

HPS Fortress™

Commercial Encapsulated
Distribution Transformers



Hammond Power
Solutions Inc.

HPS Fortress™

Commercial Encapsulated
Distribution Transformers



OUR COMPANY

Hammond Power Solutions (HPS) was established in 1917 in Guelph, Ontario and has grown from a small family owned business in the short wave radio market, to the industry leader in magnetic transformer design and manufacturing. HPS has manufacturing facilities in Compton, California; Guelph, Ontario; Walkerton, Ontario; Granby, Quebec and Monterrey, Mexico. HPS currently has multiple regional distribution centers throughout North America.

HPS FORTRESS™

HPS Fortress is an innovative design that provides the ideal solution for commercial applications where **quality, ease of installation, and low cost** are key.

All units are encapsulated with electrical grade silica sand and resin compounds, which completely enclose the core and coil to seal out moisture, airborne contaminants and eliminates corrosion and deterioration.

Inexpensive
& easy



APPLICATIONS

- Shopping Centers
- Schools
- Sports Complexes
- Office Buildings
- Lighting





STANDARD FEATURES

Features	Single Phase	Three Phase
Voltage Groups	9 standard voltage groups	8 standard voltage groups
Ratings	From 50VA to 37.5kVA	From 2kVA to 75kVA
Shield	Standard shield from 750VA and up	Standard shield on all units
Frequency	60 Hz (50Hz standard on four voltage groups)	60Hz standard on all voltage groups
Connection	Standard via copper leads	
Enclosure	NEMA 3R	NEMA 3R (NEMA 4/12 with optional gasket kit installed)
Quality Design	All units are encapsulated with electrical grade silica sand and resin compounds, which completely enclose the core and coil to seal out moisture, airborne contaminants and eliminates corrosion and deterioration.	
Conduit Knockouts	For rear and side entry into an easily accessible and roomy wiring compartment.	
Installation	Wall mounting up to 25kVA, optional wall mounting bracket available on 37.5kVA. Wall mounting template supplied.	Wall mounting up to 9kVA, optional wall mounting bracket available on 15kVA, 30kVA and 45kVA. Wall mounting template supplied.
Warranty	All HPS standard catalog encapsulated transformers come with a 10 year limited* warranty	

*(Please refer to the HPS standard Catalog Transformer Products Warranty for full details.)

SUPERIOR QUALITY & VALUE

Other manufacturers of commercial encapsulated transformers can design a functional transformer, but what makes HPS the leader in the industry is our investment in providing a complete solution:

- Compact, Efficient Design
- Easy Installation and Hook-up
- Inexpensive while maintaining superior quality in materials and workmanship
- Value, Customer Service and Support

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HPS FORTRESS™ FEATURES

Totally enclosed to seal out moisture and airborne contaminants.

Rear and side entry conduit knockouts into an easily accessible and roomy wiring compartment.

NEMA 4/12 enclosure rating available when optional gasket kit is installed.

NEMA 3R enclosure meets or exceeds listing criteria including NEMA and ANSI standards for indoor and outdoor applications.

Installation made quick and easy with keyhole mounting slots and supplied wall mounting template.

Easily accessible nameplate. All three phase units come standard with two nameplates. One on the front and one on the inside top cover.

All units are encapsulated with electrical grade silica sand and resin compounds.

*Picture displayed above is of a standard three phase unit.



HPS FORTRESS™ ACCESSORIES

~ WALL MOUNTING KIT

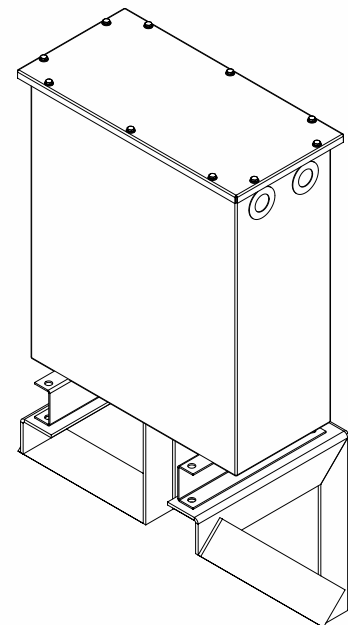
Features include:

- Manufactured from heavy-duty angle steel for maximum support.
- Wall mounting brackets are finished in matching ANSI 61 UL 50 Grey.
- All hardware required to attach to the transformer is supplied.
- Mounting brackets come with three wall mounting holes for maximum holding strength.

The following wall mounting kits are available:

Enclosure Case Style*	Mounting Type	Wall Mounting Kit Part Number
NQ0-NQ8	Wall	Included
NQS10	Wall or Floor	NQTW2
NQT3-NQT6	Wall	Included
NQT7-NQT8	Wall or Floor	NQTW1
NQT9A	Floor	N/A
NQT9	Wall or Floor	NQTW2

*Applies to HPS Fortress line only.



HPS TITAN® SERIES

Did you know...

HPS also has an industrial line of encapsulated transformers for Class 1, Division 2, Groups A, B, C and D Hazardous locations.

HPS Titan series transformers are UL Listed for “Class 1, Division 2, Groups A, B, C and D Hazardous Locations” and also meet ABS Type Approval for “Marine Duty Service and Offshore Applications - Electrical Distribution and Propulsion”. And with a North American Temperature Classification of T3C, the HPS Titan series will remain cool under load. Please contact your HPS sales representative for more details.

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SINGLE PHASE SPECIFICATIONS

120 x 240V Primary
120/240V Secondary 60 Hz

kVA Rating	Catalog Number	Case Style	Approx. Weight
0.05	C1FC05EE	NQ0	7
0.10	C1FC10EE	NQ0	7
0.15	C1FC15EE	NQ0	8
0.25	C1FC25EE	NQ0	9
0.35	C1FC35EE	NQ1	15
0.50	C1FC50EE	NQ1	16
0.75	C1FC75EES	NQ2	23
1	C1F1C0EES	NQ3	24
1.5	C1F1C5EES	NQ3	33
2	C1F002EES	NQ4	42
3	C1F003EES	NQ4	55
5	C1F005EES	NQ5	96
7.5	C1F007EES	NQ6A	148
10	C1F010EES	NQ6	178

208 x 416V Primary
120/240V Secondary 60 Hz

kVA Rating	Catalog Number	Case Style	Approx. Weight
0.05	C1FC05GE	NQ0	7
0.10	C1FC10GE	NQ0	7
0.15	C1FC15GE	NQ0	8
0.25	C1FC25GE	NQ0	9
0.35	C1FC35GE	NQ1	15
0.50	C1FC50GE	NQ1	16
0.75	C1FC75GES	NQ2	23
1	C1F1C0GES	NQ3	24
1.5	C1F1C5GES	NQ3	33
2	C1F002GES	NQ4	42
3	C1F003GES	NQ4	55
5	C1F005GES	NQ5	96
7.5	C1F007GES	NQ6A	148
10	C1F010GES	NQ6	178

120/208/240/277V Primary
120/240V Secondary 60 Hz

kVA Rating	Catalog Number	Case Style	Approx. Weight
0.05	C1FC05WE	NQ0	7
0.10	C1FC10WE	NQ0	7
0.15	C1FC15WE	NQ0	8
0.25	C1FC25WE	NQ1	10
0.35	C1FC35WE	NQ2	17
0.50	C1FC50WE	NQ2	25
0.75	C1FC75WES	NQ2	23
1	C1F1C0WES	NQ3	24
1.5	C1F1C5WES	NQ3	37
2	C1F002WES	NQ4	52
3	C1F003WES	NQ5	65
5	C1F005WES	NQ5	108
7.5	C1F007WES	NQ6	171
10	C1F010WES	NQ6	183

240 x 480V Primary
120/240V Secondary 60 Hz

kVA Rating	Catalog Number	Case Style	Approx. Weight
0.05	C1FC05LE	NQ0	7
0.10	C1FC10LE	NQ0	7
0.15	C1FC15LE	NQ0	8
0.25	C1FC25LE	NQ0	9
0.35	C1FC35LE	NQ1	15
0.50	C1FC50LE	NQ1	15
0.75	C1FC75LES	NQ2	23
1	C1F1C0LES	NQ3	24
1.5	C1F1C5LES	NQ3	33
2	C1F002LES	NQ4	42
3	C1F003LES	NQ4	55
5	C1F005LES	NQ5	96
7.5	C1F007LES	NQ6A	148
10	C1F010LES	NQ6	179
15	C1F015LES	NQ7	265
25	C1F025LES	NQ8	385
37.5	C1F037LES	NQS10	598

277V Primary
120/240V Secondary 50/60 Hz

kVA Rating	Catalog Number	Case Style	Approx. Weight
0.05	C1FC05CE	NQ0	7
0.10	C1FC10CE	NQ0	7
0.15	C1FC15CE	NQ0	8
0.25	C1FC25CE	NQ0	9
0.35	C1FC35CE	NQ1	15
0.50	C1FC50CE	NQ2	15
0.75	C1FC75CES	NQ2	23
1	C1F1C0CES	NQ3	24
1.5	C1F1C5CES	NQ3	33
2	C1F002CES	NQ4	42
3	C1F003CES	NQ4	55
5	C1F005CES	NQ5	96
7.5	C1F007CES	NQ6A	148
10	C1F010CES	NQ6	178



Hammond Power Solutions Inc.

277/480V Primary
208/277V Secondary 50/60 Hz

kVA Rating	Catalog Number	Case Style	Approx. Weight
0.05	C1FC05HR	NQ0	7
0.10	C1FC10HR	NQ0	8
0.15	C1FC15HR	NQ0	11
0.25	C1FC25HR	NQ1	12
0.35	C1FC35HR	NQ2	15
0.50	C1FC50HR	NQ2	18
0.75	C1FC75HRS	NQ3	25
1	C1F1C0HRS	NQ3	31
1.5	C1F1C5HRS	NQ4	39
2	C1F002HRS	NQ4	54
3	C1F003HRS	NQ5	80
5	C1F005HRS	NQ6	156
7.5	C1F007HRS	NQ6	188
10	C1F010HRS	NQ6	179

347/380V Primary
120/240V Secondary 50/60 Hz



kVA Rating	Catalog Number	Case Style	Approx. Weight
0.05	C1FC05JE	NQ0	7
0.10	C1FC10JE	NQ0	7
0.15	C1FC15JE	NQ0	8
0.25	C1FC25JE	NQ0	9
0.35	C1FC35JE	NQ1	14
0.50	C1FC50JE	NQ1	14
0.75	C1FC75JES	NQ2	23
1	C1F1C0JES	NQ3	32
1.5	C1F1C5JES	NQ3	35
2	C1F002JES	NQ4	51
3	C1F003JES	NQ5	89
5	C1F005JES	NQ5	106
7.5	C1F007JES	NQ6A	162
10	C1F010JES	NQ6	194

Export* Primary
120/240V Secondary 50/60 Hz



kVA Rating	Catalog Number	Case Style	Approx. Weight
0.05	C1FC05XE	NQ0	7
0.10	C1FC10XE	NQ0	7
0.15	C1FC15XE	NQ0	9
0.25	C1FC25XE	NQ0	10
0.35	C1FC35XE	NQ1	15
0.50	C1FC50XE	NQ1	16
0.75	C1FC75XES	NQ2	24
1	C1F1C0XES	NQ3	32
1.5	C1F1C5XES	NQ4	37
2	C1F002XES	NQ4	52
3	C1F003XES	NQ5	89
5	C1F005XES	NQ5	96
7.5	C1F007XES	NQ6A	148
10	C1F010XES	NQ6	179

600V Primary
120/240V Secondary 60 Hz

kVA Rating	Catalog Number	Case Style	Approx. Weight
0.05	C1FC05PE	NQ0	7
0.10	C1FC10PE	NQ0	7
0.15	C1FC15PE	NQ0	8
0.25	C1FC25PE	NQ0	9
0.35	C1FC35PE	NQ1	15
0.50	C1FC50PE	NQ1	16
0.75	C1FC75PES	NQ2	23
1	C1F1C0PES	NQ3	24
1.5	C1F1C5PES	NQ3	33
2	C1F002PES	NQ4	42
3	C1F003PES	NQ4	55
5	C1F005PES	NQ5	96
7.5	C1F007PES	NQ6A	148
10	C1F010PES	NQ6	179
15	C1F015PES	NQ7	265
25	C1F025PES	NQ8	385
37.5	C1F037PES	NQS10	598

*Export = 190/200/208/220/240¹ X 380/400/416/440/480¹ Primary Volts

Note¹: The primary voltage ratio of 240V and 480V is available at 60 Hz only with a secondary voltage of approximately 130/260V.

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THREE PHASE SPECIFICATIONS

208V Primary
208Y/120V Secondary 60 Hz

kVA Rating	Catalog Number	Case Style	Approx. Weight
2	C3F002BBS	NQT3	57
3	C3F003BBS	NQT3	76
6	C3F006BBS	NQT5	139
9	C3F009BBS	NQT6	208
15	C3F015BBS	NQT7	357
30	C3F030BBS	NQT8	521
45	C3F045BBS	NQT9	700
75	C3F075BBS	NQT9A	1420

208V Primary
480Y/277V Secondary 60 Hz

kVA Rating	Catalog Number	Case Style	Approx. Weight
2	C3F002BKS	NQT3	58
3	C3F003BKS	NQT3	75
6	C3F006BKS	NQT5	139
9	C3F009BKS	NQT6	208
15	C3F015BKS	NQT7	357
30	C3F030BKS	NQT8	520
45	C3F045BKS	NQT9	700
75	C3F075BKS	NQT9A	1420

240V Primary
208Y/120V Secondary 60 Hz

kVA Rating	Catalog Number	Case Style	Approx. Weight
2	C3F002DBS	NQT3	58
3	C3F003DBS	NQT3	74
6	C3F006DBS	NQT5	139
9	C3F009DBS	NQT6	208
15	C3F015DBS	NQT7	356
30	C3F030DBS	NQT8	521
45	C3F045DBS	NQT9	700
75	C3F075DBS	NQT9A	1420

240V Primary
480Y/277V Secondary 60 Hz

kVA Rating	Catalog Number	Case Style	Approx. Weight
2	C3F002DKS	NQT3	58
3	C3F003DKS	NQT3	75
6	C3F006DKS	NQT5	139
9	C3F009DKS	NQT6	208
15	C3F015DKS	NQT7	354
30	C3F030DKS	NQT8	521
45	C3F045DKS	NQT9	700
75	C3F075DKS	NQT9A	1420

480V Primary
208Y/120V Secondary 60 Hz

kVA Rating	Catalog Number	Case Style	Approx. Weight
2	C3F002KBS	NQT3	59
3	C3F003KBS	NQT3	74
6	C3F006KBS	NQT5	139
9	C3F009KBS	NQT6	208
15	C3F015KBS	NQT7	355
30	C3F030KBS	NQT8	521
45	C3F045KBS	NQT9	700
75	C3F075KBS	NQT9A	1420

480V Primary
240V Delta Secondary 60 Hz

kVA Rating	Catalog Number	Case Style	Approx. Weight
2	C3F002KDS	NQT3	58
3	C3F003KDS	NQT3	76
6	C3F006KDS	NQT5	139
9	C3F009KDS	NQT6	210
15	C3F015KDS	NQT7	355
30	C3F030KDS	NQT8	521
45	C3F045KDS	NQT9	700
75	C3F075KDS	NQT9A	1420



600V Primary
208Y/120V Secondary

60 Hz

kVA Rating	Catalog Number	Case Style	Approx. Weight
2	C3F002PBS	NQT3	58
3	C3F003PBS	NQT3	74
6	C3F006PBS	NQT5	139
9	C3F009PBS	NQT6	207
15	C3F015PBS	NQT7	356
30	C3F030PBS	NQT8	521
45	C3F045PBS	NQT9	700
75	C3F075PBS	NQT9A	1420

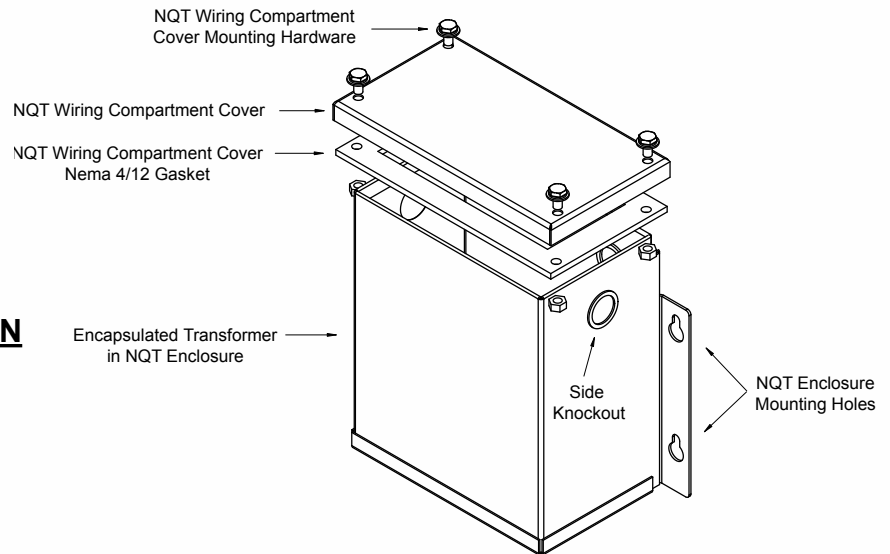
600V Primary
240V Delta Secondary

60 Hz

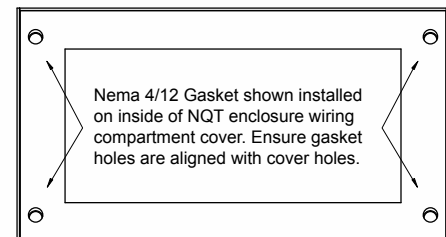
kVA Rating	Catalog Number	Case Style	Approx. Weight
2	C3F002PDS	NQT3	58
3	C3F003PDS	NQT3	74
6	C3F006PDS	NQT5	139
9	C3F009PDS	NQT6	206
15	C3F015PDS	NQT7	356
30	C3F030PDS	NQT8	521
45	C3F045PDS	NQT9	700
75	C3F075PDS	NQT9A	1420

OPTIONAL NEMA 4/12 GASKET KITS

Three phase HPS Fortress™ encapsulated transformers in standard NEMA 3R rated NQT enclosures can easily be converted to a NEMA 4 or 12 rating by ordering and installing the appropriate optional gasket kit as listed in the table below.



Enclosure Case Style	Gasket Kit P/N
NQT3	NQT3GK
NQT4	NQT4GK
NQT5	NQT5GK
NQT6	NQT6GK
NQT7	NQT7GK
NQT8	NQT8GK
NQT9	NQT9GK
NQT9A	NQT9AGK





ENCLOSURE DRAWINGS & DIMENSIONS

Figure 1

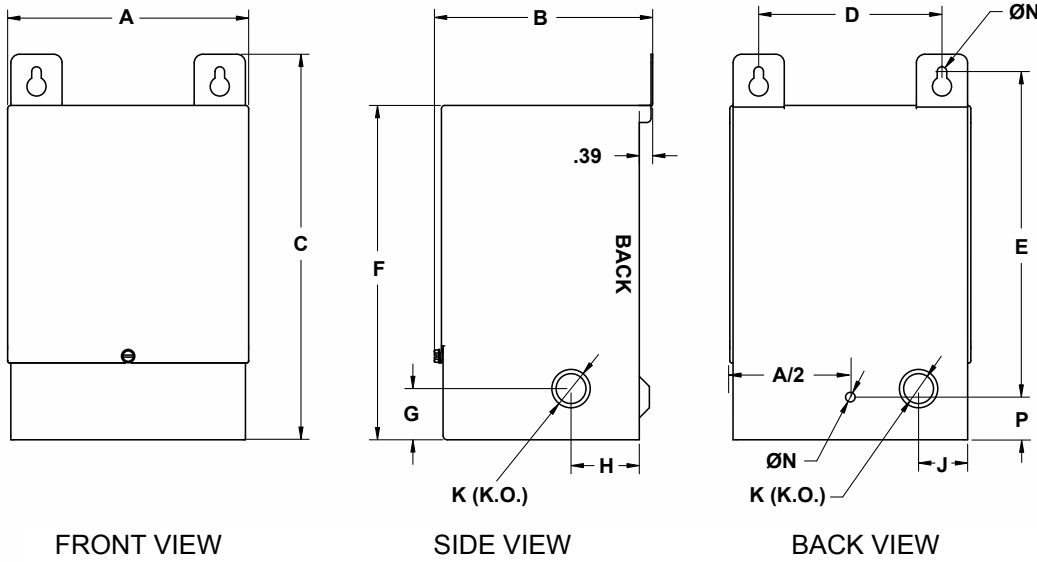
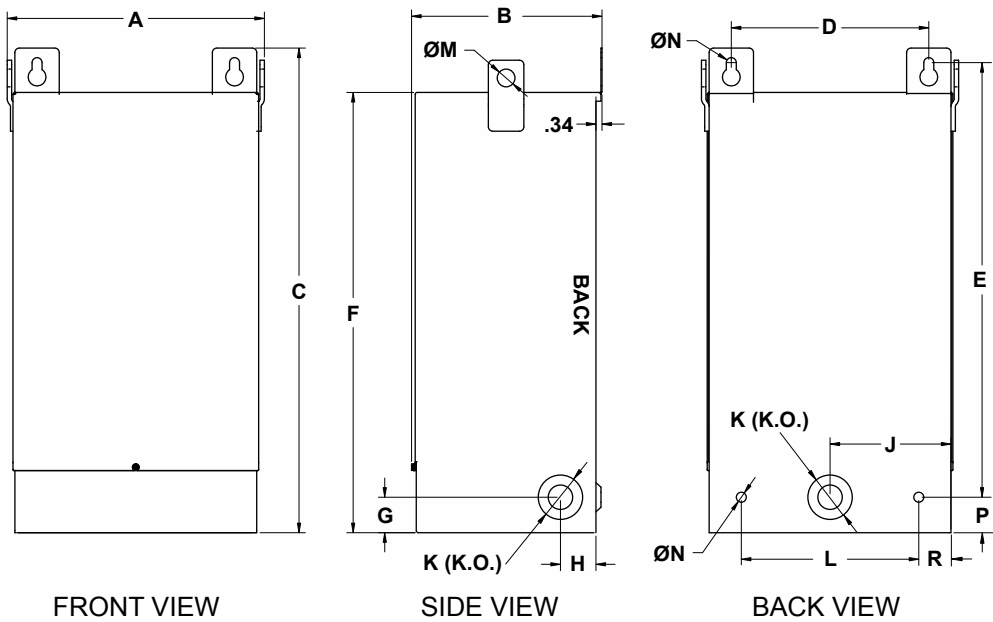


Figure 2



Case Style	Fig #	A	B	C	D	E	F	G	H	J	K ¹	L	M	N	P	R
NQ0	1	3.75	5.25	7.25	2.50	5.63	6.25	1.50	2.00	--	0.88	--	--	0.22	1.25	--
NQ1	1	4.50	5.75	7.25	3.13	5.63	6.25	1.50	2.00	0.81	0.88	--	--	0.22	1.25	--
NQ2	1	5.00	4.75	9.25	3.88	7.75	8.25	1.50	2.00	1.00	0.88 x 1.13 x 1.38	--	--	0.22	1.25	--
NQ3	1	5.88	5.50	10.50	4.13	8.25	9.00	1.50	2.00	1.25	0.88 x 1.13 x 1.38	--	--	0.28	1.25	--
NQ4	1	7.00	6.50	11.75	5.38	9.50	10.25	1.75	2.00	1.50	0.88 x 1.13 x 1.38	--	--	0.28	1.25	--
NQ5	2	10.00	7.75	17.25	7.38	15.38	15.25	2.375	2.00	4.00	1.13 x 1.38	6.00	0.75	0.44	1.25	1.68
NQ6A	2	12.25	9.25	17.63	9.38	14.88	15.56	2.00	2.00	5.00	1.38 x 2.50	8.00	0.75	0.44	2.00	1.68
NQ6	2	12.25	9.25	20.88	9.38	18.13	18.88	2.00	2.00	5.00	1.38 x 2.50	8.00	0.75	0.44	2.00	1.68
NQ7	2	14.50	10.75	21.38	11.63	18.63	19.38	2.00	2.00	6.00	1.38 x 2.50	10.00	0.75	0.44	2.00	1.81
NQ8	2	14.50	10.75	27.38	11.13	24.50	24.88	2.00	2.00	6.00	1.38 x 2.50	10.00	0.75	0.56	2.00	1.81

¹ Knockout (K) sizes are actual diameters of knockout, not conduit sizes



ENCLOSURE DRAWINGS & DIMENSIONS

Figure 1

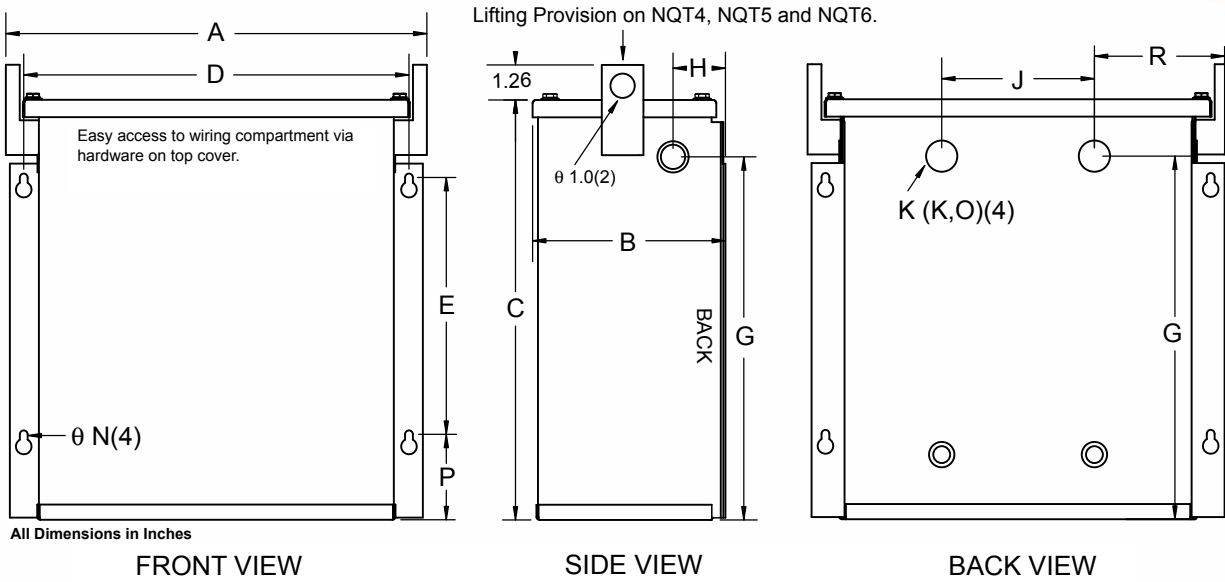
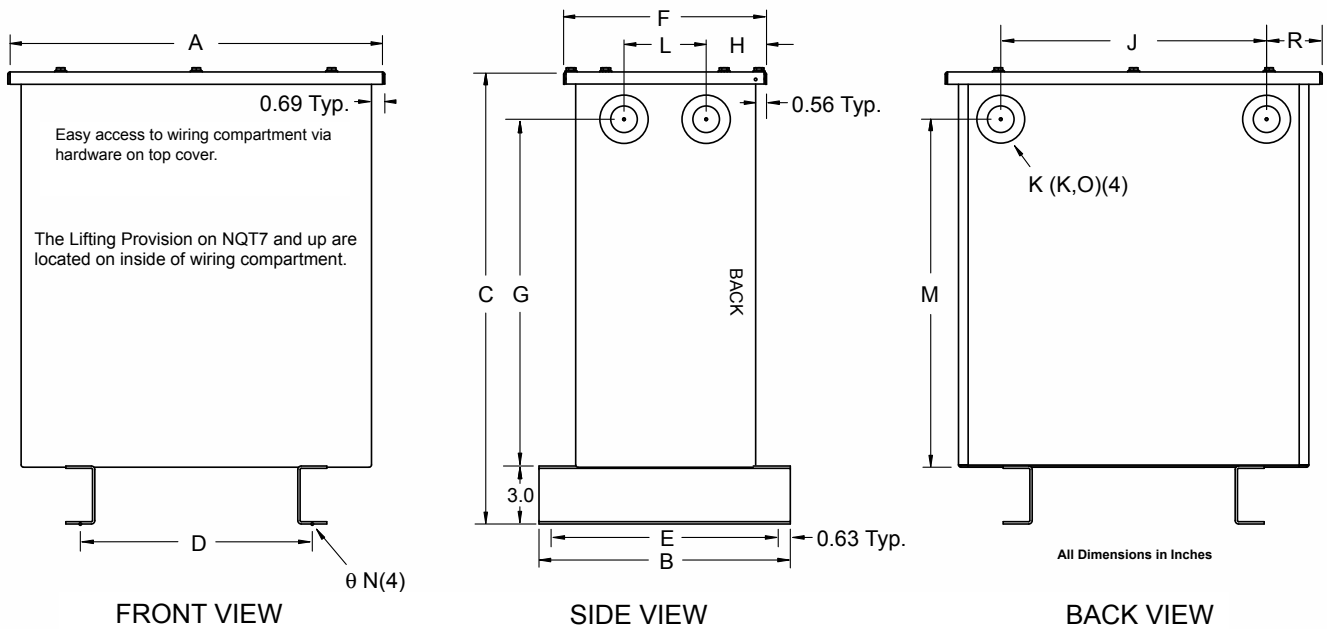


Figure 2



Case Style	Fig #	A	B	C	D	E	F	G	H	J	K ¹	L	M	N	P	R
NQT3	1	12.38	5.44	11.13	11.38	6.50	-	9.50	2.38	5.50	0.88 x 1.13	-	-	0.28	1.81	3.44
NQT4	1	15.19	6.94	15.13	13.88	9.25	-	13.56	1.88	5.50	0.88 x 1.13	-	-	0.28	3.06	4.19
NQT5	1	16.63	10.25	16.63	14.50	8.25	-	13.88	2.69	10.00	1.38 x 1.75	-	-	0.41	4.50	2.25
NQT6	1	19.25	10.44	16.63	17.50	8.25	-	13.56	2.69	12.50	1.38 x 2.50	-	-	0.41	4.50	2.50
NQT7	2	20.25	13.00	23.38	12.00	11.75	11.38	17.94	2.50	13.75	1.38 x 2.50	4.25	17.94	0.56	-	2.13
NQT8	2	22.25	13.00	28.38	14.00	11.75	11.38	21.94	2.50	15.75	1.38 x 2.50	4.25	21.94	0.56	-	2.13
NQT9	2	31.25	16.00	29.88	18.00	14.75	14.13	23.94	2.75	22.75	2.00 x 3.00	6.50	23.64	0.56	-	3.13
NQT9A	2	34.63	18.50	36.75	22.50	17.25	16.50	30.38	4.69	27.25	2.00 X 3.00	6.50	30.38	0.56	-	3.31
NQT10	2	38.44	26.00	39.13	23.50	24.00	20.80	32.50	6.40	24.75	2.50 X 3.63	8.00	32.50	0.69	-	6.84
NQT11	2	37.38	30.00	45.63	23.50	28.00	22.00	39.00	6.95	24.75	2.50 X 3.63	8.00	39.00	0.69	-	6.31
NQS10	2	21.88	18.50	31.00	13.50	17.25	16.50	24.63	4.91	13.13	1.75 x 2.50	6.50	24.63	0.56	-	4.00

¹ Knockout (K) sizes are actual diameters of knockout, not conduit sizes

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Hammond Power
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FORPOT
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