

Series 50 Industrial Control Transformers

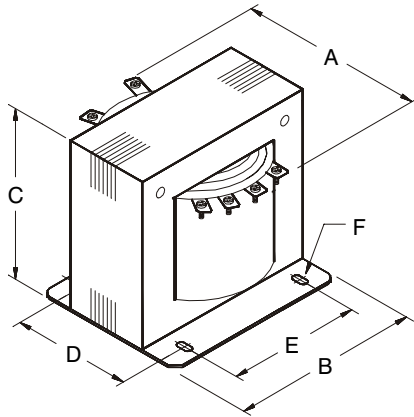
DONGAN ELECTRIC MANUFACTURING CO. • 2987 FRANKLIN • DETROIT, MI 48207
 800.428.2626 • 313.567.8500 • FAX 313.567.8828 • www.dongan.com

Series 50 Industrial Control Transformers are designed to the highest NEMA and industrial standards. Series 50 offer compact designs for ease of installation in hundreds of control panel and automation applications.

All Series 50 transformers are UL approved and CSA certified.

Series 50 are available in both domestic and export voltage combinations. Other voltage, frequency and size requirements are readily manufactured by consulting the factory or your Dongan representative.

CE Marked, TÜV Licensed Industrial Control Transformers are featured on pgs. 82-83 in this section.



Domestic Series:

Features

- **UL Listed, File E3210.**
- **CSA Certified, File LR 560.**
- **All copper windings.**
- **All designs are rated 50 / 60 Hertz.**
- **Rugged coil mounted screw terminals.**
- **Primary fuse blocks and secondary fuse holders are available and are easily installed.**
- **Regulation characteristics equal or exceed the highest industry standards.**
- **Transformers .750 kVA and below employ a UL Class 105°C insulation system with 55°C temperature rise at a maximum ambient of 40°C.**
- **Transformers 1.0 kVA and above are designed with a UL Class 180°C insulation system with 115°C temperature rise at a maximum ambient of 40°C.**
- **Nonstandard designs are available by consulting the factory or your Dongan Representative.**

Voltage Combinations:

Suffix	Primary	Secondary
-052	120 x 240	24
-053	240 x 480	120
-054	208	120
-056	600	120
-134	240 x 480	120 / 240

SUFFIX -052, 50 / 60 HZ

Primary Volts 120 X 240, Secondary Volts 24

General Information			Dimensions (inches)						Primary		Secondary		
kVA Cap.	Catalog Number	Wgt. Lbs	Height A	Width B	Depth C	Mounting			Pri. Max. Amps 120V / 240V	Pri. Fuse Kit	Sec. Max. Amps	Sec. Fuse Kit	Sec. Fuse Size
						D	E	F					
.050	50-0050-052	3	3.00	3.00	2.50	2.00	2.50	.203 x .375	.42 / .21	BR-734-1	2.08	GLF 1¼	2.25
.075	50-0075-052	3	3.38	3.00	2.50	2.50	2.50	.203 x .375	.63 / .31	BR-734-1	3.13	GLF 1¼	3.2
.100	50-0100-052	4	3.38	3.38	2.81	2.38	2.81	.203 x .375	.83 / .42	BR-734-2	4.17	GLF 1¼	4.5
.150	50-0150-052	6	3.90	3.75	3.13	2.63	3.13	.203 x .375	1.25 / .63	BR-734-3	6.25	GLF 1¼	6.25
.200	50-0200-052	8	4.12	4.50	3.75	2.50	3.75	.203 x .375	1.67 / .83	BR-734-4	8.33	GLF 1¼	9
.250	50-0250-052	9	4.25	4.50	3.75	2.75	3.75	.203 x .375	2.08 / 1.04	BR-734-4	10.42	GLF 1¼	10
.300	50-0300-052	11	4.75	4.50	3.75	3.13	3.75	.203 x .375	2.50 / 1.25	BR-734-4	12.50	GLF 1¼	15
.375	50-0375-052	12	5.25	4.50	3.75	3.63	3.75	.203 x .375	3.13 / 1.56	BR-734-4	16.63	GLF 1¼	20
.500	50-0500-052	17	5.88	5.25	4.38	3.63	4.38	.281 x .562	4.17 / 2.08	BR-734-6	20.83	265 B	25
.750	50-0750-052	25	7.50	5.25	4.38	5.25	4.38	.281 x .562	6.25 / 3.13	BR-734-6	31.25	265 B	30
1.0	50-1000-052	26	7.50	5.25	4.38	5.25	4.38	.281 x .562	8.33 / 4.17	BR-734-6	41.67	--	--

Series 50 Industrial Control Transformers

Export Series:

Features

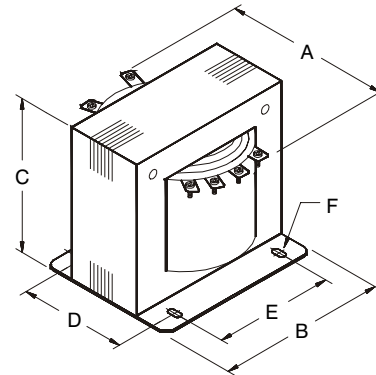
- **UL Listed, File E3210.**
- **CSA Certified, File LR 560.**
- All copper windings.
- All designs are rated 50 / 60 Hertz.
- Rugged coil mounted screw terminals.
- Primary fuse blocks and secondary fuse holders are available and are easily installed.
- Regulation characteristics equal or exceed the highest industry standards.
- Transformers .750 kVA and below employ a UL Class 105°C insulation system with 55°C temperature rise at a maximum ambient of 40°C.
- Transformers 1.0 kVA and above are designed with a UL Class 180°C insulation system with 115°C temperature rise at a maximum ambient of 40°C.
- Nonstandard designs are available by consulting the factory or your Dongan Representative.



Connection Diagrams may be found on Pg. 74

Note: Dimension C increases approximately 1 3/8" when Primary Fuse Kit BR-734-X is installed. Drawing is for dimensional purposes only. Actual terminal arrangements may vary.

Dimensions & weights may change. Consult factory for certified drawings.



Voltage Combinations:

Suffix	Primary	Secondary
-058	220/380/415	95/115
-059	208 or 500	85/100/110
	220/380/440/550	91/110/120
	230/400/460/575	95/115/125
	240/416/480/600	99/120/130

SUFFIX -053, 50 / 60 HZ

Primary Volts 240 X 480, 230 X 460, 220 X 440, Secondary Volts 120/115/110

General Information			Dimensions (inches)						Primary		Secondary		
kVA Cap.	Catalog Number	Wgt. Lbs	Height A	Width B	Depth C	Mounting			Pri. Max. Amps 240V / 480V	Pri. Fuse Kit	Sec. Max. Amps	Sec. Fuse Kit	120 V Fuse Size
						D	E	F					
.050	50-0050-053	3	3.00	3.00	2.50	2.00	2.50	.203 x .375	.21 / .10	BR-734-1	.42	GLF 1¼	.5
.075	50-0075-053	3	3.38	3.00	2.50	2.50	2.50	.203 x .375	.31 / .16	BR-734-1	.63	GLF 1¼	.6
.100	50-0100-053	4	3.38	3.38	2.81	2.38	2.81	.203 x .375	.42 / .21	BR-734-2	.83	GLF 1¼	1
.150	50-0150-053	6	3.90	3.75	3.13	2.63	3.13	.203 x .375	.63 / .31	BR-734-3	1.25	GLF 1¼	1.25
.200	50-0200-053	8	4.12	4.50	3.75	2.50	3.75	.203 x .375	.83 / .42	BR-734-4	1.67	GLF 1¼	2
.250	50-0250-053	9	4.25	4.50	3.75	2.75	3.75	.203 x .375	1.04 / .52	BR-734-4	2.08	GLF 1¼	2.25
.300	50-0300-053	11	4.75	4.50	3.75	3.13	3.75	.203 x .375	1.25 / .63	BR-734-4	2.50	GLF 1¼	2.5
.375	50-0375-053	12	5.25	4.50	3.75	3.63	3.75	.203 x .375	1.56 / .78	BR-734-4	3.13	GLF 1¼	3.2
.500	50-0500-053	17	5.88	5.25	4.38	3.63	4.38	.281 x .562	2.08 / 1.04	BR-734-6	4.17	265 B	4.5
.750	50-0750-053	25	7.50	5.25	4.38	5.25	4.38	.281 x .562	3.13 / 1.56	BR-734-6	6.25	265 B	6.25
1.0	50-1000-053	26	7.50	5.25	4.38	5.25	4.38	.281 x .562	4.17 / 2.08	BR-734-6	8.33	265 B	9
1.5	50-1500-053	32	7.00	6.38	5.62	4.50	5.31	.312 x .625	6.25 / 3.13	BR-734-7	12.50	265 B	15
2.0	50-2000-053	38	7.62	6.38	5.62	5.00	5.31	.312 x .625	6.25 / 3.13	BR-734-7	16.67	265 B	20
3.0	50-3000-053	50	7.75	7.50	6.62	4.75	6.75	.312 x .625	12.50 / 6.25	BR-734-8	25.00	265 B	25
5.0	50-5000-053	70	10.25	7.50	6.62	6.88	6.75	.312 x .625	20.83 / 10.42	BR-734-8	41.67	--	--

SUFFIX -054, 50 / 60 HZ

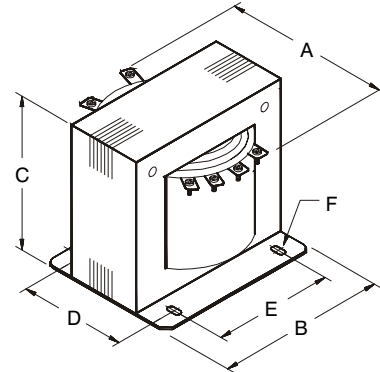
Primary Volts 208, Secondary Volts 120

General Information			Dimensions (inches)						Primary		Secondary		
kVA Cap.	Catalog Number	Wgt. Lbs	Height A	Width B	Depth C	Mounting			Pri. Max. Amps 208V	Pri. Fuse Kit	Sec. Max. Amps	Sec. Fuse Kit	Sec. Fuse Size
						D	E	F					
.050	50-0050-054	3	3.00	3.00	2.50	2.00	2.50	.203 x .375	.24	BR-734-1	.42	GLF 1¼	.4
.075	50-0075-054	3	3.38	3.00	2.50	2.50	2.50	.203 x .375	.36	BR-734-1	.63	GLF 1¼	.6
.100	50-0100-054	4	3.38	3.38	2.81	2.38	2.81	.203 x .375	.48	BR-734-2	.83	GLF 1¼	1
.150	50-0150-054	6	3.90	3.75	3.13	2.63	3.13	.203 x .375	.72	BR-734-3	1.25	GLF 1¼	1.25
.200	50-0200-054	8	4.12	4.50	3.75	2.50	3.75	.203 x .375	.96	BR-734-4	1.67	GLF 1¼	2
.250	50-0250-054	9	4.25	4.50	3.75	2.75	3.75	.203 x .375	1.20	BR-734-4	2.08	GLF 1¼	2.25
.300	50-0300-054	11	4.75	4.50	3.75	3.13	3.75	.203 x .375	1.44	BR-734-4	2.50	GLF 1¼	2.5
.375	50-0375-054	12	5.25	4.50	3.75	3.63	3.75	.203 x .375	1.80	BR-734-4	3.13	GLF 1¼	3.2
.500	50-0500-054	17	5.88	5.25	4.38	3.63	4.38	.281 x .562	2.40	BR-734-6	4.17	265 B	4.5
.750	50-0750-054	25	7.50	5.25	4.38	5.25	4.38	.281 x .562	3.61	BR-734-6	6.25	265 B	6.25
1.0	50-1000-054	26	7.50	5.25	4.38	5.25	4.38	.281 x .562	4.81	BR-734-6	8.33	265 B	9
1.5	50-1500-054	32	7.00	6.38	5.62	4.50	5.31	.312 x .625	7.21	BR-734-7	12.50	265 B	15
2.0	50-2000-054	38	7.62	6.38	5.62	5.00	5.31	.312 x .625	9.62	BR-734-7	16.67	265 B	20
3.0	50-3000-054	50	7.75	7.50	6.62	4.75	6.75	.312 x .625	14.42	BR-734-8	25.00	265 B	25

Connection Diagrams may be found on Pg. 74

Note: Dimension C increases approximately 1 3/8" when Primary Fuse Kit BR-734-X is installed. Drawing is for dimensional purposes only. Actual terminal arrangements may vary.

Dimensions & weights may change. Consult factory for certified drawings.



SUFFIX -056, 50 / 60 HZ

Primary Volts 600/575/550, Secondary Volts 120/115/110

General Information			Dimensions (inches)						Primary		Secondary		
kVA Cap.	Catalog Number	Wgt. Lbs	Height A	Width B	Depth C	Mounting			Pri. Max. Amps 600V	Pri. Fuse Kit	Sec. Max. Amps	Sec. Fuse Kit	120 V Fuse Size
						D	E	F					
.050	50-0050-056	3	3.00	3.00	2.50	2.00	2.50	.203 x .375	.08	BR-734-1	.42	GLF 1¼	.4
.075	50-0075-056	3	3.38	3.00	2.50	2.50	2.50	.203 x .375	.13	BR-734-1	.63	GLF 1¼	.6
.100	50-0100-056	4	3.38	3.38	2.81	2.38	2.81	.203 x .375	.17	BR-734-2	.83	GLF 1¼	1
.150	50-0150-056	6	3.90	3.75	3.13	2.63	3.13	.203 x .375	.25	BR-734-3	1.25	GLF 1¼	1.25
.200	50-0200-056	8	4.12	4.50	3.75	2.50	3.75	.203 x .375	.33	BR-734-4	1.67	GLF 1¼	2
.250	50-0250-056	9	4.25	4.50	3.75	2.75	3.75	.203 x .375	.42	BR-734-4	2.08	GLF 1¼	2.25
.300	50-0300-056	11	4.75	4.50	3.75	3.13	3.75	.203 x .375	.50	BR-734-4	2.50	GLF 1¼	2.5
.375	50-0375-056	12	5.25	4.50	3.75	3.63	3.75	.203 x .375	.63	BR-734-4	3.13	GLF 1¼	3.2
.500	50-0500-056	17	5.88	5.25	4.38	3.63	4.38	.281 x .562	.83	BR-734-6	4.17	265 B	4.5
.750	50-0750-056	25	7.50	5.25	4.38	5.25	4.38	.281 x .562	1.25	BR-734-6	6.25	265 B	6.25
1.0	50-1000-056	26	7.50	5.25	4.38	5.25	4.38	.281 x .562	1.67	BR-734-6	8.33	265 B	9
1.5	50-1500-056	32	7.00	6.38	5.62	4.50	5.31	.312 x .625	2.50	BR-734-7	12.50	265 B	15
2.0	50-2000-056	38	7.62	6.38	5.62	5.00	5.31	.312 x .625	3.33	BR-734-7	16.67	265 B	20
3.0	50-3000-056	50	7.75	7.50	6.62	4.75	6.75	.312 x .625	5.00	BR-734-8	25.00	265 B	25



Series 50 Industrial Control Transformers

SUFFIX -058, 50 / 60 HZ

Primary Volts 220 / 380 / 415, Secondary Volts 95 / 115

General Information			Dimensions (inches)						Primary		Secondary		
kVA Cap.	Catalog Number	Wgt. Lbs	Height A	Width B	Depth C	Mounting			Pri. Max. Amps 220V / 380V / 415	Pri. Fuse Kit	Sec. Max. Amps	Sec. Fuse Kit	115 V Fuse Size
						D	E	F					
.250	50-0250-058	11	4.81	4.50	3.75	3.38	3.75	.203 x .375	1.14 / .66 / .60	BR-734-4	2.17	GLF 1¼	2.25
.500	50-0500-058	22	6.63	5.25	4.38	4.60	4.38	.281 x .406	2.27 / 1.32 / 1.20	BR-734-6	4.35	265 B	4.5
.750	50-0750-058	23	7.38	5.75	4.25	4.38	4.94	.281 x .406	3.41 / 1.97 / 1.81	BR-734-5	6.52	265 B	7
1.0	50-1000-058	32	6.75	6.38	5.31	4.50	5.31	.312 x .625	4.55 / 2.63 / 2.41	BR-734-7	8.70	265 B	9
1.5	50-1500-058	41	6.25	7.50	6.25	4.00	6.75	.312 x .625	6.82 / 3.95 / 3.61	BR-734-8	13.04	265 B	15
2.0	50-2000-058	49	7.80	7.50	6.25	4.75	6.75	.312 x .625	9.09 / 5.26 / 4.82	BR-734-8	17.39	265 B	20
3.0	50-3000-058	75	9.88	7.50	6.25	4.62	6.75	.312 x .625	13.64 / 7.89 / 7.23	BR-734-8	26.09	265 B	30
5.0	50-5000-058	113	9.12	9.00	7.50	6.93	7.50	.437 x .750	22.73 / 13.16 / 12.05	BR-734-9	43.48	--	--

SUFFIX -059, 50 / 60 HZ

Primary Volts 208/500
220/380/440/550
230/400/460/575
240/416/480/600

Secondary Volts 85/100/110
91/110/120
95/115/125
99/120/130

General Information			Dimensions (inches)						Primary	Secondary		
kVA Cap.	Catalog Number	Wgt. Lbs	Height A	Width B	Depth C	Mounting			Pri. Fuse Kit	Sec. Max. Amps	Sec. Fuse Kit	120 V Fuse Size
						D	E	F				
.150	50-0150-059	11	4.57	5.25	4.38	2.63	4.38	.281 x .406	BR-734-6	1.25	265 B	1.25
.250	50-0250-059	15	5.25	5.25	4.38	3.38	4.38	.281 x .406	BR-734-6	2.08	265 B	2.25
.375	50-0375-059	18	6.25	5.75	4.25	3.44	4.94	.281 x .406	BR-734-5	3.13	265 B	3.2
.500	50-0500-059	22	6.68	5.75	4.25	4.38	4.94	.281 x .406	BR-734-5	4.17	265 B	4.5
.750	50-0750-059	32	6.75	6.38	5.31	4.63	5.31	.312 x .625	BR-734-7	6.25	265 B	6.25
1.0	50-1000-059	35	7.25	6.38	5.31	5.10	5.31	.312 x .625	BR-734-7	8.33	265 B	9
1.5	50-1500-059	53	8.63	7.50	6.25	5.38	6.75	.312 x .625	BR-734-8	12.5	265 B	15
2.0	50-2000-059	60	8.75	7.50	6.25	5.80	6.75	.312 x .625	BR-734-8	16.67	265 B	20
3.0	50-3000-059	74	10.25	7.50	6.25	6.88	6.75	.312 x .625	BR-734-8	25.00	265 B	25

SUFFIX -134, 50 / 60 HZ

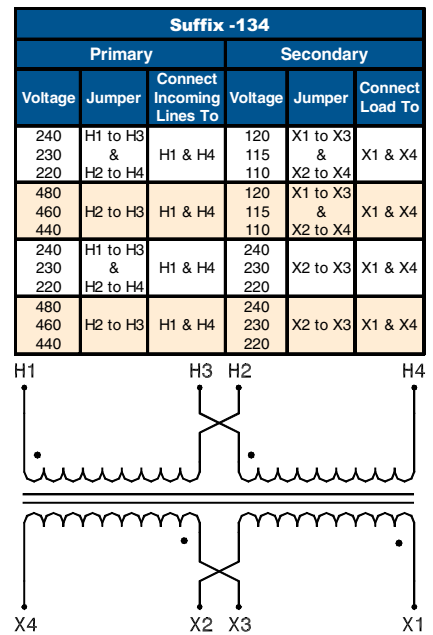
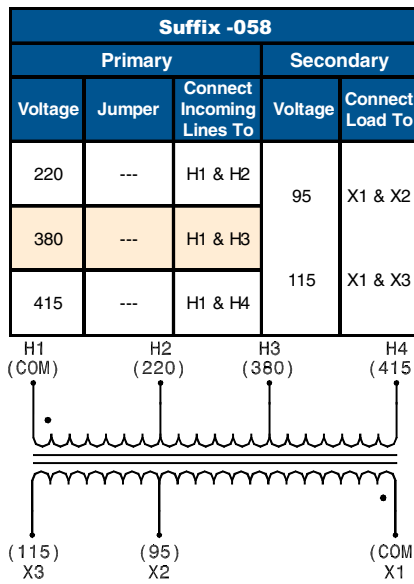
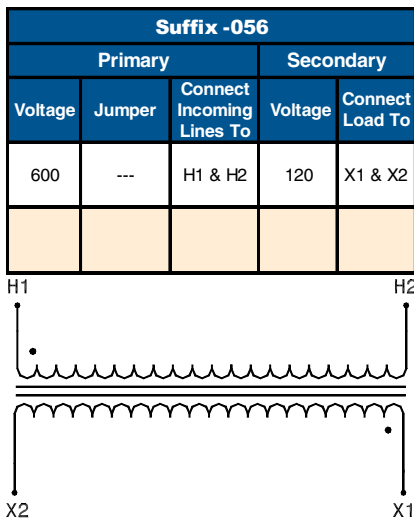
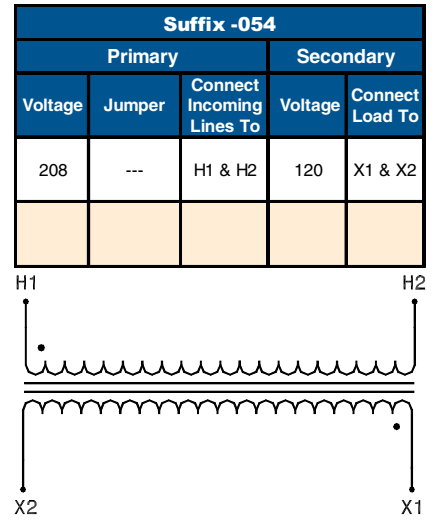
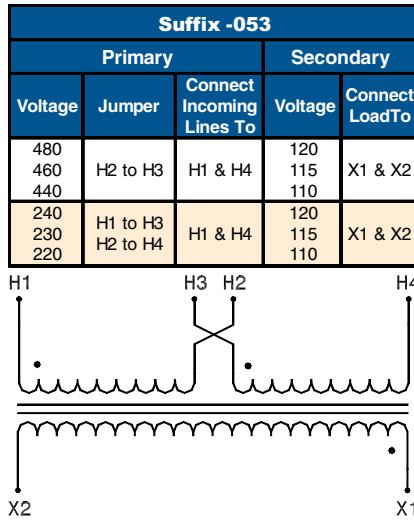
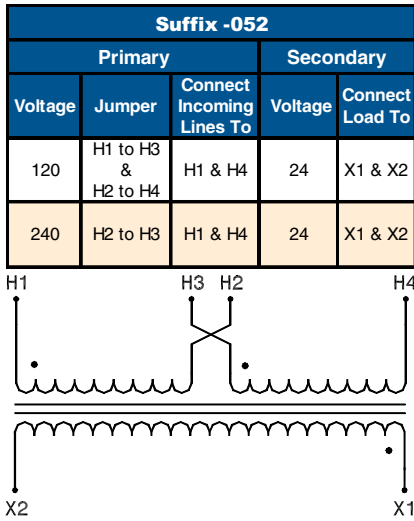
Primary Volts 240 X 480, 230 X 460, 220 X 440,
Secondary Volts 120/240,115/230,110/220

General Information			Dimensions (inches)						Primary		Secondary		
kVA Cap.	Catalog Number	Wgt. Lbs	Height A	Width B	Depth C	Mounting			Pri. Max. Amps 240V / 480V	Pri. Fuse Kit	Sec. Max. Amps 120V / 240V	Sec. Fuse Kit	120 V Fuse Size
						D	E	F					
.050	50-0050-134	3	3.00	3.00	2.50	2.00	2.50	.203 x .375	.21 / .10	BR-734-1	.42 / .21	GLF 1¼	.5
.075	50-0075-134	3	3.38	3.00	2.50	2.50	2.50	.203 x .375	.31 / .16	BR-734-1	.63 / .31	GLF 1¼	.6
.100	50-0100-134	4	3.38	3.38	2.81	2.38	2.81	.203 x .375	.42 / .21	BR-734-2	.83 / .42	GLF 1¼	1
.150	50-0150-134	6	3.90	3.75	3.13	2.63	3.13	.203 x .375	.63 / .31	BR-734-3	1.25 / .63	GLF 1¼	1.25
.200	50-0200-134	8	4.12	4.50	3.75	2.50	3.75	.203 x .375	.83 / .42	BR-734-4	1.67 / .83	GLF 1¼	2
.250	50-0250-134	9	4.25	4.50	3.75	2.75	3.75	.203 x .375	1.04 / .52	BR-734-4	2.08 / 1.04	GLF 1¼	2.25
.300	50-0300-134	11	4.75	4.50	3.75	3.13	3.75	.203 x .375	1.25 / .63	BR-734-4	2.50 / 1.25	GLF 1¼	2.5
.375	50-0375-134	12	5.25	4.50	3.75	3.63	3.75	.203 x .375	1.56 / .78	BR-734-4	3.13 / 1.56	GLF 1¼	3.2
.500	50-0500-134	17	5.88	5.25	4.38	3.63	4.38	.281 x .562	2.08 / 1.04	BR-734-6	4.17 / 2.08	265 B	4.5
.750	50-0750-134	25	7.50	5.25	4.38	5.25	4.38	.281 x .562	3.13 / 1.56	BR-734-6	6.25 / 3.13	265 B	6.25
1.0	50-1000-134	26	7.50	5.25	4.38	5.25	4.38	.281 x .562	4.17 / 2.08	BR-734-6	8.33 / 4.17	265 B	9
1.5	50-1500-134	32	7.00	6.38	5.62	4.50	5.31	.312 x .625	6.25 / 3.13	BR-734-7	12.50 / 6.25	265 B	15
2.0	50-2000-134	38	7.62	6.38	5.62	5.00	5.31	.312 x .625	6.25 / 3.13	BR-734-7	16.67 / 8.33	265 B	20
3.0	50-3000-134	50	7.75	7.50	6.62	4.75	6.75	.312 x .625	12.50 / 6.25	BR-734-8	25.00 / 12.50	265 B	25

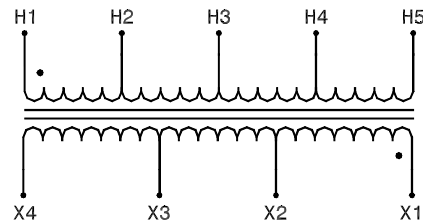
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Series 50 Industrial Control Transformers Connection Diagrams

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Suffix -059						
Primary				Secondary		
Connect Incoming Lines To H1 & H2	Connect Incoming Lines To H1 & H3	Connect Incoming Lines To H1 & H4	Connect Incoming Lines To H1 & H5	Connect Load To X1 & X2	Connect Load To X1 & X3	Connect Load To X1 & X4
208			500	85	100	110
220	380	440	550	91	110	120
230	400	460	575	95	115	125
240	416	480	600	99	120	130



Series 50 Industrial Control Transformers

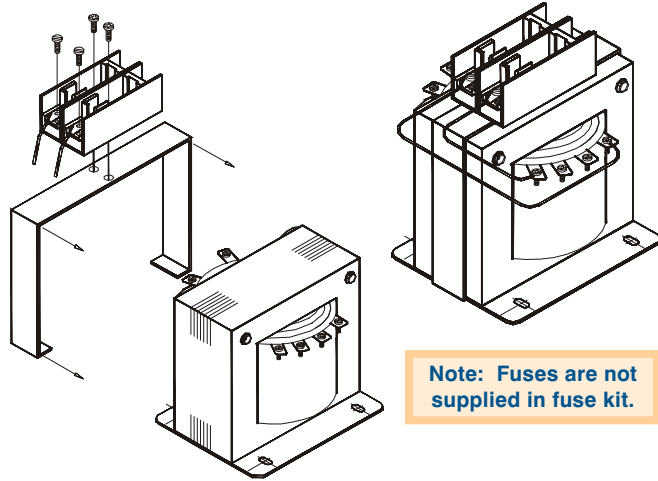
SERIES 50 PRIMARY FUSE KIT

Fuse Kit BR-734

- Meets UL 508
- Meets NEC Article 450
- Uses Class CC Fuses

Installation Procedure

- Loosen bolts holding transformer to the panel backplate.
- Slide the BR-734 bracket over the transformer.
- Retighten mounting bolts.
- Connect the fuse holder leads to the transformer terminals with the jumper leads furnished.



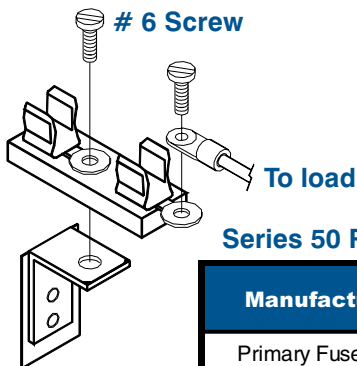
SERIES 50 SECONDARY FUSE KITS

Fuse Kit GLF 1 1/4

- Meets UL 508
- Meets NEC Article 450
- Uses 1/4" x 1 1/4" Fuses

Installation Procedure

- Remove #6 screw in the transformer terminal to be fused.
- Fasten GLF 1 1/4 fuse holder to transformer terminal with the longer #6 screw provided, as shown in the diagram.
- Connect the load lead to the terminal provided on the GLF 1 1/4 fuse holder.

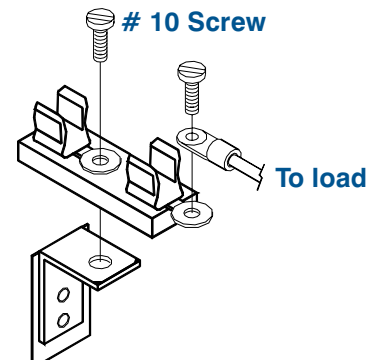


Fuse Kit 265B

- Meets UL 508
- Meets NEC Article 450
- Uses 13/32" x 1 1/2" Fuses

Installation Procedure

- Remove #10 screw in the transformer terminal to be fused.
- Fasten 265B fuse holder to transformer terminal with the longer #10 screw provided, as shown in the diagram.
- Connect the load lead to the terminal provided on the 265B fuse holder.



Series 50 Recommended Fuse Type By Manufacturer

Manufacturer	Bussman	Gould	Littlefuse
Primary Fuse Type	FNQ-R	ATQR / ATDR	KLDR / CCRM
Secondary Fuse Type Fuse Holder 265-B	FNM / FNQ (250V) (500V)	TRM / ATQ (250V) (500V)	FLM / FLQ (250V) (500V)
Secondary Fuse Type Fuse Holder GLF-1 1/4	MDQ (250V)	GDL (250V)	3AB (250V)