

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

AM-328 SHEET 2
OF 10

TABLE 2

TYPICAL SUPPLEMENTARY PROTECTOR RESISTANCE / IMPEDANCE CHART					
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	4000.00
.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 $\pm 25\%$					
CONSULT FACTORY FOR VALUES NOT SHOWN					

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POWER PROTECTION PRODUCTS CAMBRIDGE, MD USA



THIRD ANGLE
PROJECTION

TOLERANCE
UNLESS NOTED

INCH $\pm .015$

MM $\pm .38$

ANGLES $\pm 5^\circ$

TYPE 203 SUPPLEMENTARY PROTECTOR SPEC.

MATERIAL

FINISH

DRAWN J.G.

APPROVED R.C.

INTERPRET DRAWING PER
ANSI Y14.5M-1982

CHECKED R.C.

DATE 9-23-70

INCH
[MM]

SCALE

AM-328

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

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AM-328 SHEET 3
OF 10

FIRST DECISION	
TYPE	
203	ROCKER HANDLE UL/CSA CONSTRUCTION
293	ROCKER HANDLE 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-

SECOND DECISION	
POLES	
-1	SINGLE POLE
-1 1	TWO POLE
-1 1 1	THREE POLE
-2	SINGLE POLE ILLUMINATED HANDLE
-22	TWO POLE ILLUMINATED HANDLE
-222	THREE POLE 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 SHORT DELAY
-65	50/60 Hz HIGH PULSE TOLERANT LONG DELAY
-66	50/60 Hz HIGH PULSE TOLERANT 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)

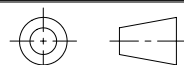
SIXTH DECISION
HANDLE COLOR
(SEE SHEET 4)

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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THIRD ANGLE
PROJECTION

TOLERANCE
UNLESS NOTED

1 NCH $\pm .015$

MM $\pm .38$

ANGLES $\pm 5^\circ$

SCALE

INCH
[MM]

TYPE 203 SUPPLEMENTARY PROTECTOR SPEC.

MATERIAL

FINISH

DRAWN	J.G.	APPROVED	R.C.
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CHECKED	R.C.	DATE	9-23-70
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INTERPRET DRAWING PER
ANSI Y14.5M-1982

INCH
[MM]

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
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REVISIONS	
AJ	29118

AM-328

SIXTH DECISION		
HANDLE COLOR		
CODE	HANDLE COLOR	MARKINGS
1	WHITE - NON ILLUMINATED	FIG. 1
2	BLACK - NON ILLUMINATED	
	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	WHITE	FIG. 4
H		FIG. 2
J		FIG. 5
K		UNMARKED
L		FIG. 3
M		FIG. 6
N	BLACK	FIG. 4
P		FIG. 2
Q		FIG. 5
R		UNMARKED
S		FIG. 3
T		FIG. 6
U	RED	FIG. 4
V		FIG. 2
W		FIG. 5
X		UNMARKED
Y		FIG. 3
Z		FIG. 6

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

SEVENTH DECISION	
BODY COLOR	
1	BLACK
2	WHITE
3	GREY

EIGHTH DECISION	
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.

OFF	ON
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	O	I
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OFF ○	ON I
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 AIRPAX www.airpax.net		 THIRD ANGLE PROJECTION		TOLERANCE UNLESS NOTED		TYPE 203 SUPPLEMENTARY PROTECTOR SPEC.			
POWER PROTECTION PRODUCTS CAMBRIDGE, MD USA				INCH $\pm .015$		MATERIAL		FINISH	
DRAWN J. G. APPROVED R. C.		INTERPRET DRAWING PER ANSI Y14.5M-1982		MM $\pm .38$					
CHECKED R. C. DATE 9-23-70		INCH [MM]		ANGLES $\pm 5^\circ$					
				SCALE		AM-328		SHEET 4 OF 10	
								REVISION AP	

REVISIONS			AM-328 SHEET 5 OF 10
AJ	29118	Property of Sensata Technologies 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 "O" 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.	
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AM	33839		
AN	33882		
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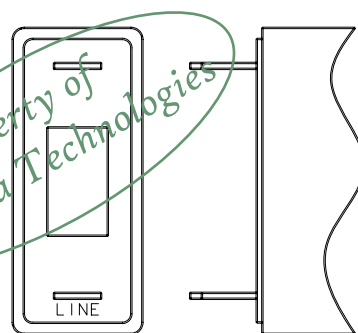
AIRPAX www.airpax.net				THIRD ANGLE PROJECTION		TOLERANCE UNLESS NOTED INCH ±.015 MM ±.38 ANGLES ±5°		TYPE 203 SUPPLEMENTARY PROTECTOR SPEC.			
POWER PROTECTION PRODUCTS CAMBRIDGE, MD USA				INTERPRET DRAWING PER ANSI Y14.5M-1982		SCALE		MATERIAL		FINISH	
DRAWN J.G.		APPROVED R.C.		DATE 9-23-70		INCH [MM]		AM-328		SHEET 5 OF 10	
CHECKED R.C.										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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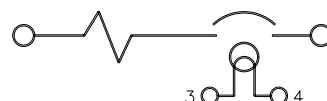
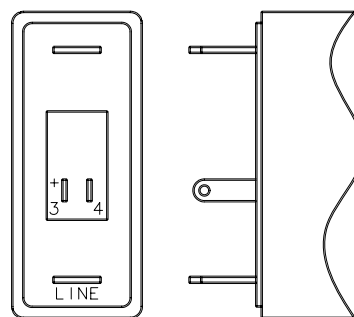
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AJ	29118
AK	31784
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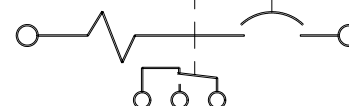
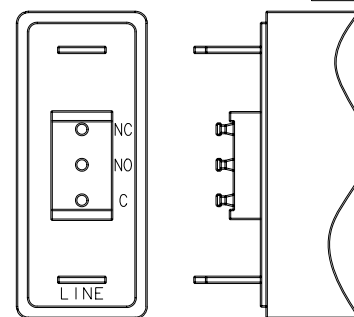
AM-328 SHEET 6
OF 10



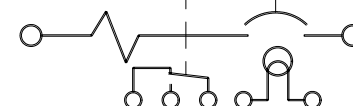
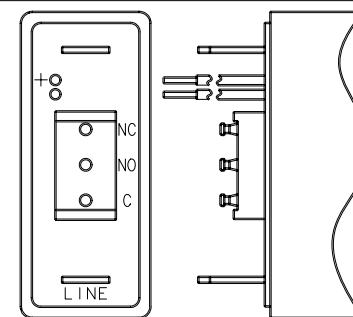
SERIES
203-1-1



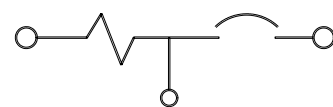
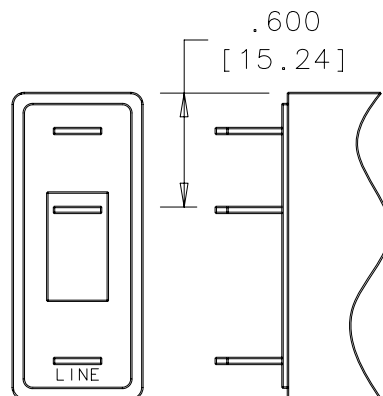
SERIES WITH
ILLUMINATED HANDLE
203-2-1



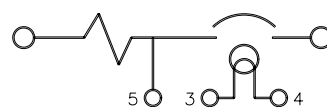
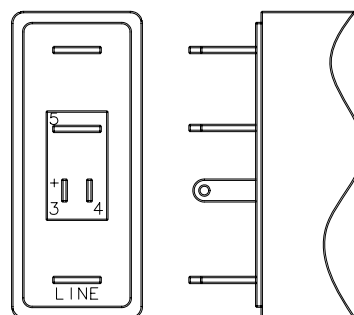
SERIES WITH
AUXILIARY SWITCH
203-1-2



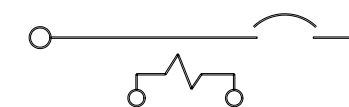
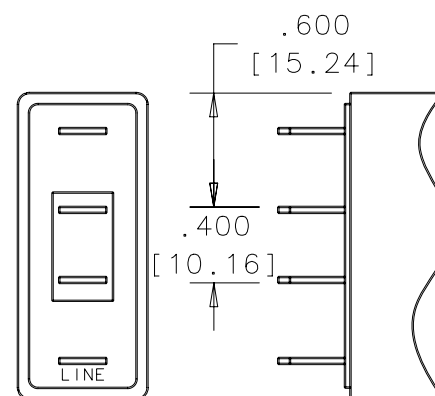
SERIES WITH AUX. SWITCH
AND ILLUMINATED HANDLE
203-2-2



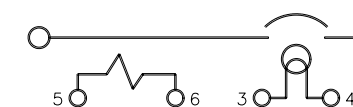
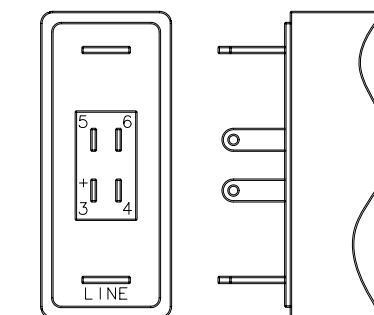
SHUNT
203-1-3



SHUNT WITH
ILLUMINATED HANDLE
203-2-3



RELAY
203-1-4



RELAY WITH
ILLUMINATED HANDLE
203-2-4

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THIRD ANGLE
PROJECTION

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INCH
[MM]

TOLERANCE
UNLESS NOTED

INCH ± .015

MM ± .38

ANGLES ± 5°

SCALE

TYPE 203 SUPPLEMENTARY PROTECTOR SPEC.

MATERIAL

FINISH

AM-328

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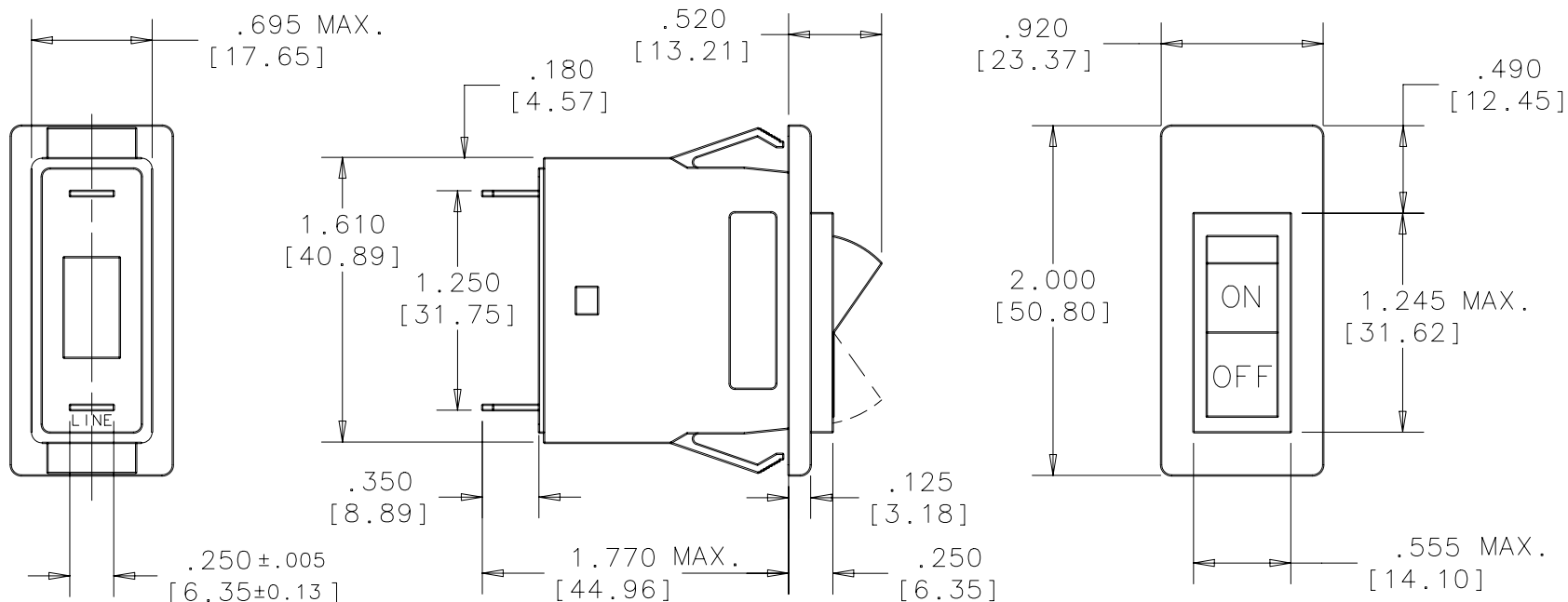
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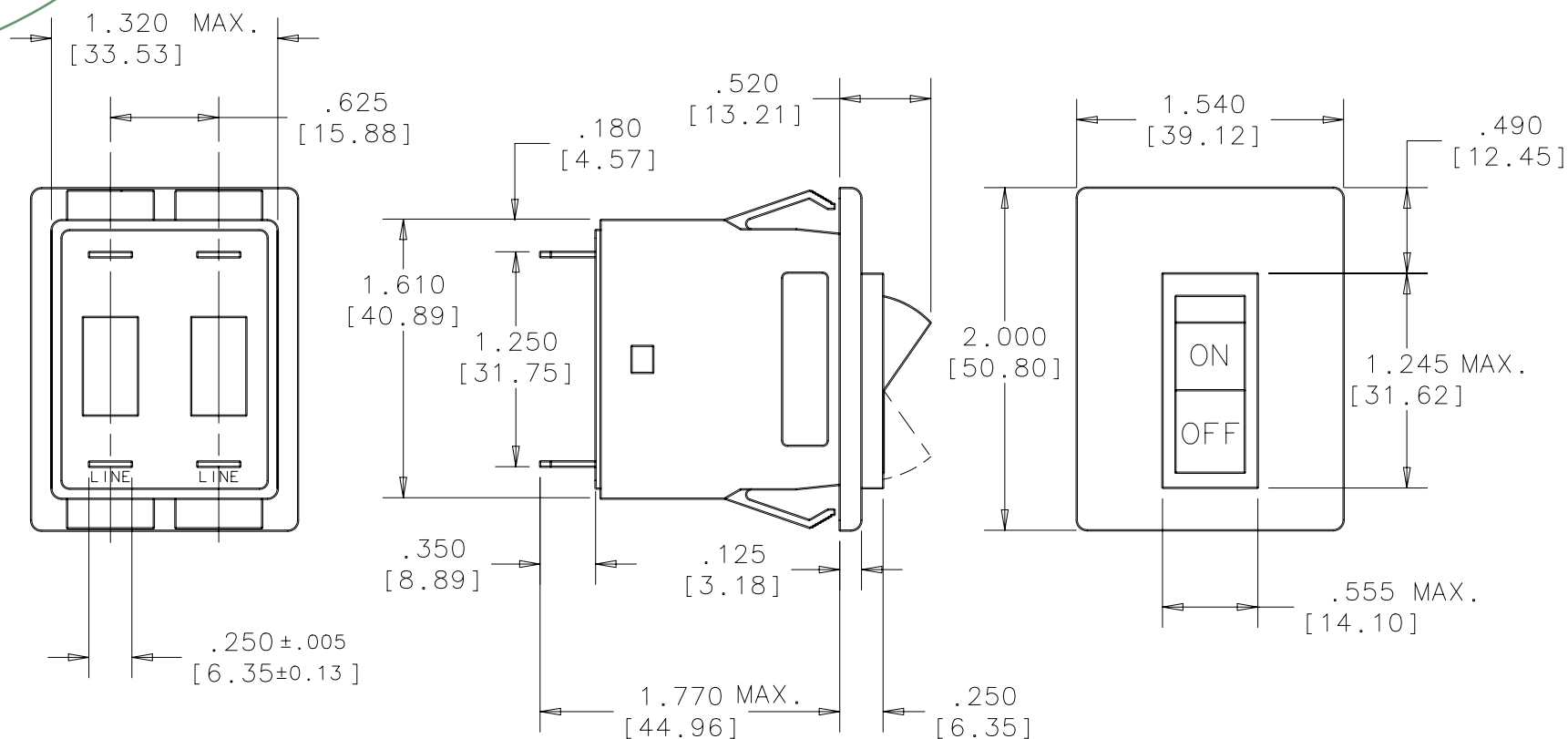
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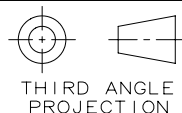
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TOLERANCE
UNLESS NOTED

INCH ± .015

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ANGLES ± 5°

SCALE

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MATERIAL

FINISH

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

INCH
[MM]

AM-328

SHEET 8
OF 10

REVISION

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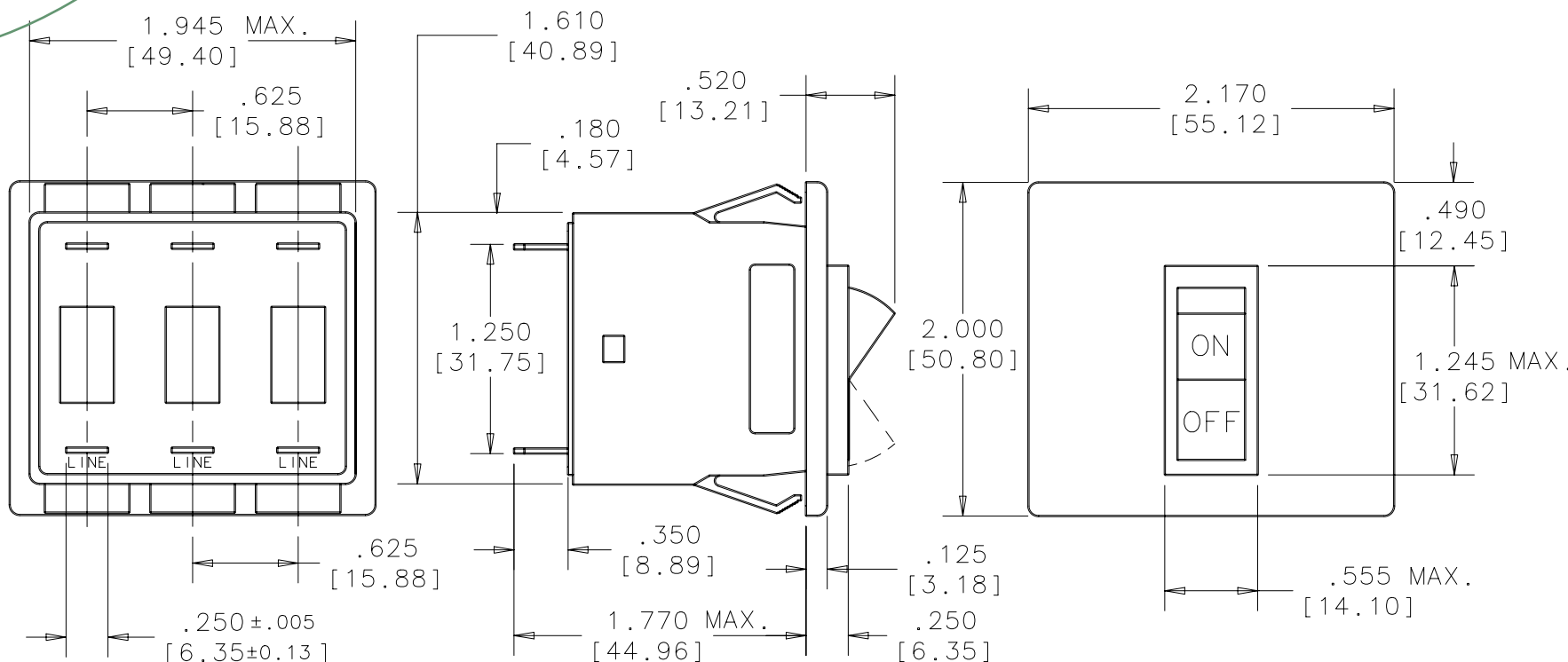
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AM-328 SHEET 9
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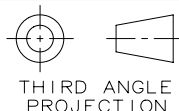
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ANSI Y14.5M-1982

INCH
[MM]

TOLERANCE
UNLESS NOTED

INCH ± .015

MM ± .38

ANGLES ± 5°

SCALE

TYPE 203 SUPPLEMENTARY PROTECTOR SPEC.

MATERIAL

FINISH

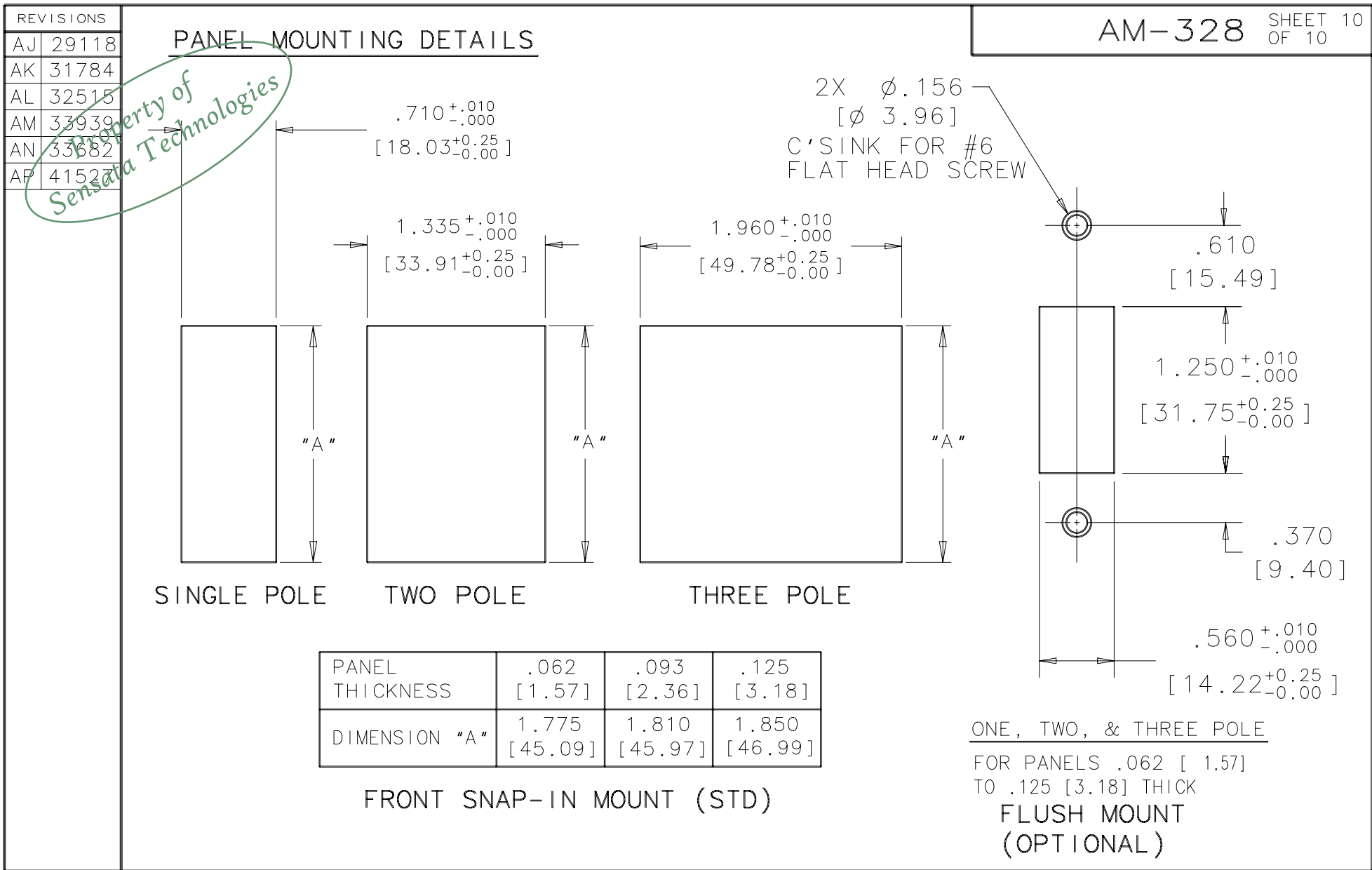
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OF 10

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A B C D E F G H J K L M N P R S U V W X Y Z

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DRAWN J.G.		APPROVED R.C.		INTERPRET DRAWING PER ANSI Y14.5M-1982		MATERIAL		FINISH			
CHECKED R.C.		DATE 9-23-70		INCH [MM] SCALE		AM-328		SHEET 10 OF 10		REVISION AP	

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