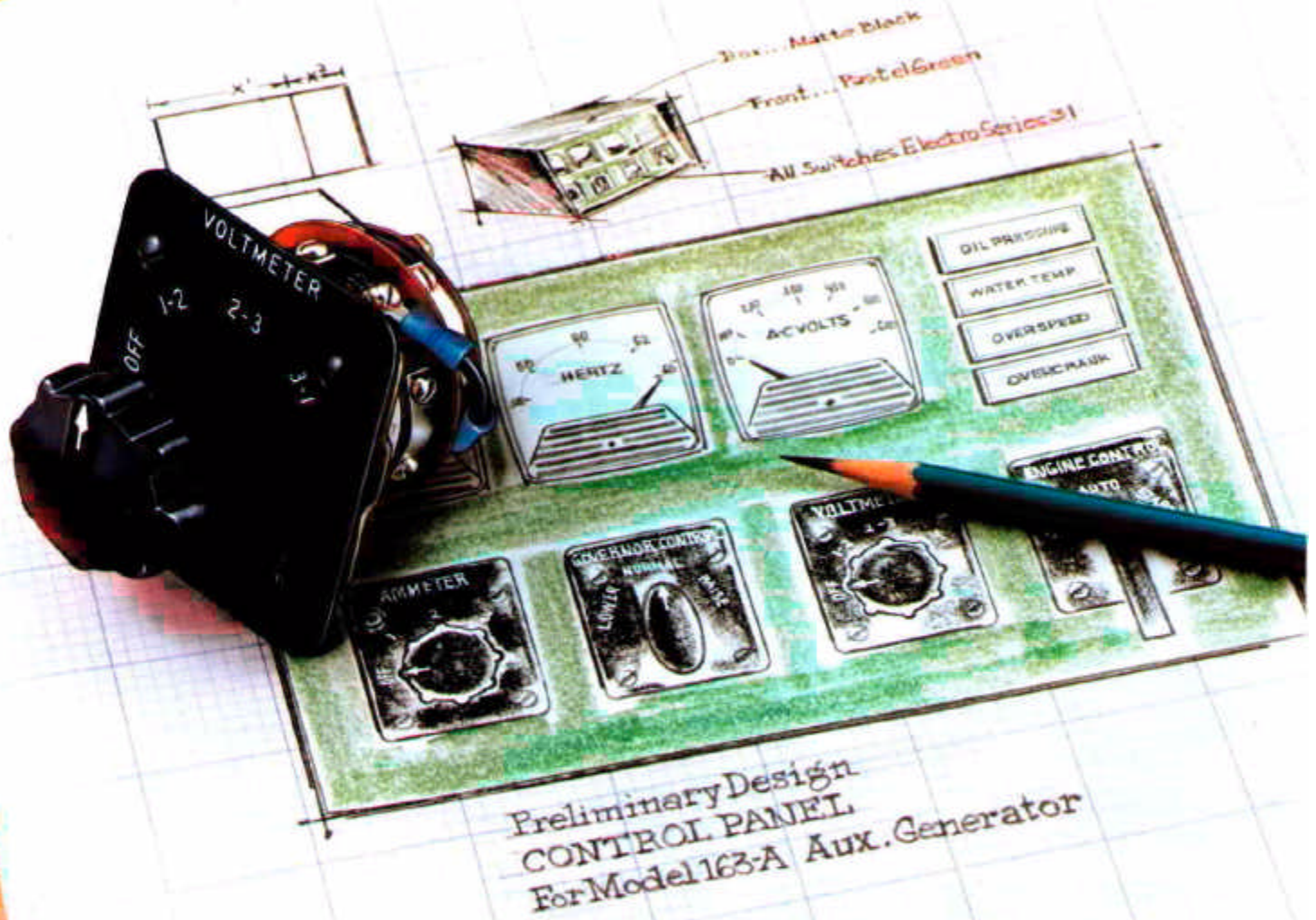


SERIES 31
DIGEST

INDUSTRIAL CONTROL SWITCHES



UL LISTED



10A - 125VAC
5A - 250VAC
3A - 600VAC
5A - 30VDC
1A - 125VDC

CSA CERTIFIED



10A - 125VAC
5A - 250VAC
5A - 125VAC



ELECTROSWITCH

UNIT OF ELECTRO SWITCH CORP.

ROTARY SWITCHES for TAP, TRANSFER & SELECTOR SERVICE

These control switches include an oval handle. See Bulletin ACC for nameplates. The catalog numbers are for universal switches that provide all contacting shown. To limit switches to positions shown put limit screws in holes in rear stop plate.

OFF-ON SINGLE-THROW

detent spring return

DOUBLE-THROW WITHOUT OFF

detent spring return

DOUBLE-THROW WITH OFF

detent spring return

Order the jumpers for this arrangement separately (2 per deck P/N 03057-1-C3)

Catalog numbers			
Decks	Detent	spring-return †	depth*
1	31201B	75201B	1.25
2	31202B	75202B-2.09	1.63
3	31203B	75203B-2.50	2.00
4	31204B	75204B-3.25	2.38
5	31205B	75205B-4.50	2.75
6	31206B		3.13
7	31207B		3.75
8	31208B		4.13
9	31209B		4.50
10	31210B		4.88

* depth behind panel in inches
† depth behind panel is greater for spring-return

Typical Deck Layout

n = deck number

3 THROW WITH OFF

5 THROW WITH OFF

7 THROW WITH OFF

4 THROW WITH OFF

6 THROW WITH OFF

Catalog numbers		
Decks	Detent	depth*
1	31301B	1.25
2	31302B	1.63
3	31303B	2.00
4	31304B	2.38
5	31305B	2.75
6	31306B	3.13
7	31307B	3.75
8	31308B	4.13
9	31309B	4.50
10	31310B	4.88

* depth behind panel in inches

Typical Deck Layout

n = deck number

ROTARY SWITCHES for INSTRUMENT and CONTROL

These switches include engraved nameplate as shown and all needed jumpers. "Depth" is depth behind panel in inches.

VOLTMETER TRANSFER SWITCH

3 phase, phase-to-phase
Double-pole triple-throw
Handle: Round, knurled
depth - 1.63

Cat. No. 3104C

POS.	CONTACTS	POS.
1	11-12	X
1	13-14	X
1	21-22	X
1	23-24	X
2	11-12	X
2	13-14	X
2	21-22	X
2	23-24	X

AMMETER TRANSFER SWITCH

3 phase, three current transformers
Handle: Round, knurled
depth - 1.63

Cat. No. 3109C

POS.	CONTACTS	POSITIONS
1	11-12	X X X
1	13-14	X X X
1	21-22	X X X
1	23-24	X X X
2	11-12	X X X
2	13-14	X X X
2	21-22	X X X
2	23-24	X X X

*denotes make-before-break

VOLTMETER TRANSFER SWITCH

3 phase, phase-to-phase and phase-to-neutral
Double-pole six-throw
Handle: Round, knurled
depth - 1.63

Cat. No. 3105C

POS.	CONTACTS	POSITIONS
1	11-12	X
1	13-14	X
1	15-16	X
1	17-18	X
1	21-22	X
1	23-24	X
1	25-26	X
1	27-28	X
2	11-12	X
2	13-14	X
2	15-16	X
2	17-18	X
2	21-22	X
2	23-24	X
2	25-26	X
2	27-28	X

AMMETER TRANSFER SWITCH

3 phase, three current transformers
three independent circuits
Handle: Round, knurled
depth - 3.13

Cat. No. 3111C

POS.	CONTACTS	POSITIONS
1	11-12	X X X
1	13-14	X X X
1	21-22	X X X
1	23-24	X X X
2	11-12	X X X
2	13-14	X X X
2	21-22	X X X
2	23-24	X X X
3	11-12	X X X
3	13-14	X X X
3	21-22	X X X
3	23-24	X X X

*denotes make-before-break

AMMETER TRANSFER SWITCH

3 phase, two current transformers
Handle: Round, knurled
depth - 1.63

Cat. No. 3108C

POS.	CONTACTS	POSITIONS
1	11-12	X X X
1	13-14	X X X
1	21-22	X X X
1	23-24	X X X
2	11-12	X X X
2	13-14	X X X
2	21-22	X X X
2	23-24	X X X

*denotes make-before-break

AMMETER TRANSFER SWITCH

3 phase, three current transformers
Handle: Round, knurled
depth - 3.13

Cat. No. 3112C

POS.	CONTACTS	POSITIONS
1	11-12	X X X
1	13-14	X X X
1	21-22	X X X
1	23-24	X X X
2	11-12	X X X
2	13-14	X X X
2	21-22	X X X
2	23-24	X X X
3	11-12	X X X
3	13-14	X X X
3	21-22	X X X
3	23-24	X X X
4	11-12	X X X
4	13-14	X X X
4	21-22	X X X
4	23-24	X X X
5	11-12	X X X
5	13-14	X X X
5	21-22	X X X
5	23-24	X X X
6	11-12	X X X
6	13-14	X X X
6	21-22	X X X
6	23-24	X X X

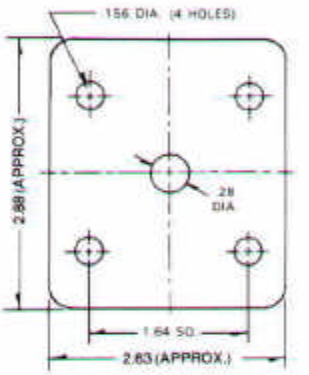
*denotes make-before-break

ROTARY SWITCHES for INSTRUMENT and CONTROL

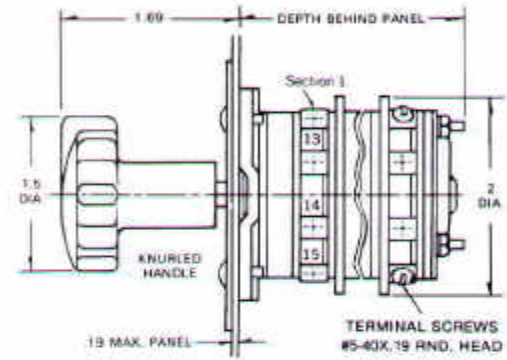
These switches include engraved nameplate as shown and all needed jumpers. "Depth" is depth behind panel in inches.

<p>AMMETER-VOLTMETER TRANSFER SWITCH 3-phase, phase-to-phase three current transformers Handle: Round, knurled depth - 2.38</p>	<table border="1"> <thead> <tr> <th>CONTACTS</th> <th>POSITIONS</th> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>11</td> <td>12</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>21</td> <td>22</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>31</td> <td>32</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>41</td> <td>42</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>51</td> <td>52</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>61</td> <td>62</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>71</td> <td>72</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>81</td> <td>82</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>91</td> <td>92</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>101</td> <td>102</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>111</td> <td>112</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>121</td> <td>122</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>131</td> <td>132</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>141</td> <td>142</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>151</td> <td>152</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>161</td> <td>162</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>171</td> <td>172</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>181</td> <td>182</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>191</td> <td>192</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>201</td> <td>202</td> <td>X</td> <td>X</td> <td>X</td> </tr> </tbody> </table>	CONTACTS	POSITIONS	1	2	3	11	12	X	X	X	21	22	X	X	X	31	32	X	X	X	41	42	X	X	X	51	52	X	X	X	61	62	X	X	X	71	72	X	X	X	81	82	X	X	X	91	92	X	X	X	101	102	X	X	X	111	112	X	X	X	121	122	X	X	X	131	132	X	X	X	141	142	X	X	X	151	152	X	X	X	161	162	X	X	X	171	172	X	X	X	181	182	X	X	X	191	192	X	X	X	201	202	X	X	X		<p>MOTOR CONTROL SWITCH INTEGRATION OF ROTARY Split-field motor Handle: Pistol grip Spring-return to vertical depth - 1.25</p>	<table border="1"> <thead> <tr> <th>CONTACTS</th> <th>POS.</th> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>11-11-11-11-11</td> <td>12</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>21-21-21-21-21</td> <td>22</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>31-31-31-31-31</td> <td>32</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>41-41-41-41-41</td> <td>42</td> <td>X</td> <td>X</td> <td>X</td> </tr> </tbody> </table>	CONTACTS	POS.	1	2	3	11-11-11-11-11	12	X	X	X	21-21-21-21-21	22	X	X	X	31-31-31-31-31	32	X	X	X	41-41-41-41-41	42	X	X	X	
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* denotes make-before-break



NAMEPLATE DIMENSIONS AND PANEL DRILLING DIMENSIONS



SWITCH DIMENSIONS

ORDERING DATA

Standard Instrument and Control Switches

The standard series 31 Instrument and Control switches are ordered by catalog number. Each catalog number identifies a specific switch that is furnished complete with the contact arrangement, terminal-to-terminal prewiring, handle, and engraved escutcheon plate shown in the description that accompanies the switch listing. Each switch is supplied with complete mounting hardware for panels up to 3/16 inch thick. The most common circuits are stocked for immediate delivery.

The other shaped handles may be substituted without affecting the availability of the switch since the handles are interchangeable. Order by exception, e.g. Catalog No. 31205B except with round-knurled handle or Catalog No. 31205B except with pistol-grip handle.

Jumpers

Strap jumpers are available for adjacent contacts and wire and lug assemblies are available for other terminal jumpering. The strap jumpers are available in packages of ten or twenty-five and the wire and lug assemblies are ordered individually. Data is as follows:

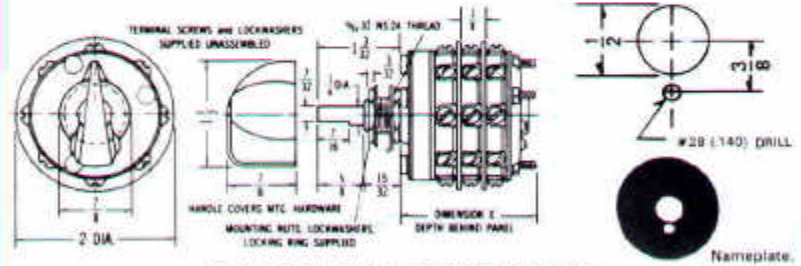
CATALOG NO.	DESCRIPTION
03057-1-C3	Jumper, adjacent terminals on the same deck
03059-1-C3	Jumper, same terminal location on adjacent deck

Wire and lug assemblies have stranded wire and insulated ring lugs.

CATALOG NO.	LENGTH (L)
00314-1	2"
00314-2	3"
00314-3	5"

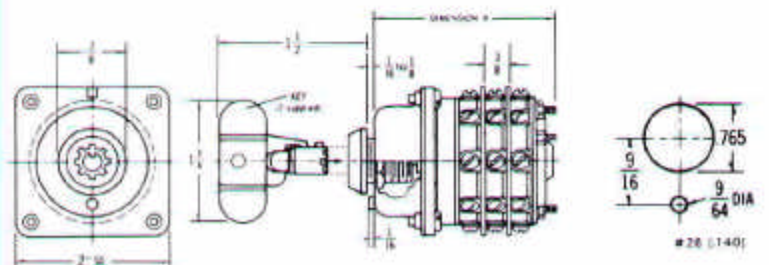
OTHER SERIES 31 INDUSTRIAL CONTROL SWITCHES

(Complete information in Catalog EMC-2)



SERIES 31 SINGLE-HOLE MOUNT

To order, change suffix letter to "A", e.g. 3115A



SERIES 31 KEY-OPERATED

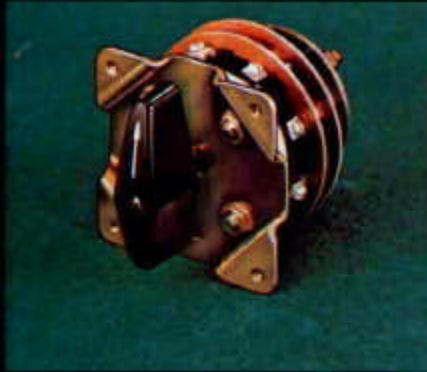
To order, change first two digits to 65 and suffix letter to "A" for detent action, and "C" for spring return, e.g. 65203A is same as 31203B except key-operated (key removable in vertical position).

OTHER INDUSTRIAL CONTROL SWITCHES

Details in Catalog EMC-2

Series 21 (8 position) 15A-120VAC
Series 25 (12 position) 10A-120VAC
Series 28 (16 position) 5A-120VAC

DETENT SWITCHES



Series 101 15A-120VAC 10A-125VDC
Series 103 30A-480VAC 30A-250VDC
Series 105 60A-600VAC 60A-250VDC
Series 107 200A-600VAC 200A-250VDC

SNAP-ACTION SWITCHES

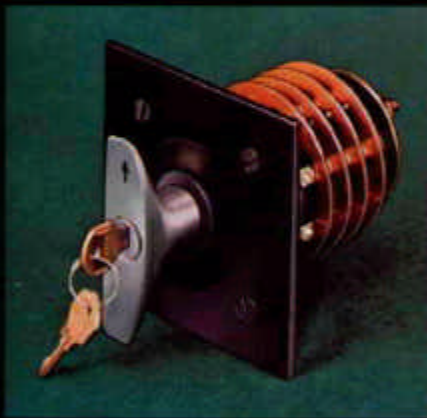


Series PR-16 16A-600VAC
Series PR-20 20A-600VAC
Series PR-40 32A-600VAC
Series PR-63 63A-240VAC

CAM SWITCHES



Series 21, 25 & 28
KEY-LOCK SWITCHES



Series 21, 25 & 28
SOLENOID-LOCK SWITCHES



Series 21, 25 & 28
PUSH-TO-TURN SWITCHES



POWER INDUSTRY SWITCHES AND RELAYS

SERIES 24 INSTRUMENT & CONTROL SWITCHES



(See Bulletin 24-1)

SERIES 20 INSTRUMENT & CONTROL SWITCHES



(See Bulletin MIN-1)

AUXILIARY RELAYS



(See Bulletins LOR-1, SSR-1, LSR-1 & CSR-1)



ELECTROSWITCH
 UNIT OF ELECTRO SWITCH CORP.

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LA691/5M