

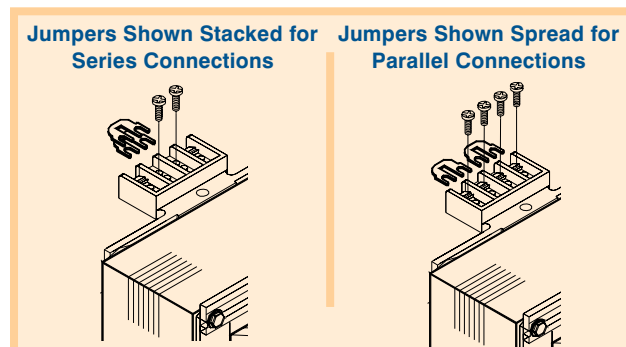
Series HC Industrial Control Transformers

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

Series HC Industrial Control Transformers feature a molded, barrier type terminal board for easy connections of both line and load as well as various fusing kits for both primary and secondary. In addition, Series HC offer convenient jumper clips for series/parallel connections. These features allow the designer to simplify control panel fusing designs and minimize transformer installation time and cost.

Series suffix -4100 and -4400 are conveniently shipped with both primary and secondary fuse holders installed, allowing further cost reduction to the OEM.

All Series HC transformers are UL approved and CSA certified. CE Marked, TÜV Licensed Industrial Control Transformers are featured on pgs. 82 - 83 in this section.



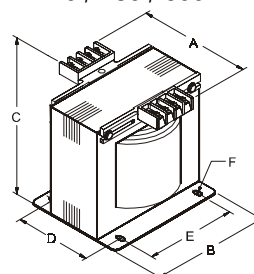
Series HC are shipped with Jumper Clips connected in series.

Features

- **UL Listed, File E3210.**
- **CSA Certified, File LR 560.**
- All copper windings.
- Core mounted, barrier type terminal strips.
- Series/parallel jumper clips provided.
- Secondary fuse kits (FKS) furnished.
- Primary fuse kits (FKP2) are available and are easily installed.
- Regulation characteristics equal or exceed the highest industry standards.
- Grain oriented, silicon steel cores minimize core losses.
- Transformers .050 kVA to .150 kVA employ a UL Class 180°C insulation system with 55°C temperature rise at a maximum ambient of 40°C.
- Transformers .250 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
-41	240 x 480	120
-44	208 / 240 / 480	120
-46	600	120
-47	240 / 480 / 600	120



Outline Drawing
HC Suffix -41,-44,-46,-47

SUFFIX -41

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	Hz.	Wgt. Lbs	Height A	Width B	Depth C	Mounting			Pri. Max. Amps 240V / 480V	Pri. Fuse Kit	Sec. Max. Amps	Sec. Fuse Kit	Sec. Fuse Size
.050	HC-0050-41	50/60	3.0	4.75	3.00	3.25	2.00	2.50	.203 x .375	.21 / .10	FKP2	.42	Included	.5
.075	HC-0075-41	50/60	4.0	5.25	3.00	3.25	2.50	2.50	.203 x .375	.31 / .16	FKP2	.63	Included	.6
.100	HC-0100-41	50/60	5.0	5.62	3.00	3.25	2.87	2.50	.203 x .375	.42 / .21	FKP2	.83	Included	1
.150	HC-0150-41	50/60	7.0	5.25	3.75	3.75	2.62	3.13	.203 x .375	.63 / .31	FKP2	1.25	Included	1.25
.250	HC-0250-41	50/60	8.5	5.62	3.75	3.75	2.87	3.13	.203 x .375	1.04 / .52	FKP2	2.08	Included	2.25
.300	HC-0300-41	50/60	9.5	6.00	3.75	3.75	3.25	3.13	.203 x .375	1.25 / .63	FKP2	2.50	Included	2.5
.375	HC-0375-41	50/60	10.0	5.50	4.50	4.30	2.80	3.80	.203 x .375	1.56 / .78	FKP2	3.13	Included	3.2
.500	HC-0500-41	50/60	11.5	6.00	4.50	4.25	3.25	3.75	.203 x .375	2.08 / 1.04	FKP2	4.17	Included	4.5
.750	HC-0750-41	50/60	15.5	6.87	4.50	4.25	4.12	3.75	.203 x .375	3.12 / 1.56	FKP2	6.25	Included	6.25
1.0	HC-1000-41	60	19.0	6.50	5.25	4.87	3.87	4.37	.281 x .562	4.16 / 2.08	FKP2	8.33	Included	9
1.5	HC-1500-41	60	27.0	7.87	5.25	4.87	5.12	4.37	.281 x .562	6.25 / 3.12	FKP2	12.50	Included	15
2.0	HC-2000-41	60	31.5	9.12	5.25	4.87	6.4	4.37	.281 x .562	8.33 / 4.16	FKP2	16.67	Included	20

Series HC Industrial Control Transformers

SUFFIX -4100 & -4400

Features

- UL Listed, File E3210.
- CSA Certified, File LR 560.

Series -4100, and -4400: Factory
Pre-Connected Primary & Secondary Fusing

- All copper windings.
- Core mounted, barrier type terminal strips.
- Series/parallel jumper clips provided on -4100.
- Dual primary fuse holder and single secondary fuse holder are factory assembled for added convenience.
- Regulation characteristics equal or exceed the highest industry standards.

- Grain oriented, silicon steel cores minimize core losses.
- Transformers .050 kVA to .150 kVA employ a UL Class 180°C insulation system with 55°C temperature rise at a maximum ambient of 40°C.
- Transformers .250 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.

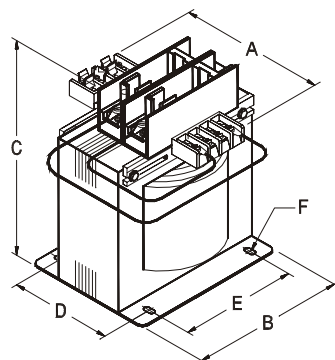
Voltage Combinations:

Suffix	Primary	Secondary
-4100	240 x 480	120
-4400	208 / 240 / 480	120

SUFFIX -4100 WITH PRE-CONNECTED DUAL PRIMARY FUSE BLOCKS & SECONDARY FUSE HOLDER

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	H _z .	Wgt. Lbs	Height A	Width B	Depth C	Mounting			Pri. Max. Amps 240V / 480V	Pri. Fuse Kit	Sec. Max. Amps	Sec. Fuse Kit	Sec. Fuse Size
							D	E	F					
.050	HC-0050-4100	50/60	3.0	4.75	3.00	4.25	2.00	2.50	.203 x .375	.21 / .10	Installed	.42	Included	.5
.075	HC-0075-4100	50/60	4.0	5.25	3.00	4.25	2.50	2.50	.203 x .375	.31 / .16	Installed	.63	Included	.6
.100	HC-0100-4100	50/60	5.0	5.62	3.00	4.25	2.87	2.50	.203 x .375	.42 / .21	Installed	.83	Included	1
.150	HC-0150-4100	50/60	7.0	5.25	3.75	4.75	2.62	3.13	.203 x .375	.63 / .31	Installed	1.25	Included	1.25
.250	HC-0250-4100	50/60	8.5	5.62	3.75	4.75	2.87	3.13	.203 x .375	1.04 / .52	Installed	2.08	Included	2.25
.300	HC-0300-4100	50/60	9.5	6.00	3.75	4.75	2.87	3.13	.203 x .375	1.25 / .63	Installed	2.50	Included	2.5
.375	HC-0375-4100	50/60	10.0	5.30	4.50	5.30	2.80	3.80	.203 x .375	1.56 / .78	Installed	3.13	Included	3.2
.500	HC-0500-4100	50/60	11.5	6.00	4.50	5.25	3.25	3.75	.203 x .375	2.08 / 1.04	Installed	4.17	Included	4.5
.750	HC-0750-4100	50/60	15.5	6.87	4.50	5.25	4.12	3.75	.203 x .375	3.12 / 1.56	Installed	6.25	Included	6.25
1.0	HC-1000-4100	60	19.0	6.50	5.25	5.87	3.87	4.37	.281 x .562	4.16 / 2.08	Installed	8.33	Included	9
1.5	HC-1500-4100	60	27.0	7.87	5.25	5.87	5.12	4.37	.281 x .562	6.25 / 3.12	Installed	12.50	Included	15
2.0	HC-2000-4100	60	31.5	9.12	5.25	5.87	6.43	4.37	.281 x .562	8.33 / 4.16	Installed	16.67	Included	20



Outline Drawing
HC Suffix -4100, -4400

Connection Diagrams may be found on
Pg. 80



Series HC Industrial Control Transformers

SUFFIX -44

Primary Volts 208/240/480, Secondary Volts 120

General Information				Dimensions (inches)						Primary		Secondary		
kVA Cap.	Catalog Number	Hz.	Wgt. Lbs	Height A	Width B	Depth C	Mounting			Pri. Max. Amps 208/240V/480V	Pri. Fuse Kit	Sec. Max. Amps	Sec. Fuse Kit	Sec. Fuse Size
							D	E	F					
.050	HC-0050-44	50/60	3.0	5.00	3.00	3.25	2.25	2.50	.203 x .375	.24 / .21 / .10	FKP2	.42	Included	.5
.075	HC-0075-44	50/60	4.0	5.62	3.00	3.25	2.87	2.50	.203 x .375	.36 / .31 / .16	FKP2	.63	Included	.6
.100	HC-0100-44	50/60	5.5	5.25	3.75	3.75	2.50	3.13	.203 x .375	.48 / .42 / .21	FKP2	.83	Included	1
.150	HC-0150-44	50/60	7.5	6.12	3.75	3.75	3.31	3.12	.203 x .375	.72 / .63 / .31	FKP2	1.25	Included	1.25
.250	HC-0250-44	50/60	8.5	5.25	4.50	4.30	2.50	3.75	.203 x .375	1.21 / 1.04 / .52	FKP2	2.08	Included	2.25
.300	HC-0300-44	50/60	10.5	6.00	4.50	4.30	3.25	3.75	.203 x .375	1.4 / 1.25 / .63	FKP2	2.50	Included	2.5
.375	HC-0375-44	50/60	11.5	6.00	4.50	4.30	3.25	3.75	.203 x .375	1.8 / 1.56 / .78	FKP2	3.13	Included	3.2
.500	HC-0500-44	50/60	13.5	6.50	4.50	4.30	3.75	3.75	.203 x .375	2.4 / 2.08 / 1.04	FKP2	4.17	Included	4.5
.750	HC-0750-44	50/60	18.5	6.50	5.25	4.87	3.75	4.37	.203 x .375	3.6 / 3.12 / 1.56	FKP2	6.25	Included	6.25
1.0	HC-1000-44	60	20.0	6.75	5.25	4.87	4.00	4.37	.281 x .562	4.8 / 4.16 / 2.08	FKP2	8.33	Included	9
1.5	HC-1500-44	60	29.5	8.50	5.25	4.87	5.87	4.37	.281 x .562	7.2 / 6.25 / 3.12	FKP2	12.50	Included	15
2.0	HC-2000-44	60	32.0	8.50	4.25	6.25	5.93	3.43	.281 x .562	9.6 / 4.17 / 4.16	FKP2	16.67	Included	20

SUFFIX -4400

With Pre-Connected Dual Primary Fuse Blocks & Secondary Fuse Holder*

Primary Volts 208/240/480, Secondary Volts 120

General Information				Dimensions (inches)						Primary		Secondary		
kVA Cap.	Catalog Number	Hz.	Wgt. Lbs	Height A	Width B	Depth C	Mounting			Pri. Max. Amps 208/240V/480V	Pri. Fuse Kit*	Sec. Max. Amps	Sec. Fuse Kit	Sec. Fuse Size
							D	E	F					
.050	HC-0050-4400	50/60	3.0	5.00	3.00	4.25	2.25	2.50	.203 x .375	.24 / .21 / .10	Installed	.42	Included	.5
.075	HC-0075-4400	50/60	4.0	5.62	3.00	4.25	2.87	2.50	.203 x .375	.36 / .31 / .16	Installed	.63	Included	.6
.100	HC-0100-4400	50/60	5.5	5.25	3.75	4.75	2.50	3.12	.203 x .375	.48 / .42 / .21	Installed	.83	Included	1
.150	HC-0150-4400	50/60	7.5	6.12	3.75	4.75	3.31	3.12	.203 x .375	.72 / .63 / .31	Installed	1.25	Included	1.25
.250	HC-0250-4400	50/60	8.5	5.25	4.50	5.50	2.50	3.75	.203 x .375	1.21 / 1.04 / .52	Installed	2.08	Included	2.25
.300	HC-0300-4400	50/60	9.5	6.00	4.50	5.50	3.25	3.75	.203 x .375	1.4 / 1.25 / .63	Installed	2.50	Included	2.5
.375	HC-0375-4400	50/60	11.5	6.00	4.50	5.50	3.25	3.75	.203 x .375	1.8 / 1.56 / .78	Installed	3.13	Included	3.2
.500	HC-0500-4400	50/60	13.5	6.50	4.50	5.50	3.75	3.75	.203 x .375	2.4 / 2.08 / 1.04	Installed	4.17	Included	4.5
.750	HC-0750-4400	50/60	18.5	6.50	5.25	6.25	3.75	4.37	.203 x .375	3.6 / 3.12 / 1.56	Installed	6.25	Included	6.25
1.0	HC-1000-4400	60	20.0	6.75	5.25	6.25	4.00	4.37	.281 x .562	4.8 / 4.16 / 2.08	Installed	8.33	Included	9
1.5	HC-1500-4400	60	29.5	8.50	5.25	6.25	5.87	4.37	.281 x .562	7.2 / 6.25 / 3.12	Installed	12.50	Included	15
2.0	HC-2000-4400	60	32.0	8.50	4.25	5.25	5.93	3.43	.281 x .562	9.6 / 4.17 / 4.16	Installed	16.67	Included	20

*Fuse block is factory preconnected on 480 volt terminals.

SUFFIX -46

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

General Information				Dimensions (inches)						Primary		Secondary		
kVA Cap.	Catalog Number	Hz.	Wgt. Lbs	Height A	Width B	Depth C	Mounting			Pri. Max. Amps 600V	Pri. Fuse Kit	Sec. Max. Amps	Sec. Fuse Kit	Sec. Fuse Size
							D	E	F					
.050	HC-0050-46	50/60	3.0	4.75	3.00	3.25	2.00	2.50	.203 x .375	.08	FKP2	.42	Included	.5
.075	HC-0075-46	50/60	4.0	5.25	3.00	3.25	2.50	2.50	.203 x .375	.13	FKP2	.63	Included	.6
.100	HC-0100-46	50/60	5.0	5.62	3.00	3.25	2.87	2.50	.203 x .375	.17	FKP2	.83	Included	1
.150	HC-0150-46	50/60	7.0	5.25	3.75	3.75	2.62	3.13	.203 x .375	.25	FKP2	1.25	Included	1.25
.250	HC-0250-46	50/60	8.5	5.62	3.75	3.75	2.87	3.13	.203 x .375	.42	FKP2	2.08	Included	2.25
.300	HC-0300-46	50/60	9.5	6.00	3.75	3.75	3.25	3.13	.203 x .375	.50	FKP2	2.50	Included	2.5
.375	HC-0375-46	50/60	10.0	5.30	4.50	4.30	2.80	3.80	.203 x .375	.63	FKP2	3.13	Included	3.2
.500	HC-0500-46	50/60	11.5	6.00	4.50	4.25	3.25	3.75	.203 x .375	.83	FKP2	4.17	Included	4.5
.750	HC-0750-46	50/60	15.5	6.87	4.50	4.25	4.12	3.75	.203 x .375	1.3	FKP2	6.25	Included	6.25
1.0	HC-1000-46	60	19.0	6.50	5.25	4.87	3.87	4.37	.281 x .562	1.7	FKP2	8.33	Included	9
1.5	HC-1500-46	60	27.0	7.87	5.25	4.87	5.12	4.37	.281 x .562	2.5	FKP2	12.50	Included	15
2.0	HC-2000-46	60	31.5	9.12	5.25	4.87	6.43	4.37	.281 x .562	3.3	FKP2	16.67	Included	20

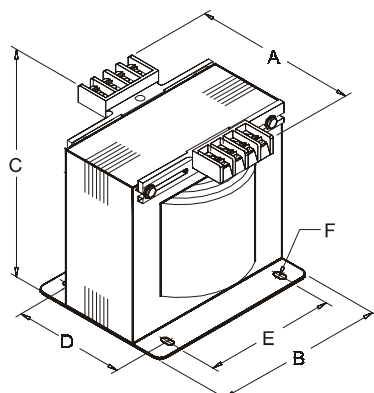
Series HC Industrial Control Transformers



SUFFIX -47

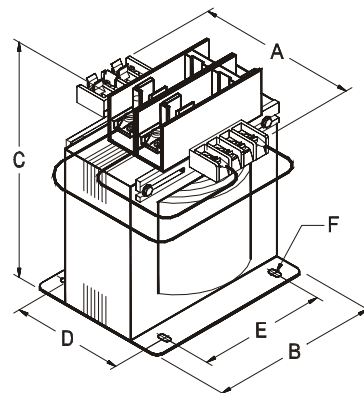
Primary Volts 240/480/600, Secondary Volts 120

General Information			Dimensions (inches)							Primary		Secondary		
kVA Cap.	Catalog Number	Hz.	Wgt. Lbs	Height A	Width B	Depth C	Mounting			Pri. Max. Amps 240/480/600V	Pri. Fuse Kit	Sec. Max. Amps	Sec. Fuse Kit	Sec. Fuse Size
.050	HC-0050-47	50/60	3.0	5.00	3.00	3.25	2.25	2.50	.203 x .375	.21 / .10 / .08	FKP2	.42	Included	.5
.075	HC-0075-47	50/60	4.0	5.62	3.00	3.25	2.87	2.50	.203 x .375	.31 / .16 / .13	FKP2	.63	Included	.6
.100	HC-0100-47	50/60	5.5	5.25	3.75	3.75	2.50	3.12	.203 x .375	.42 / .21 / .17	FKP2	.83	Included	1
.150	HC-0150-47	50/60	7.5	6.12	3.75	3.75	3.31	3.12	.203 x .375	.63 / .31 / .25	FKP2	1.25	Included	1.25
.250	HC-0250-47	50/60	8.5	5.25	4.50	4.30	2.50	3.75	.203 x .375	1.0 / .52 / .42	FKP2	2.08	Included	2.25
.300	HC-0300-47	50/60	10.5	6.00	4.50	4.30	3.25	3.75	.203 x .375	1.25 / .63 / .50	FKP2	2.50	Included	2.5
.375	HC-0375-47	50/60	11.5	6.00	4.50	4.30	3.25	3.75	.203 x .375	1.6 / .78 / .63	FKP2	3.13	Included	3.2
.500	HC-0500-47	50/60	13.5	6.50	4.50	4.30	3.75	3.75	.203 x .375	2.1 / 1.0 / .83	FKP2	4.17	Included	4.5
.750	HC-0750-47	50/60	18.5	6.50	5.25	4.87	3.75	4.37	.203 x .375	3.1 / 1.6 / 1.3	FKP2	6.25	Included	6.25
1.0	HC-1000-47	60	20.0	6.75	5.25	4.87	4.00	4.37	.281 x .562	4.2 / 2.1 / 1.7	FKP2	8.33	Included	9
1.5	HC-1500-47	60	29.5	8.50	5.25	4.87	5.87	4.37	.281 x .562	6.3 / 3.1 / 2.5	FKP2	12.50	Included	15
2.0	HC-2000-47	60	32.0	8.50	4.25	6.25	5.93	3.43	.281 x .562	8.3 / 4.2 / 3.3	FKP2	16.67	Included	20



Outline Drawing
HC Suffix -41, -44, -46, -47

Connection
Diagrams
may be
found
on Pg. 80



Outline Drawing
HC Suffix -4100, -4400

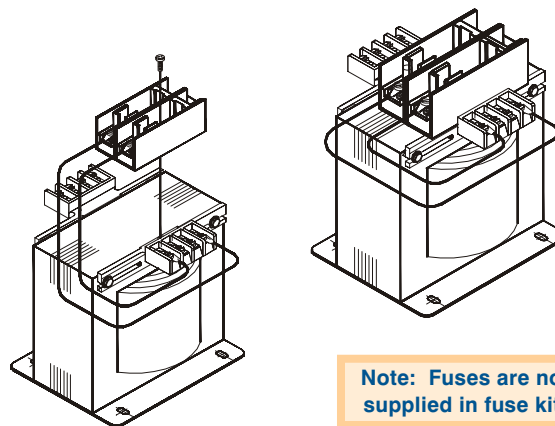
SERIES HC PRIMARY FUSE KIT

Fuse Kit FKP2

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

Installation Procedure

- Locate the mounting hole in the terminal block of primary side of transformer.
- Fasten FKP2 fuse holder to primary side of transformer terminal block with the screw provided.
- Connect the fuse holder leads to the transformer terminals with the jumper leads furnished.



Note: Fuses are not
supplied in fuse kit.

Series HC Recommended Fuse Type By Manufacturer

Manufacturer	Bussman	Gould	Littlefuse
Primary Fuse Type	FNQ-R	ATQR / ATDR	KLDR / CCRM
Secondary Fuse Type	FNM / FNQ (250V) (500V)	TRM / ATQ (250V) (500V)	FLM / FLQ (250V) (500V)

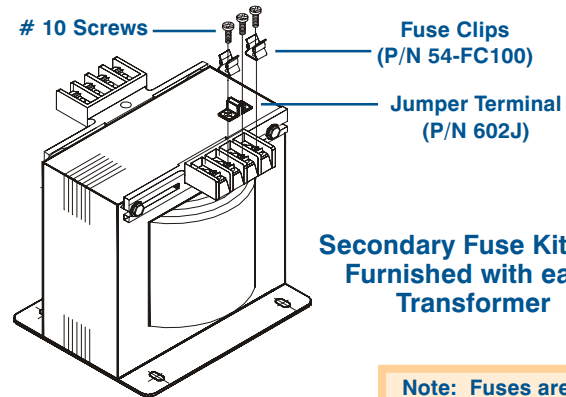
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Fuse Kit FKS

- Meets UL 508
- Meets NEC® Article 450
- Uses 13/32" x 1½" Fuses

Installation Procedure

- To fuse terminal X1, remove #10 screws in terminals X1, XF, and unmarked terminal slot.
- Fasten fuse clip to transformer terminal X1 using #10 screw.
- Fasten #10 screw through Fuse Clip, and Jumper Terminal and into unmarked terminal slot.
- Fasten #10 screw through Jumper Terminal and into terminal XF.
- Connect load to terminals X2 and XF.



**Secondary Fuse Kit FKS
Furnished with each
Transformer**

**Note: Fuses are not
supplied in fuse kit.**

SERIES HC CONNECTION DIAGRAMS

