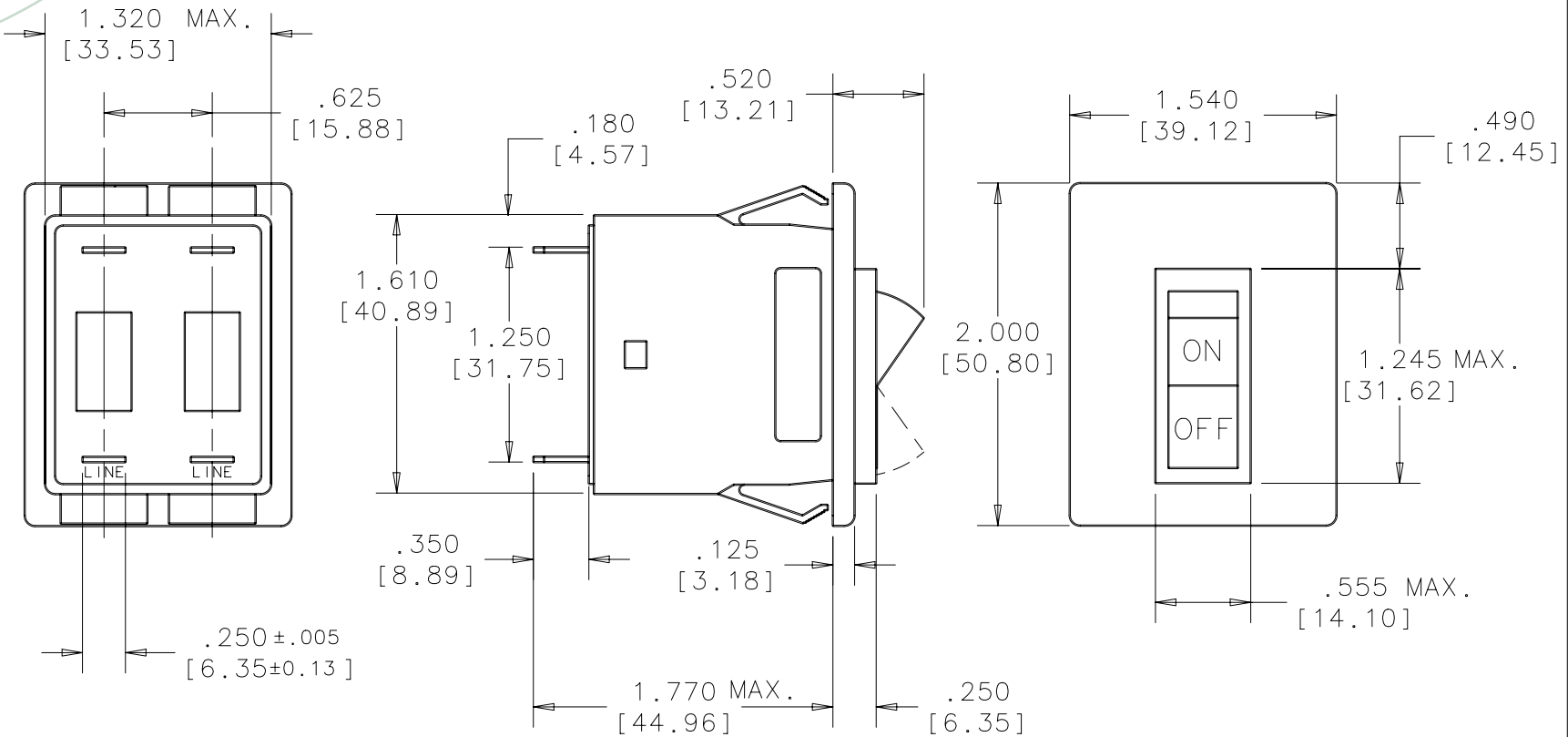
MATERIAL FINISH

AM-328 SHEET 7 OF 10 REVISION AP

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| A | B | C | D | E | F | G | H | J | K | L | M | N | P | R | S | U | V | Mx | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|

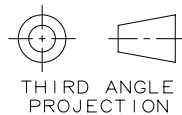
| REVISIONS |       |
|-----------|-------|
| AJ        | 29118 |
| AK        | 31784 |
| AL        | 32515 |
| AM        | 33939 |
| AN        | 33682 |
| AP        | 41527 |

Property of  
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INTERPRET DRAWING PER ANSI Y14.5M-1982

TOLERANCE UNLESS NOTED

INCH ± .015

MM ± .38

ANGLES ± 5°

TYPE 203 SUPPLEMENTARY PROTECTOR SPEC.

MATERIAL

FINISH

DRAWN J.G. APPROVED R.C.

CHECKED R.C. DATE 9-23-70

INCH [MM]

SCALE

AM-328

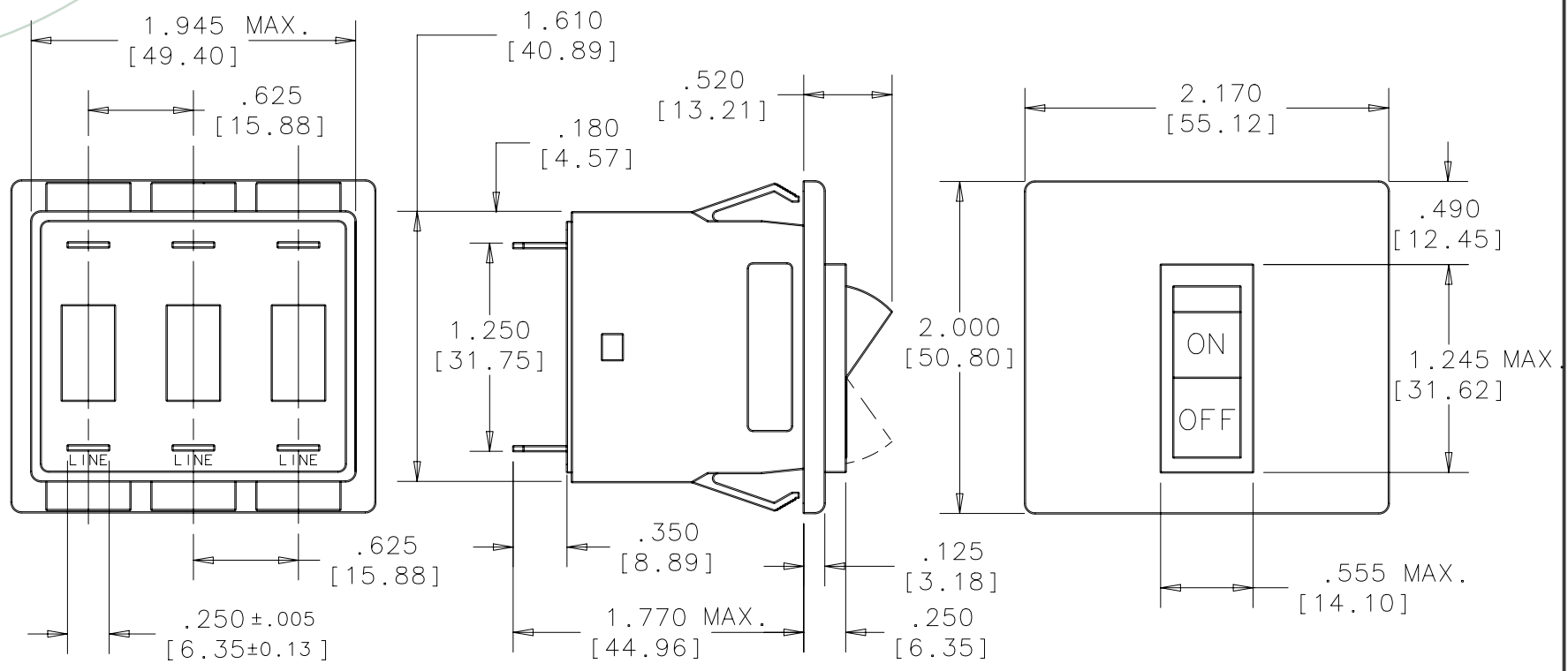
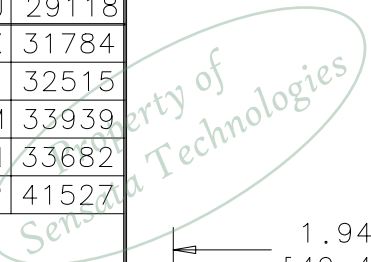
SHEET 8 OF 10

REVISION AP

A B C D E F G H J K L M N P R S U V Mx T



| REVISIONS |       |
|-----------|-------|
| AJ        | 29118 |
| AK        | 31784 |
| AL        | 32515 |
| AM        | 33939 |
| AN        | 33682 |
| AP        | 41527 |



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DRAWN J.G. APPROVED R.C.  
CHECKED R.C. DATE 9-23-70

THIRD ANGLE PROJECTION

INTERPRET DRAWING PER ANSI Y14.5M-1982

INCH [MM]

SCALE

| TOLERANCE UNLESS NOTED |        |
|------------------------|--------|
| INCH                   | ± .015 |
| MM                     | ± .38  |
| ANGLES                 | ± 5°   |

TYPE 203 SUPPLEMENTARY PROTECTOR SPEC.

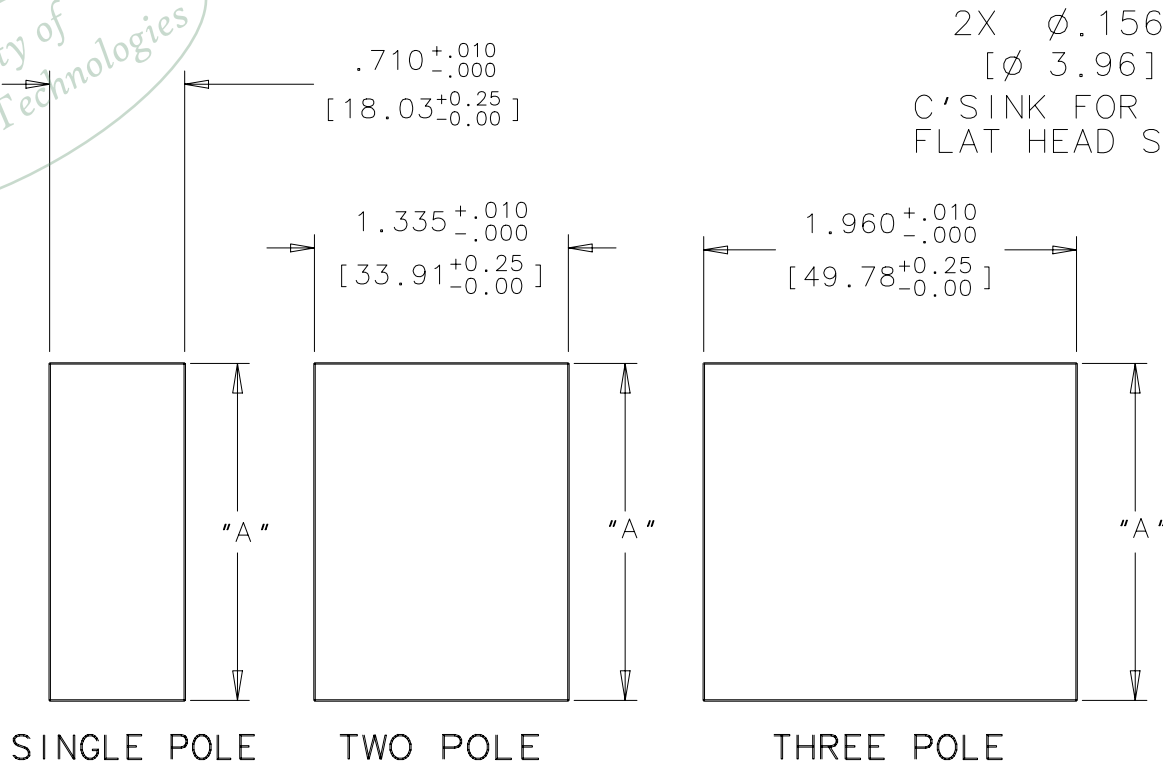
|          |        |
|----------|--------|
| MATERIAL | FINISH |
|----------|--------|

AM-328 SHEET 9 OF 10 REVISION AP

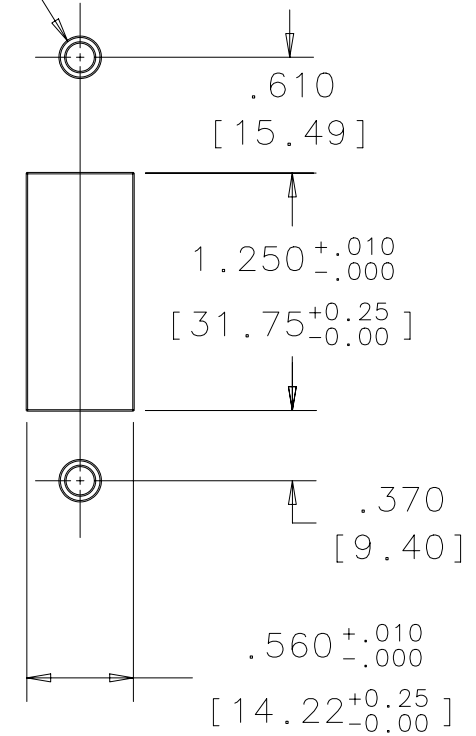
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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| A | B | C | D | E | F | G | H | J | K | L | M | N | P | R | S | U | V | Mx | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|

| REVISIONS |       |
|-----------|-------|
| AJ        | 29118 |
| AK        | 31784 |
| AL        | 32515 |
| AM        | 33939 |
| AN        | 33682 |
| AP        | 41527 |

**PANEL MOUNTING DETAILS**



2X  $\phi$ .156  
[ $\phi$  3.96]  
C'SINK FOR #6  
FLAT HEAD SCREW



|                 |               |               |               |
|-----------------|---------------|---------------|---------------|
| PANEL THICKNESS | .062 [1.57]   | .093 [2.36]   | .125 [3.18]   |
| DIMENSION "A"   | 1.775 [45.09] | 1.810 [45.97] | 1.850 [46.99] |

ONE, TWO, & THREE POLE  
FOR PANELS .062 [ 1.57]  
TO .125 [3.18] THICK  
FLUSH MOUNT  
(OPTIONAL)

**FRONT SNAP-IN MOUNT (STD)**

|  |  |   |  |  |  |  |  |                       |  |                    |
|--|--|---|--|--|--|--|--|-----------------------|--|--------------------|
| <p><b>AIRPAX</b><br/>www.airpax.net</p>            |  | <p>THIRD ANGLE PROJECTION</p>                 |  | <p>TOLERANCE UNLESS NOTED</p> <p>INCH ±.015</p> <p>MM ±.38</p> <p>ANGLES ±5°</p> |  | <p><b>TYPE 203 SUPPLEMENTARY PROTECTOR SPEC.</b></p> |  |                       |  |                    |
| <p>POWER PROTECTION PRODUCTS CAMBRIDGE, MD USA</p> |  | <p>INTERPRET DRAWING PER ANSI Y14.5M-1982</p> |  | <p>MATERIAL</p>  |  | <p>FINISH</p>  |  |                       |  |                    |
| <p>DRAWN J.G. APPROVED R.C.</p>                    |  | <p>DATE 9-23-70</p>                           |  | <p>SCALE</p>   |  | <p>AM-328</p>  |  | <p>SHEET 10 OF 10</p> |  | <p>REVISION AP</p> |

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| A | B | C | D | E | F | G | H | J | K | L | M | N | P | R | S | U | V | Mx | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|