

BUYLOG SECTION 7

Circuit Breaker Enclosures

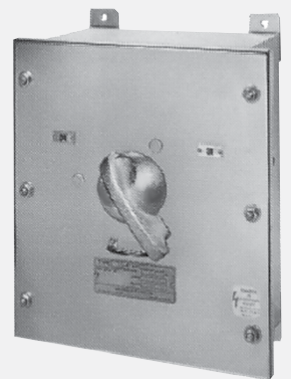






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Circuit Breaker Enclosures

NEMA Type 1

Product Features

- Suitable for use as service equipment (SE) as noted.
- 60°C/75°C conductor ratings
- Short circuit ratings are equal to the rating of the installed breaker.

To order enclosed or accessorized circuit breakers, a configurator is available at: empower.abb.com



Type 1, Indoor Surface or Flush Mounting

NEMA Type 1

Max. Ampere Rating	Frame Type	No. of Poles	Certifications				Product Number	Suffix Options (Mounting)			For 3P4W Enclosures	For Enclosures with Ground Fault Protection		
			UL SE	cUL	cUL SE ¹	CSA		Prefix	Flush	Surface		Surface, Blank End Wall ²	Neutral Product Number	Neutral Product Number ³
70	THQL, TXQL, THQL-GF	1, 2, 3	•	-	-	•	TQL70_ ⁴	F	S	-	Included	-	-	
100	THQL, TXQL, THQL-GF	1, 2, 3	•	-	-	•	TQL100_ ⁴	F	S	-	Included	-	-	
125	THQL	2	•	-	-	-	TQL125_	F	S	-	Included	-	-	
100	THQC, THHQC, TXQC	1, 2, 3	•	-	-	•	TQC100_ ⁴	F	S	-	Included	-	-	
100	SE150, THED, TED, TEB	2, 3	•	-	-	•	TE100_	F	S	SB	Included	-	-	
150	SE150, THED, TED	2, 3	•	-	-	•	TE150_	F	S	SB	Included	-	-	
225	TQD, THQD	2, 3	•	-	-	•	TQD225_	F	S	-	Included	-	-	
250	SF250	2, 3	•	-	-	•	SF250_	F	S	SB	TNIA225 ⁵	-	-	
400	TJD, TJJ, TJK, THJK	2, 3	•	-	-	•	TJ400_ ⁶	F	S	-	TNIA400	-	-	
600	TJK, THJK	2, 3	•	-	-	•	TJ600_	F	S	-	TNIA600	-	-	
400	SG400	2, 3	•	-	-	•	SG400_	F	S	SB	TNIA400	TNIA400VG	TSRG201 TSRG204	
600	SG600	2, 3	•	-	-	•	SG600_	F	S	SB	TNIA600	TNIA600VG	TSRG206	
600	FG600	2, 3	•	•	-	-	FG600_	F	S	SB	TNIA400 TNIA600	TNIA400GGF TNIA600GGF	FGGS0250 FGGS0400 FGGS0600	
1200	SK1200	2, 3	•	-	-	•	TK4V1200_ ^{7,8}	F	S	SB	TNIA400 TNIA600 TNIA800 TNIA1200 TNIA1200	TNIA800G TNIA1200G	TSKG408 TSKG410 TSKG412	

¹cUL Listed - Suitable for use as service equipment.

²Enclosures with blank end walls (no Knockouts) and a feature to adjust the instantaneous setting on Spectra Circuit breakers.

³Neutral for ground fault required to mount neutral sensor in enclosure.

⁴3-Pole breakers with an accessory cannot be installed in these enclosures.

⁵For 250A rating, use copper cable only.

⁶Suitable for parallel 250 kcmil maximum. If larger cable is required, use 600A enclosure.

⁷Not suitable for 100% rated 1200A SK breakers.

⁸Suitable for parallel 500 kcmil maximum.

Circuit Breaker Enclosures

NEMA Type 3R

Product Features

- Suitable for use as service equipment (SE) as noted.
- 60°C/75°C conductor ratings
- Short circuit ratings are equal to the rating of the installed breaker.

To order enclosed or accessorized circuit breakers, a configurator is available at: empower.abb.com



Type 3R, Outdoor, Raintight

NEMA Type 3R

Max. Ampere Rating	Frame Type	No. of Poles	Certifications				Product Number ¹⁰	For 3P4W Enclosures	For Enclosures with Ground Fault Protection	
			UL SE	cUL	cUL SE ¹	CSA		Neutral Product Number	Neutral Product Number ²	Neutral Sensor for Ground Fault
70	THQL, TXQL, THQL-GF	1, 2, 3	•	-	•	•	TQL70R ³	Included	-	-
100	THQL, TXQL, THQL-GF	1, 2, 3	•	-	•	•	TQL100R ³	Included	-	-
125	THQL	2	•	-	•	-	TQL125R	Included	-	-
100	THQC, THHQC, TXQC	1, 2, 3	•	-	•	•	TQC100R ³	Included	-	-
100	SE150, THED, TED, TEB	2, 3	•	-	•	•	TE100R	Included	-	-
150	SE150, THED, TED	2, 3	•	-	•	•	TE150R	Included	-	-
225	TQD, THQD	2	•	-	•	•	TQD225NR ⁹	Included	-	-
225	TQD, THQD	2, 3	•	-	•	•	TQD225R	Included	-	-
250	SF250	2, 3	•	-	-	•	TF225R	TNIA225 ⁴	-	-
400	TJD, TJJ, TJK, THJK	2, 3	•	-	-	•	TJ400R ⁵	TNIA400	-	-
600	TJK, THJK	2, 3	•	-	-	•	TJ600R	TNIA600	-	-
400	SG400	2, 3	•	-	-	•	SG400R	TNIA400	TNIA400VG	TSRG201 TSRG204
600	SG600	2, 3	•	-	-	•	SG600R	TNIA600	TNIA600VG	TSRG206
600	FG600	2, 3	•	•	-	-	FG600R	TNIA400 TNIA600	TNIA400GGF TNIA600GGF	FGGS0250 FGGS0400 FGGS0600
1200	SK1200	2, 3	•	-	-	•	TK4V1200R ^{6,7}	TNIA400 TNIA600 TNIA800 TNIA1200 TNIA1200	TNIA800G TNIA1200G	TSKG408 TSKG410 TSKG412

Max. Ampere Rating	Frame Type	No. of Poles	Certifications				Product Number ¹⁰	For 3P4W Enclosures	Notes
			UL SE	cUL	cUL SE ¹	CSA		Neutral Product Number	
100	THQL, TXQL, THQL-GF	1, 2, 3	•	-	-	•	TQL70RE ³	Included	100A circuit breaker factory installed (2-pole)
150	TQD, THQD	2	•	-	-	•	TQD150NRE	Included	150A circuit breaker factory installed (2-pole)
200	TQD, THQD	2	•	-	•	•	TQD200NRE	Included	200A circuit breaker factory installed (2-pole)
150	THQMV	2	•	-	•	•	THQMV150NRE ⁸	Included	150A circuit breaker factory installed (2-pole)
200	THQMV	2	•	-	•	•	THQMV200NRE ⁸	Included	200A circuit breaker factory installed (2-pole)

¹cUL Listed - Suitable for use as service equipment.

²Neutral for ground fault required to mount neutral sensor in enclosure.

³3-Pole breakers with an accessory can not be installed in these enclosures.

⁴For 250A rating, use copper cable only.

⁵Suitable for parallel 250 kcmil maximum. If larger cable is required, use 600A enclosure.

⁶Not suitable for 100% rated 1200A SK breakers.

⁷Suitable for parallel 500 kcmil maximum.

⁸Service rated equipment only.

⁹TQD225NR is 2P only and differs in size from TQD225R.

¹⁰100-250A devices have removable closing cap. Larger ampere devices require field cut openings. Order hubs separately. See page 7-8.

Circuit Breaker Enclosures

NEMA Type 12

Product Features

- Suitable for use as service equipment (SE) as noted.
- 60°C/75°C conductor ratings
- Short circuit ratings are equal to the rating of the installed breaker.

To order enclosed or accessorized circuit breakers, a configurator is available at: empower.abb.com



Types 12K and 12,
Rotary Handle Integral with Breaker

NEMA Type 12

Max. Ampere Rating	Frame Type	No. of Poles	Certifications				Product Number	Suffix Options (Mounting)		For 3P4W Enclosures	For Enclosures with Ground Fault Protection	
			UL SE	cUL	cUL SE ¹	CSA		Prefix	With Knock Outs		Without Knock Outs	Neutral Product Number
100	THED, TED, TEB	3	•	-	•	•	TE100_	D	J	Included	-	-
100	SE150	2, 3	•	-	•	•	SE100_	D	J	Included	-	-
250	SF250	2, 3	•	-	-	•	SF250_	D	J	TNIA225 ⁴	-	-
400	TJD, TJJ, TJK, THJK	2, 3	•	-	-	•	TJ400_ ³	-	J	TNIA400	-	-
600	TJK, THJK	2, 3	•	-	-	•	TJ600_	-	J	TNIA400 TNIA600	-	-
400	SG400	2, 3	•	-	-	•	SG400_	D	J	TNIA400	TNIA400VG	TSRG201 TSRG204
600	SG600	2, 3	•	-	-	•	SG600_	-	J	TNIA600	TNIA600VG	TSRG206
1200	SK1200	2, 3	•	-	-	•	SK1200_ ^{5,6}	-	J	TNIA400 TNIA600 TNIA800 TNIA1200 TNIA1200G	TNIA800G TNIA1200G	TSKG408 TSKG410 TSKG412

¹cUL Listed - Suitable for use as service equipment.

²Neutral for ground fault required to mount neutral sensor in enclosure.

³Suitable for parallel 250 kcmil maximum. If larger cable is required, use 600A enclosure.

⁴For 250A rating, use copper cable only.

⁵Not suitable for 100% rated 1200A SK breakers.

⁶Suitable for parallel 500 kcmil maximum.

Circuit Breaker Enclosures

NEMA Type 4/4X

Product Features

- Suitable for use as service equipment (SE) as noted.
- 60°C/75°C conductor ratings
- Short circuit ratings are equal to the rating of the installed breaker.

To order enclosed or accessorized circuit breakers, a configurator is available at: empower.abb.com



Type 4/4X,
Stainless Steel, Watertight, Dust Tight

NEMA Type 4/4X

Max. Ampere Rating	Frame Type	No. of Poles	Certifications				Product Number	For 3P4W Enclosures	For Enclosures with Ground Fault Protection	
			UL SE	cUL	cUL SE ¹	CSA		Neutral Product Number	Neutral Product Number ²	Neutral Sensor for Ground Fault
100	THED, TED, TEB	2, 3	•	-	-	-	TE100CS	TNI100	-	-
100	SE150	2, 3	•	-	-	-	SE150CS	TNI100	-	-
250	SF250	2, 3	•	-	-	-	SF250CS	TNIA225 ³	-	-
400	TJD, TJJ, TJK, THJK	2, 3	-	-	-	-	TJ400CS ⁴	TNIA400	-	-
600	TJK, THJK	2, 3	-	-	-	-	TJ600CS	TNIA400 TNIA600	-	-
400	SG400	2, 3	•	-	-	-	SG400CS ⁵	TNIA400	-	-

¹cUL Listed - Suitable for use as service equipment.

²Neutral for ground fault required to mount neutral sensor in enclosure.

³For 250A rating, use copper cable only.

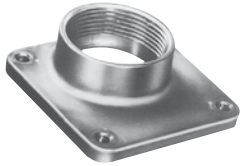
⁴Suitable for parallel 250 kcmil maximum. If larger cable is required, use 600A enclosure.

⁵Not suitable for 3-Phase, 4-wire or Single-Phase, 4 wire ground fault applications that require Neutral sensor mounted in enclosure.

Circuit Breaker Enclosures

Hubs and Other Accessories

Universal Raintight Hubs, Aluminum



TC150

For outdoor enclosures that have removable closing caps.

Nominal Conduit Diameter (in.)	Standard Package	Product Number
3/4	10	TC75
1	10	TC100
1 1/4	10	TC125
1 1/2	10	TC150
2	10	TC200
2 1/2	10	TC250
3	5	TC300
Closing Cap	10	TCCP

Stainless Steel Cover

For flush mounted Type 1 circuit breaker enclosures, field installed only.

For Use with	Product Number
TE100F	TE100FSS

Insulated Groundable Neutrals

Max. Ampere Rating	Lug Wire Size (Cu-Al) AWG/kcmil	Standard Package	Product Number
100	14-1/0 Cu, 12-1/0Al	1	TNI100
225	1-300	1	TNIA225 ¹
250	1-300	1	TNIA250EGF ^{1,3}
400	(2) 1/0-250 or (1) 4-600	1	TNIA400
400	(2) 1/0-250 or (1) 4-600	1	TNIA400VG ²
400	(2) 1/0-250 or (1) 4-600	1	TNIA400GGF ³
600	(2) 2/0-500	1	TNIA600
600	(2) 2/0-500	1	TNIA600VG ²
600	(2) 2/0-500	1	TNIA600GGF ³
800	(3) 250-500	1	TNIA800
800	(3) 250-350 Cu or (3) 250-500 Al	1	TNIA800G ²
1200	(4) 250-350 Cu or (4) 250-500 Al	1	TNIA1200
1200	(4) 250-350 Cu or (4) 250-500 Al	1	TNIA1200G ²
1200	(4) 250-400 Cu Only	1	TNIAC1200

¹For 250A rating, use copper cable only

²Neutral required for Spectra Circuit Breakers with ground fault.

³Neutral required for Record Plus Circuit Breakers with ground fault.

Ground Kits

Ampere Rating	Product Number
70-125 amp	TGL1
150-400 amp	(1) TGL1 plus (1) TGL20
600-1200 amp	TGL6

Circuit Breaker Enclosures

Dimensions and Outline Drawings

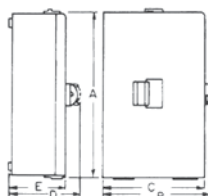
NEMA Type 1 Enclosures

Product Number	Dimension ¹ A (in.)	Dimension ¹ B (in.)	Dimension ¹ C (in.)	Dimension D (in.)	Dimension E (in.)	Outline Drawing No.
TE100F, S, SB ³	17	-	7 7/8	5 1/2	4 3/4	208C2891 Sh 3
TE150F, S, SB ³	26 7/16	8 7/8	8 7/8	6 3/16	5 1/2	139C5497 Sh 1
SF250F, S, SB ³	29 7/8	8 7/8	8 7/8	6 3/16	5 1/2	139C5497 Sh 2
SG400F	31 3/8	-	15 5/32	7 5/16	6 5/8	208C2891 Sh 1
SG400S, SB ³	30 5/16	-	14 1/8	7 5/16	6 5/8	208C2891 Sh 1
TJ400F, S ²	27 7/16	15 7/16	15 7/16	7 1/8	6 7/16	139C5497 Sh 3
SG600F	44	-	18 3/16	9	8 3/8	208C2891 Sh 2
SG600S, SB ³	42 3/4	-	17 1/8	9	8 3/8	208C2891 Sh 2
FG600F, S, SB ³	42 3/4	-	17 1/8	9	8 3/8	208C2891 Sh 7
TJ600F, S	46 5/8	17 3/16	17 3/16	9 1/16	8 3/8	139C5497 Sh 4
TK4V1200F, S, SB	48 1/8	21 15/16	21 15/16	9 9/16	8 11/16	139C5497 Sh 5
TQC100F, S	15 1/4	-	6 7/8	4 3/4	4	139C5651 Sh 1
TQD225F, S	26 7/16	8 7/8	8 7/8	6 3/16	5 1/2	139C5497 Sh 1
TQL70F, S	12 7/8	-	5 3/4	4 3/4	4 1/16	208C2817 Sh 1
TQL100F, S	15 1/4	-	6 7/8	4 3/4	4	139C5651 Sh 2
TQL125F, S	16 7/8	-	6 3/4	5 3/16	4 1/2	139C5651 Sh 2

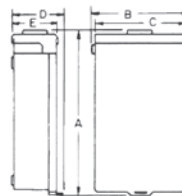
NEMA Type 3R Enclosures

Product Number	Dimension A (in.)	Dimension B (in.)	Dimension C (in.)	Dimension D (in.)	Dimension E (in.)	Outline Drawing No.
TE100R	18 1/8	7 7/8	7 1/2	5 11/16	5 3/8	139C5652 Sh 1
TE150R	27 7/16	10 1/4	10	6 1/4	5 1/2	139C5498 Sh 1
TF225R	30 13/16	10 1/4	10	7	6 1/4	139C5498 Sh 2
SG400R	30 13/16	14 15/16	14 5/8	9 1/8	8	208C2837 Sh 1
SG600R	43	18 7/8	18 1/6	8 13/16	7 11/16	208C2838 Sh 1
FG600R	43	18 7/8	18 1/6	8 13/16	7 11/16	208C2838 Sh 2
TJ400R2	27 5/16	15 7/8	15 11/16	8 11/16	8	139C5498 Sh 4
TJ600R	46 3/16	18 1/16	18 1/16	8 5/8	7 5/8	139C5519 Sh 1
TK4V1200R	47 3/4	23 3/8	22 9/16	9 7/16	8 5/16	139C5520 Sh 1
TQC100R	15 3/4	7 7/8	7 1/2	5 11/16	5 3/8	139C5652 Sh 1
TQD150NRE	26 13/16	7 13/16	7 5/8	5 1/8	4 7/16	139C5498 Sh 3
TQD200NRE	26 13/16	7 13/16	7 5/8	5 1/8	4 7/16	139C5498 Sh 3
TQD225NR	26 13/16	7 13/16	7 5/8	5 1/8	4 7/16	139C5498 Sh 3
TQD225R	26 3/8	10 1/4	10	6 1/4	5 1/2	139C5498 Sh 1
TQL70R	17	-	6 7/8	5 15/16	5	208C3061 Sh 1
TQL100R, RE	17	7 1/4	6 7/8	6	5	139C5652 Sh 1
TQL125R	18 5/16	7 11/16	7 1/2	6 5/16	5 3/16	139C5652 Sh 1
THQMV150NRE	18 13/16	9 1/2	9 5/16	5 1/2	4 7/8	208C3061 Sh 2
THQMV200NRE	18 13/16	9 1/2	9 5/16	5 1/2	4 7/8	208C3061 Sh 2

¹Flush front extends approximately 5/8-inch beyond each side.
²Suitable for parallel 250 kcmil maximum. If larger cable is applied, use 600 amp enclosure.
³NEMA Type 1 Enclosure Product Numbers ending in "SB" contain blank end walls (No Knockouts).



NEMA Type 1
 Suffix F (Flush)
 Suffix S (Surface)



NEMA Type 3R
 Outdoor Enclosure

Circuit Breaker Enclosures

Dimensions and Outline Drawings

NEMA Type 4/4X Enclosures

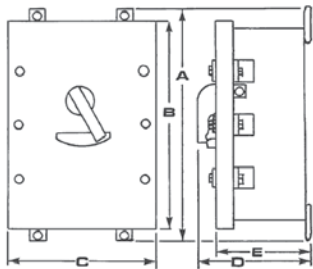
Product Number	Dimension A (in.)	Dimension B (in.)	Dimension C (in.)	Dimension D (in.)	Dimension E (in.)	Outline Drawing No.
SE100CS	19 1/4	18 1/2	8 1/2	7	5	139C5654 Sh 1
TE100CS	19 1/4	17 1/4	8 1/2	7	5	139C5654 Sh 1
SF250CS	36 5/8	34 13/16	9 1/4	7 27/32	5 29/32	168D1626 Sh 1
TJ400CS ¹	29 1/4	27 1/2	16 1/4	9 1/16	7 1/8	139C5496 Sh 2
SG400CS ²	32	31 1/4	14 1/8	9 5/16	7 7/16	208C2887 Sh 1
TJ600CS	46 1/4	45 1/2	19 1/8	9 1/16	7 1/8	139C5496 Sh 3

NEMA Type 12 and 12K Enclosures

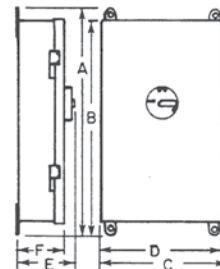
Product Number	Dimension A (in.)	Dimension B (in.)	Dimension C (in.)	Dimension D (in.)	Dimension E (in.)	Dimension F (in.)	Outline Drawing No.
SE100J, D	19 1/4	17 7/8	9	5	5 3/4	4 7/8	139C5653 Sh 1
TE100J, D	19 1/4	17 7/8	9	5	5 3/4	4 7/8	139C5653 Sh 1
SF250D	36 1/4	35 3/8	9 13/16	9 3/16	7 9/16	6 1/2	208C2884 Sh 1
SF250J	36 1/4	35 3/8	9 13/16	9 3/16	7 9/16	6 1/2	208C2884 Sh 2
SG400D	31 3/8	30 1/2	16 5/16	15 11/16	7 7/8	6 9/16	208C2885 Sh 1
SG400J	31 3/8	30 1/2	16 5/16	15 11/16	7 7/8	6 9/16	208C2885 Sh 2
TJ400J ¹	29 5/16	27 13/16	14 1/4	13 3/16	7 7/8	6 7/16	139C5682 Sh 4
SG600J	44 7/8	44	18	17 3/8	9 9/16	8 3/8	208C2886 Sh 1
TJ600J	48 7/16	46 15/16	17 3/4	17 3/16	9 3/4	8 3/8	139C5682 Sh 5
SK1200J	56 5/16	55 7/16	22 11/16	22	10 7/16	8 11/16	139C5682 Sh 6

¹Suitable for parallel 250 kcmil maximum. If larger cable is applied, use 600 amp enclosure.

²Not Suitable for use with ground fault.



NEMA Type 4/4X
Stainless Steel



NEMA Type 12 and 12K
Suffix D (with KOs)
Suffix J (without KOs)

Circuit Breaker Enclosures

Dimensions and Knockout Drawings

Symbol	A	⊕	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z		
Conduit Size (Inches)	3/32	-	3/8	-	-	-	-	-	-	3/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	-	1/2	1/2	1/2	-	1/2	-	1/2	-	1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	-	-	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	-	-	-	-	3/4	-	-	-	-	-	-	3/4	-	-	-	-	
	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-
	-	-	-	-	-	-	-	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	-	-	1 1/4	-	-	1 1/4	-	-	-	-	
	-	-	-	-	-	-	-	-	-	-	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	-	-	-	-		
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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4		

Circuit Breaker Enclosures

Product Number	Knockout Figure No.
TE100F, S	1
TE100R	10
TE100F, S	4
TE150R	7
SF250F, S	4
TF225R	7
TJ400F, S, SG400F, S	5
TJ400R, SG400R	6
TJ600R, SG600R, FG600R	9
TJ600F, S, SG600F, S, FG600F, S	3
TK4V1200F, S	No KO
TK4V1200R	No KO
TQC100F, S	2
TQC100R	10
TQD225F, S	4
TQD225NR	8
TQD225R	7
TQL100F, S	2
TQL100R	10

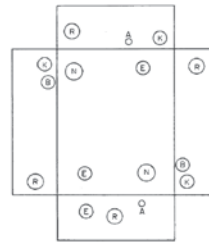


Figure 1

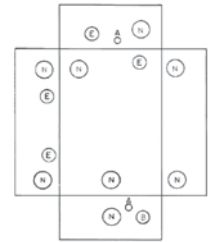


Figure 2

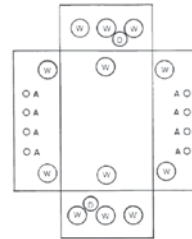


Figure 3

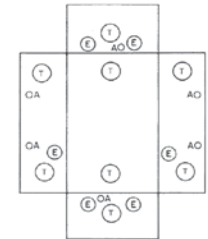


Figure 4

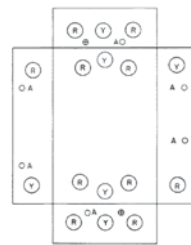


Figure 5

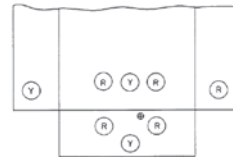


Figure 6

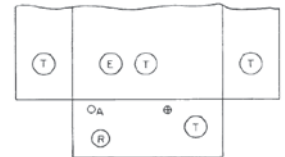


Figure 7



Figure 8

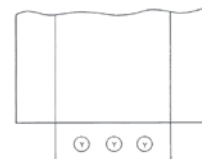


Figure 9



Figure 10