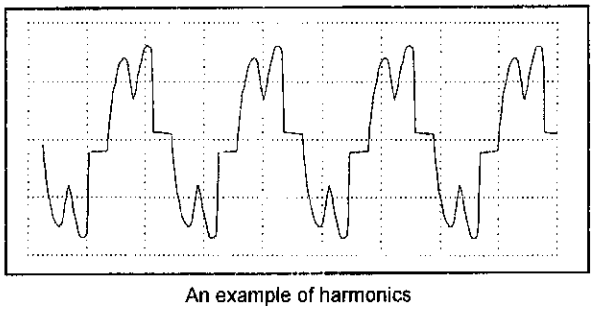
HPS SYNERGY® Series

600V CLASS ENERGY EFFICIENT K-FACTOR TRANSFORMER

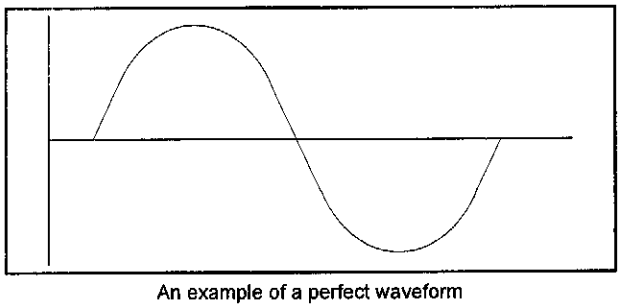
The use of electronic equipment has continued to proliferate in both offices and industrial plants. These electronic devices are powered by either switching power supplies or a rectifier circuit. Examples of these devices include computers, fax machines, copiers, printers, cash registers, UPS's and solid-state ballasts. They all contribute to the distortion of the current waveform and the generation of harmonics.

HARMONICS AND NON-LINEAR LOADS

Harmonics, in an electrical system, are currents created by non-linear loads that generate non-sinusoidal (non-linear) current waveforms. These current and voltage waveforms operate on frequencies that are in multiples of the fundamental 60 hertz frequency. That is, the fundamental frequency is at 60 hertz, the 2nd harmonic is at 120 hertz frequency (60 x 2), the 3rd at 180 hertz, and so forth.



An example of harmonics



An example of a perfect waveform

Harmonics are principally the by-product of switch-mode power supply technology where AC is rectified to DC, and back again. In the process, a capacitor is charged in the first half-cycle and then discharged in the next half-cycle in supplying current to the load. This cycle is repeated. This action of recharging causes AC current to flow only during a portion of the AC voltage wave in abrupt pulses. These abrupt pulses distort the fundamental wave shape causing distortion to the various harmonic frequencies.

Non-Linear Loads

Today, non-linear loads make up the majority of all electrical demand. Rectified input, switching power supplies and electronic lighting ballasts are the most common single phase non-linear loads. Harmonic currents and voltages produced by single phase, non-linear loads which are connected phase-to-neutral in a three phase four wire system, are third order, zero sequence harmonics (the third harmonic and its odd multiples - 3rd, 9th, 15th, 21st, etc., phasors displaced by zero degrees). These third order, zero sequence harmonic currents do not cancel, but add up arithmetically on the neutral bus, creating a primary source of excessive neutral current.

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Data subject to change without notice.

HPS SYNERGY® Series

600V CLASS ENERGY EFFICIENT K-FACTOR TRANSFORMER continued...

Energy efficient general purpose distribution transformers, most frequently used for applications such as commercial or institutional buildings, will supply widely varied single phase loads. Energy Efficient K-Factor transformers are energy efficient general purpose transformers, but are designed to tolerate the harmonic distortion associated with these loads.

Harmonics indicate their presence in a number of ways:

- Overheating
- Device malfunctions
- Telephone interference
- Equipment vibration
- Breakers tripping

Harmonics For A 60Hz System

In a 60 Hz power system, the fundamental and harmonic frequencies are outlined in the table below.

Fundamental	60 Hz
2nd Harmonic	120 Hz
3rd Harmonic	180 Hz
4th Harmonic	240 Hz
5th Harmonic	300 Hz
6th Harmonic	360 Hz
7th Harmonic	420 Hz
8th Harmonic	480 Hz
9th Harmonic	540 Hz
10th Harmonic	600 Hz
11th Harmonic	660 Hz
12th Harmonic	720 Hz
13th Harmonic	780 Hz

14th Harmonic	840 Hz
15th Harmonic	900 Hz
16th Harmonic	9600 Hz
17th Harmonic	1020 Hz
18th Harmonic	1080 Hz
19th Harmonic	1140 Hz
20th Harmonic	1200 Hz
21st Harmonic	1260 Hz
22nd Harmonic	1320 Hz
23rd Harmonic	1380 Hz
24th Harmonic	1440 Hz
25th Harmonic	1500 Hz

SECTION 7

K-Factor

K-factor is defined as a ratio between the additional losses due to harmonics and the eddy current losses at 60Hz. It is used to specify transformers for non-linear loads. Transformers with a rated K-factor of 4, 7, 13, 20 and 30 are available. For balanced loading, a transformer with a K-factor of 4 should be specified when no more than 50% of the total load is non-linear. A transformer with K-factor 13 should be specified when 100% of the load is non-linear.

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HPS SUPERSYNERGY®

600 VOLT CLASS ENERGY EFFICIENT K-FACTOR TRANSFORMERS

K-Factor Transformer Efficiencies:

HPS SUPERSYNERGY (PART NUMBER PREFIX SMT)

The HPS SuperSynergy energy efficient k-factor transformer exceeds DOE 10 CFR Part 431/C802.2 efficiencies over a range of
linear loads. It will not only satisfy the necessity for running at k-factor modern building load types, but in addition, because of the increasing need for energy conservation, they are much more efficient than that of our standard energy efficient line.

- Efficiency performance will be **25% better** than DOE 10 CFR Part 431 and C802.2 standards when measured under a linear load profile at an operating range from **35% to 65%** of rated load.
- Efficiency will meet or exceed DOE 10 CFR Part 431 and C802.2 standards at an operating range of **35%-65%** of rated load when measured under a **non-linear** load profile up to K20.
- Copper and Aluminum Available.

FOR TERMINATION DETAILS SEE PAGE 258.

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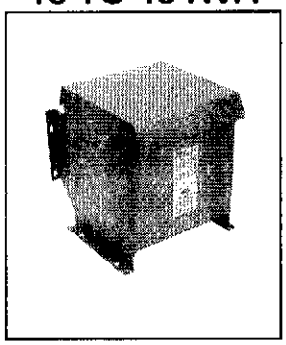
FOR ACCESSORIES SEE PAGES 254 TO 257.

Data subject to change without notice.

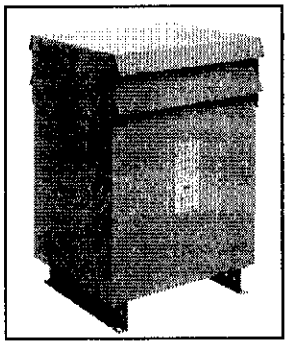
HPS SUPERSYNERGY®
600V CLASS SUPER ENERGY EFFICIENT K-FACTOR TRANSFORMERS

THREE PHASE STANDARD SPECIFICATIONS

15 TO 45 KVA



75 TO 750 KVA



THREE PHASE SPECIFICATIONS — NEMA 3R

	15 to 45 kVA	75 to 750 kVA
Efficiency	Efficiency performance will be 25% better than DOE 10 CFR Part 431 and C802.2 standards when measured under a linear load range from 35% to 65% of rated load. Efficiency will meet or exceed DOE 10 CFR Part 431 and C802.2 standards at an operating range of 35% to 65% of rated load when measured under a non-linear load profile up to K20.	
UL Listed	File: E112313	File: E112313
CSA Certified	File: LR3902	File: LR3902
Frequency	60 Hz	60 Hz
Insulation System	220°C (150°C rise) 200°C (130°C rise) on 15 & 30kVA copper (optional 115°C and 80°C rise available)	220°C (150°C rise) (optional 115°C and 80°C rise available)
Electrostatic Shield	60dB Common Mode - typical	60dB Common Mode - typical
Enclosure Type	Heavy Duty Ventilated NEMA Type 3R Optional NEMA 4, 4X (stainless steel) and 12.	Heavy Duty Ventilated NEMA Type 3R Optional NEMA 4, 4X (stainless steel) and 12.
Enclosure Finish	ANSI 61 Grey, UL50	ANSI 61 Grey, UL50
Neutral	Neutral terminal for field connection (on applicable units).	Neutral terminal for field connection (on applicable units).
Standard Primary Taps	Refer to wiring diagrams for details.	Refer to wiring diagrams for details.
Termination	Front accessible separate high and low voltage terminals; connectors suitable for aluminum and copper are provided for easy cable installation.	Front accessible separate high and low voltage terminals; connectors suitable for aluminum and copper are provided for easy cable installation.
Conduit Knock-Outs	Standard on all units.	Standard on 75 kVA & 150 kVA units.
Impedance	Typically 2.5% to 6.5%	Typically 2.5% to 6.5%
Mounting	Floor or wall/ceiling mounting available. Refer to selection tables for details.	Floor or wall/ceiling mounting available. Refer to selection tables for details.
Seismic	Meets all seismic parameters for IBC 2009 and NBCC 2005 for ground level installations only for all locations in North America.	Meets all seismic parameters for IBC 2009 and NBCC 2005 for ground level installations only for all locations in North America.
Sound level	Meets NEMA ST-20 standards. **(Optional low noise units available)**	Meets NEMA ST-20 standards. **(Optional low noise units available)**

*** Optional TVSS available. Dual Output option also available. Features as listed above may differ. Contact sales for more details.**

SECTION 7

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Hammond Power Solutions Inc.

NO.	DATE	BY	REVISION

TITLE: 1PH DISTRIBUTION TRANSFORMER
NAMEPLATE INFORMATION

SCALE: NTS | DATE: 05/08/08 | DES: GCALOTA

SHEET 1 OF 2

EDBNMF037LE

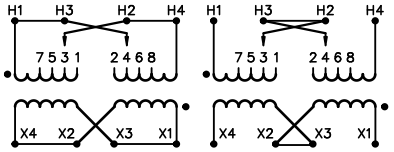
Hammond Power Solutions Inc.

SINGLE PHASE DRY TYPE TRANSFORMER
TRANSFORMATEUR UNIPHASE A SEC

CAT. NMF037LE

LISTED DRY TYPE TRANSFORMER 77U5
E112313

	HV/HT	LV/BT
V	240X480V	120/240V
BIL kV	–	–
	H1 H3 H2 H4	X4 X2 X3 X1



MEETS NEMA TP-1 EFFICIENCY REQUIREMENTS

VERIFIED ENERGY PERFORMANCE RENDEMENT ENERGETIQUE VERIFIE

03423

kVA	37.5
F TYPE	ANN
TEMP RISE deg C ECHAUFFEMENT	150
TEMP CLASS CLASSE TEMP	220
FREQ HZ FREQUENCE HZ	60
IMPEDANCE % @ 170 °C	4.9
ENCL TYPE TYPE DE COFFRAGE	NEMA-3R
WT LBS POIDS LIVRES	310
WINDING ENROULRMENT	AL
CUST. REF. REF. du CLIENT	
SERIAL NO. NO.de SERIE	

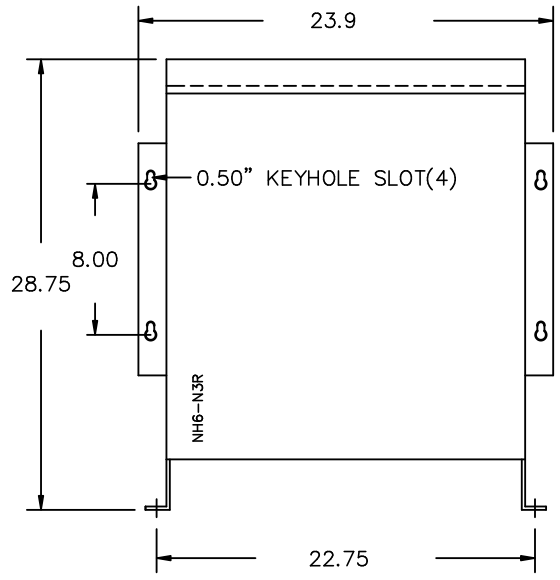
ENERGY EFFICIENCY ECONOMIE D'ENERGIE

CSA	NEMA
C802.2-00	TP 1-2002

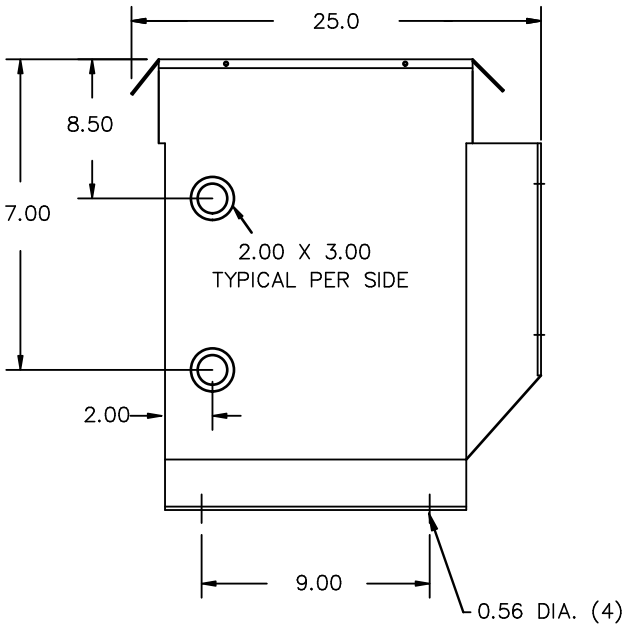
PRIMARY VOLTS	CONNECTION LINES TO	INTER-CONNECT
504	H1,H4	1-H2,2-H3,H2-H3
492	H1,H4	3-H2,2-H3,H2-H3
480	H1,H4	3-H2,4-H3,H2-H3
468	H1,H4	5-H2,4-H3,H2-H3
456	H1,H4	5-H2,6-H3,H2-H3
444	H1,H4	7-H2,6-H3,H2-H3
432	H1,H4	7-H2,8-H3,H2-H3
252	H1,H4	1-H2,2-H3,H1-H3,H2-H4
240	H1,H4	3-H2,4-H3,H1-H3,H2-H4
228	H1,H4	5-H2,6-H3,H1-H3,H2-H4
216	H1,H4	7-H2,8-H3,H1-H3,H2-H4

SECONDARY VOLTS	CONNECTION LINES TO	INTER-CONNECT
240	X1,X4	X2-X3
120	X1,X4	X1-X3,X2-X4
120/240	X1,X2,X4	X2-X3

FRONT VIEW



SIDE VIEW



All Dimensions in inches

ENCLOSURE COLOR : ANSI 61 GREY – OUTDOOR

H.V.1. TERMINAL DETAIL

SUITABLE FOR #2/0-6 CU/AL CONDUCTORS 1 CONDUCTOR PER PHASE

L.V.1. TERMINAL DETAIL

SUITABLE FOR 250MCM-6 CU/AL CONDUCTORS 1 CONDUCTOR PER PHASE

CUSTOMER NOTES:

- HV1 TERMINATED AT TOP FRONT
- LV1 TERMINATED AT BOTTOM FRONT

Hammond Power Solutions Inc.

TITLE: 1PH DISTRIBUTION TRANSFORMER

NO.	DATE	BY	REVISION

DES: GCALOTA
DATE: 05/08/08
SCALE: NTS

SHEET 2 OF 2

EDBNMF037LE

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Hammond Power Solutions Inc.

GUELPH, ONT. BARABOO,WI COMPTON, CA MONTERREY, MX

LR 3902

DRY TYPE TRANSFORMER
77U5
E112313
LISTED

THREE PHASE DRY TYPE TRANSFORMER
TRANSFORMATEUR SEC TRIPHASÉ

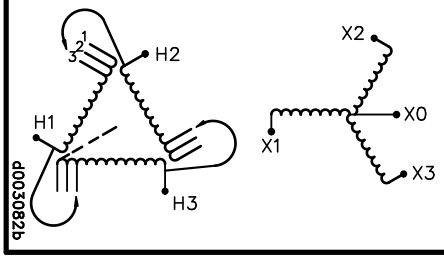
HV/HT	480V
BIL	–
TERM. BORNES	H1 H2 H3

VOLTS	CURRENT COURANT	% RATED VOLTAGE % TENSION NOMINALE	CONNECTION EACH PHASE CONNEXION PAR PHASE
480	18.0	100	1
456	19.0	95	2
432	20.0	90	3

LV/BT	208Y/120V
BIL	–
TERM. BORNES	X0 X1 X2 X3

Cust. Ref. Réf. du client	
Serial No. No. de série	
Part No. No. de pièce	SMT13K015KBS
kVA	15
TYPE	K
Cooling Refroidissement	ANN
Temp. Rise Échauffement	150 ° C
Temp. Class Classe de Temp.	220 ° C
Frequency Fréquence	60 Hz
Impédance % @ 170 °C	2.8
Encl. Type Type de boîtier	NEMA-3R
Wt LBS Poids en lbs.	270
Winding Enroulement	AL

Energy Efficiency Economie d'énergie	CSA	NEMA
	EXCEEDS C802.2-06	EXCEEDS TP 1-2002



SPACINGS BETWEEN ENCLOSURE AND ANY ADJACENT WALL SHALL BE A MINIMUM OF 6 INCHES
SUITABLE FOR NON-SINUSOIDAL CURRENT LOAD WITH A K-FACTOR NOT TO EXCEED 13
ELECTROSTATIC SHIELD

VERIFIED
CSA Energy Performance Rendement Énergetique
VÉRIFIÉ

8 03423 07651 1

				DES: GCALOTA	
				DATE: 09/06/08	
NO.	DATE	BY	REVISION	SCALE: NTS	

Hammond Power Solutions Inc.

TITLE: 3PH DISTRIBUTION TRANSFORMER NAMEPLATE INFORMATION

SHEET 1 OF 2

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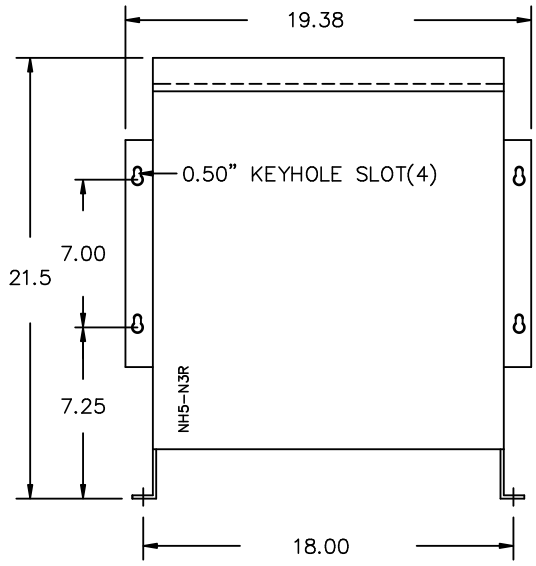
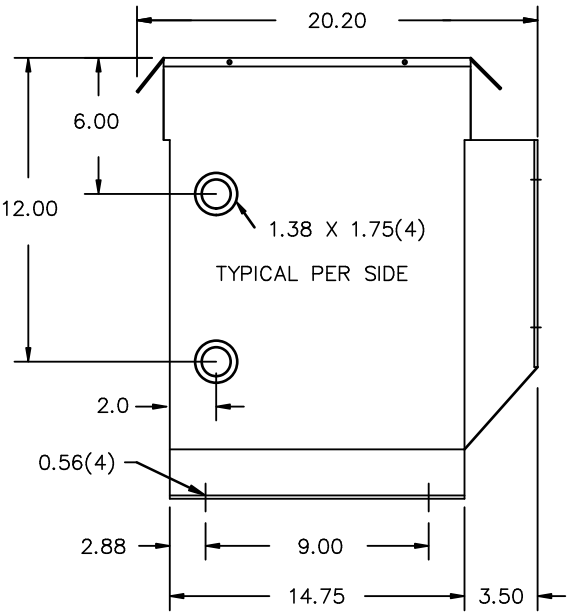
FRONT VIEW



SIDE VIEW



All Dimensions in inches

ENCLOSURE COLOR : ANSI 61 GREY – OUTDOOR

H.V.1. TERMINAL DETAIL

MECHANICAL TYPE LUGS INCLUDED
SUITABLE FOR #14–4 CU/AL
CONDUCTORS
1 CONDUCTOR PER PHASE

L.V.1. TERMINAL DETAIL

MECHANICAL TYPE LUGS INCLUDED
SUITABLE FOR #2/0–6 CU/AL
CONDUCTORS
1 CONDUCTOR PER PHASE

CUSTOMER NOTES:

- HV1 TERMINATED AT TOP FRONT
- LV1 TERMINATED AT BOTTOM FRONT

Hammond Power Solutions Inc.

TITLE: 3PH DISTRIBUTION TRANSFORMER

NO.	DATE	BY	REVISION

DES: GCALOTA
DATE: 09/06/08
SCALE: NTS

SHEET 2 OF 2

EDBSMT13K015KBS

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Hammond Power Solutions Inc.

GUELPH, ONT. BARABOO,WI COMPTON, CA MONTERREY, MX

LR 3902

DRY TYPE TRANSFORMER
77U5
E112313
LISTED

THREE PHASE DRY TYPE TRANSFORMER
TRANSFORMATEUR SEC TRIPHASÉ

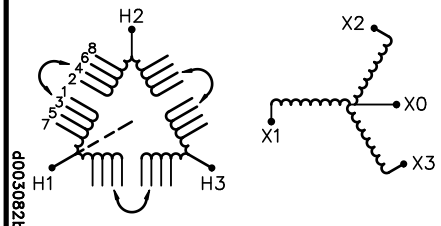
HV/HT	480V
BIL	–
TERM. BORNES	H1 H2 H3

VOLTS	CURRENT COURANT	% RATED VOLTAGE % TENSION NOMINALE	CONNECTION EACH PHASE CONNEXION PAR PHASE
504	34.4	105	1–2
492	35.2	102.5	2–3
480	36.1	100	3–4
468	37.0	97.5	4–5
456	38.0	95	5–6
444	39.0	92.5	6–7
432	40.1	90	7–8

LV/BT	208Y/120V
BIL	–
TERM. BORNES	X0 X1 X2 X3

Cust. Ref. Réf. du client	
Serial No. No. de série	
Part No. No. de pièce	SMT13K030KBS
kVA	30
TYPE	K
Cooling Refroidissement	ANN
Temp. Rise Échauffement	150 ° C
Temp. Class Classe de Temp.	220 ° C
Frequency Fréquence	60 Hz
Impédance % @ 170 °C	3.1
Encl. Type Type de boîtier	NEMA–3R
Wt LBS Poids en lbs.	390
Winding Enroulement	AL

Energy Efficiency Economie d'energie	CSA	NEMA
	EXCEEDS C802.2–06	EXCEEDS TP 1–2002



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SPACINGS BETWEEN ENCLOSURE AND ANY ADJACENT WALL SHALL BE A MINIMUM OF 6 INCHES
ELECTROSTATIC SHIELD
SUITABLE FOR NON–SINUSOIDAL CURRENT LOAD WITH A K–FACTOR NOT TO EXCEED 13

VERIFIED
CSA Energy Performance Rendement Énergetique
VÉRIFIÉ

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Hammond Power Solutions Inc.

TITLE: 3PH DISTRIBUTION TRANSFORMER
NAMEPLATE INFORMATION

NO.	DATE	BY	REVISION

DES: GCALOTA
DATE: 09/06/08
SCALE: NTS

SHEET 1 OF 2

EDBSMT13K030KBS

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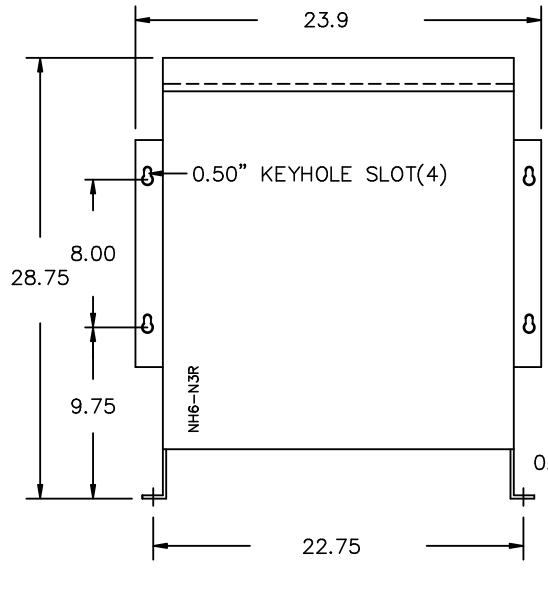
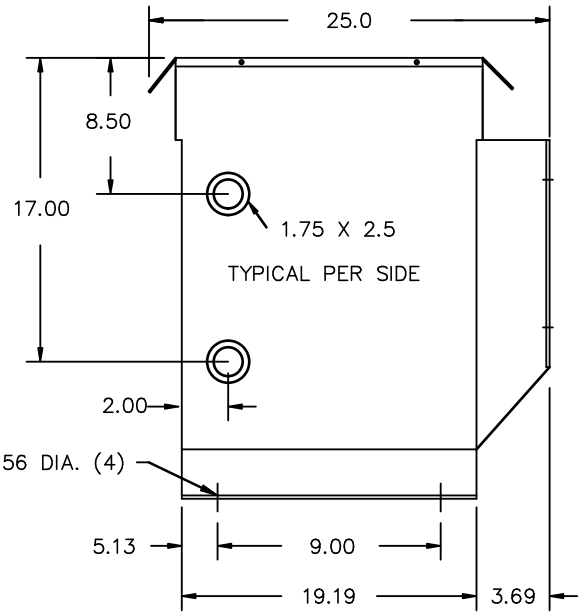
FRONT VIEW



SIDE VIEW



All Dimensions in inches

ENCLOSURE COLOR : ANSI 61 GREY – OUTDOOR

H.V.1. TERMINAL DETAIL

MECHANICAL TYPE LUGS INCLUDED
SUITABLE FOR #14–4 CU/AL
CONDUCTORS
1 CONDUCTOR PER PHASE

L.V.1. TERMINAL DETAIL

MECHANICAL TYPE LUGS INCLUDED
SUITABLE FOR #2/0–6 CU/AL
CONDUCTORS
1 CONDUCTOR PER PHASE

CUSTOMER NOTES:

- HV1 TERMINATED AT TOP FRONT
- LV1 TERMINATED AT BOTTOM FRONT

Hammond Power Solutions Inc.

TITLE: 3PH DISTRIBUTION TRANSFORMER

NO.	DATE	BY	REVISION

DES: GCALOTA
DATE: 09/06/08
SCALE: NTS

SHEET 2 OF 2

EDBSMT13K030KBS

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Hammond Power Solutions Inc.

GUELPH, ONT. BARABOO,WI COMPTON, CA MONTERREY, MX

LR 3902

DRY TYPE TRANSFORMER
77U5
E112313
LISTED

THREE PHASE DRY TYPE TRANSFORMER
TRANSFORMATEUR SEC TRIPHASÉ

HV/HT	480V
BIL	–
TERM. BORNES	H1 H2 H3

VOLTS	CURRENT COURANT	% RATED VOLTAGE % TENSION NOMINALE	CONNECTION EACH PHASE CONNEXION PAR PHASE
504	51.5	105	1–2
492	52.8	102.5	2–3
480	54.1	100	3–4
468	55.5	97.5	4–5
456	57.0	95	5–6
444	58.5	92.5	6–7
432	60.1	90	7–8

LV/BT	208Y/120V
BIL	–
TERM. BORNES	X0 X1 X2 X3

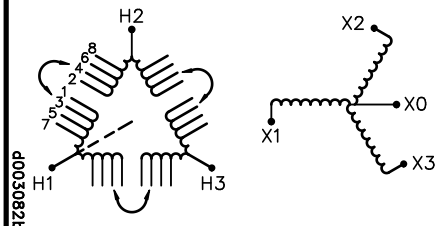
Cust. Ref. Réf. du client	
Serial No. No. de série	
Part No. No. de pièce	SMT13K045KBS
kVA	45
TYPE	K
Cooling Refroidissement	ANN
Temp. Rise Échauffement	150 ° C
Temp. Class Classe de Temp.	220 ° C
Frequency Fréquence	60 Hz
Impédance % @ 170 °C	3.9
Encl. Type Type de boîtier	NEMA–3R
Wt LBS Poids en lbs.	480
Winding Enroulement	AL

Energy Efficiency Economie d'energie	CSA	NEMA
	EXCEEDS C802.2–00	EXCEEDS TP 1–2002

SPACINGS BETWEEN ENCLOSURE AND ANY ADJACENT WALL SHALL BE A MINIMUM OF 6 INCHES

ELECTROSTATIC SHIELD

SUITABLE FOR NON–SINUSOIDAL CURRENT LOAD WITH A K–FACTOR NOT TO EXCEED 13



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VERIFIED
CSA Energy Performance Rendement Énergetique
VÉRIFIÉ

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Hammond Power Solutions Inc.	TITLE:	3PH DISTRIBUTION TRANSFORMER NAMEPLATE INFORMATION			
				DES: GCALOTA	
				DATE: 09/06/08	
	NO.	DATE	BY	REVISION	SCALE: NTS

SHEET 1 OF 2

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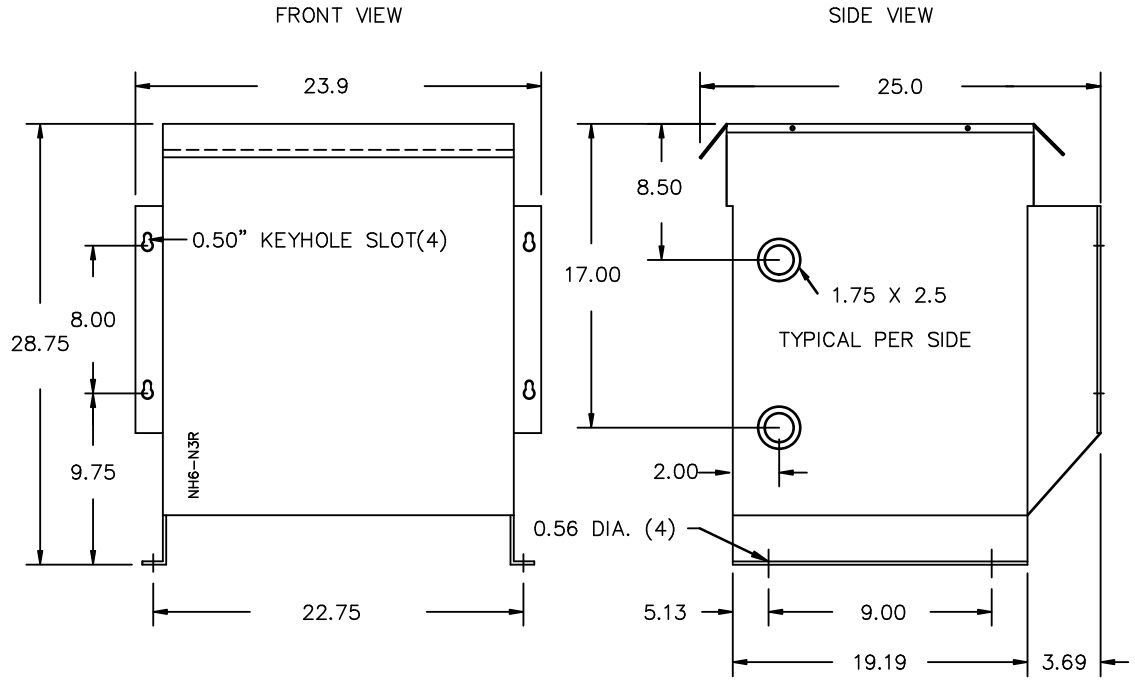

All Dimensions in inches

ENCLOSURE COLOR : ANSI 61 GREY – OUTDOOR

H.V.1. TERMINAL DETAIL

MECHANICAL TYPE LUGS INCLUDED
SUITABLE FOR #14–2 CU/AL
CONDUCTORS
1 CONDUCTOR PER PHASE

L.V.1. TERMINAL DETAIL

MECHANICAL TYPE LUGS INCLUDED
SUITABLE FOR 250MCM–6 CU/AL
CONDUCTORS
1 CONDUCTOR PER PHASE

CUSTOMER NOTES:

– HV1 TERMINATED AT TOP FRONT
– LV1 TERMINATED AT BOTTOM FRONT

Hammond Power Solutions Inc.

TITLE: 3PH DISTRIBUTION TRANSFORMER

NO.	DATE	BY	REVISION

DES: GCALOTA
DATE: 09/06/08
SCALE: NTS

SHEET 2 OF 2

EDBSMT13K045KBS

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Hammond Power Solutions Inc.

GUELPH, ONT. BARABOO,WI COMPTON, CA MONTERREY, MX

LR 3902

DRY TYPE TRANSFORMER
77U5
E112313
LISTED

THREE PHASE DRY TYPE TRANSFORMER
TRANSFORMATEUR SEC TRIPHASÉ

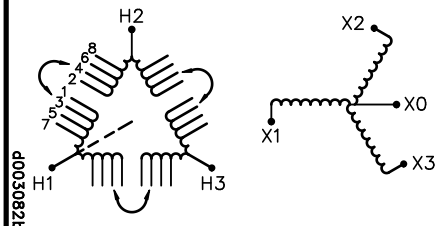
HV/HT	480V
BIL	–
TERM. BORNES	H1 H2 H3

VOLTS	CURRENT COURANT	% RATED VOLTAGE % TENSION NOMINALE	CONNECTION EACH PHASE CONNEXION PAR PHASE
504	85.9	105	1–2
492	88.0	102.5	2–3
480	90.2	100	3–4
468	92.5	97.5	4–5
456	95.0	95	5–6
444	97.5	92.5	6–7
432	100.2	90	7–8

LV/BT	208Y/120V
BIL	–
TERM. BORNES	X0 X1 X2 X3

Cust. Ref. Réf. du client	
Serial No. No. de série	
Part No. No. de pièce	SMT13K075KBS
kVA	75
TYPE	K
Cooling Refroidissement	ANN
Temp. Rise Échauffement	150 ° C
Temp. Class Classe de Temp.	220 ° C
Frequency Fréquence	60 Hz
Impédance % @ 170 °C	3.2
Encl. Type Type de boîtier	NEMA–3R
Wt LBS Poids en lbs.	815
Winding Enroulement	AL

Energy Efficiency Economie d'energie	CSA	NEMA
	EXCEEDS C802.2–00	EXCEEDS TP 1–2002



d0030820

SPACINGS BETWEEN ENCLOSURE AND ANY ADJACENT WALL SHALL BE A MINIMUM OF 6 INCHES
ELECTROSTATIC SHIELD
SUITABLE FOR NON–SINUSOIDAL CURRENT LOAD WITH A K–FACTOR NOT TO EXCEED 13

VERIFIED
CSA Energy Performance Rendement Énergetique
VÉRIFIÉ

8 03423 07687 0

Hammond Power Solutions Inc.

TITLE: 3PH DISTRIBUTION TRANSFORMER
NAMEPLATE INFORMATION

NO.	DATE	BY	REVISION

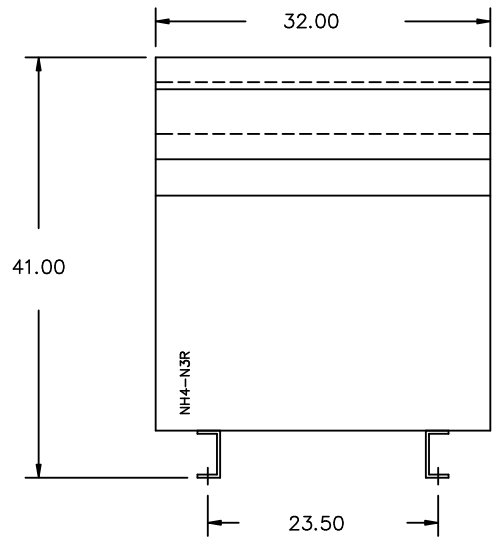
DES: GCALOTA
DATE: 09/06/08
SCALE: NTS

SHEET 1 OF 2

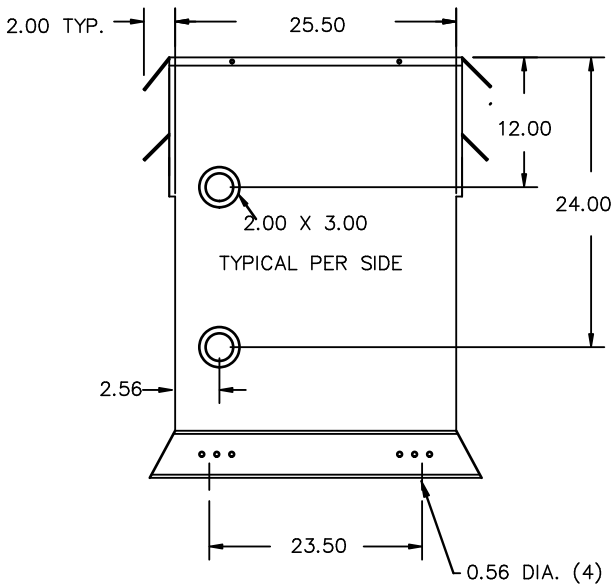
EDBSMT13K075KBS

0.2 root 2010/02/17 14:39

FRONT VIEW



SIDE VIEW



All Dimensions in inches

ENCLOSURE COLOR :ANSI 61 GREY – OUTDOOR

H.V.1. TERMINAL DETAIL

MECHANICAL TYPE LUGS INCLUDED
SUITABLE FOR #2/0-6 CU/AL
CONDUCTORS
1 CONDUCTOR PER PHASE

L.V.1. TERMINAL DETAIL

MECHANICAL TYPE LUGS INCLUDED
SUITABLE FOR 600MCM-2 CU/AL
CONDUCTORS
1 CONDUCTOR PER PHASE

CUSTOMER NOTES:

- HV1 TERMINATED AT TOP FRONT
- LV1 TERMINATED AT BOTTOM FRONT

Hammond Power Solutions Inc.

TITLE: 3PH DISTRIBUTION TRANSFORMER

NO.	DATE	BY	REVISION

DES: GCALOTA
DATE: 09/06/08
SCALE: NTS

SHEET 2 OF 2

EDBSMT13K075KBS

0.2 root 2010/02/17 14:39

FOR APPROVAL ONLY

Hammond Power Solutions Inc.

LR 3902

DRY TYPE TRANSFORMER 77U5 E112313 LISTED

GUELPH, ONT. BARABOO,WI COMPTON, CA MONTERREY, MX

THREE PHASE DRY TYPE TRANSFORMER
TRANSFORMATEUR SEC TRIPHASÉ

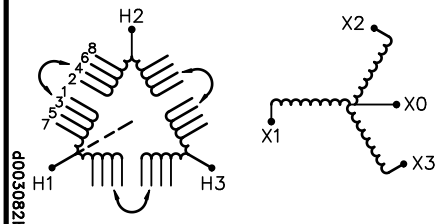
HV/HT	480V
BIL	–
TERM. BORNES	H1 H2 H3

VOLTS	CURRENT COURANT	% RATED VOLTAGE % TENSION NOMINALE	CONNECTION EACH PHASE CONNEXION PAR PHASE
504	85.9	105	1–2
492	88.0	102.5	2–3
480	90.2	100	3–4
468	92.5	97.5	4–5
456	95.0	95	5–6
444	97.5	92.5	6–7
432	100.2	90	7–8

LV/BT	480Y/277V
BIL	–
TERM. BORNES	X0 X1 X2 X3

Cust. Ref. Réf. du client	
Serial No. No. de série	
Part No. No. de pièce	SMT13K075KKSH6
kVA	75
TYPE	K
Cooling Refroidissement	ANN
Temp. Rise Échauffement	150 ° C
Temp. Class Classe de Temp.	220 ° C
Frequency Fréquence	60 Hz
Impédance % @ 170 °C	3
Encl. Type Type de boîtier	IP 65
Wt LBS Poids en lbs.	870
Winding Enroulement	AL

Energy Efficiency Economie d'energie	CSA	NEMA
	EXCEEDS C802.2-06	EXCEEDS TP 1-2002



d0030820p

SPACINGS BETWEEN ANY VENTILATED ENCLOSURE PANEL AND ANY ADJACENT WALL SHALL BE A MINIMUM OF 5 INCHES

ELECTROSTATIC SHIELD

SUITABLE FOR NON-SINUSOIDAL CURRENT LOAD WITH A K-FACTOR NOT TO EXCEED 13

VERIFIED CSA Energy Performance Rendement Énergetique VÉRIFIÉ

Hammond Power Solutions Inc.

TITLE: 3PH DISTRIBUTION TRANSFORMER NAMEPLATE INFORMATION

NO.	DATE	BY	REVISION

DES: LCEN

DATE: 10/02/24

SCALE: NTS

SHEET 1 OF 2

EDB SMT13K075KKSH6

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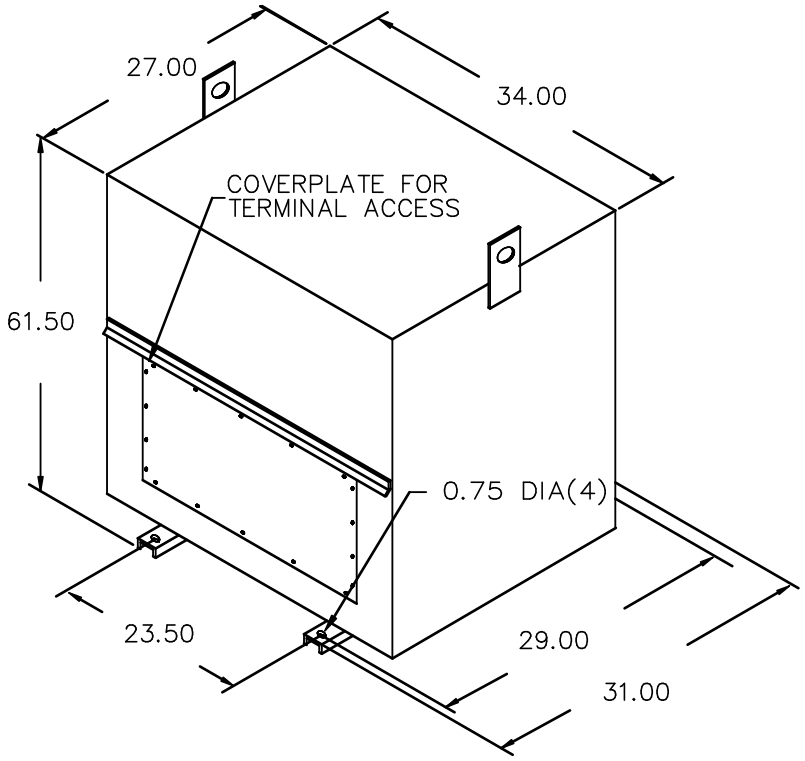


All Dimensions in inches

ENCLOSURE COLOR :ANSI 61 GREY – OUTDOOR

CUSTOMER NOTES:

– HV1 TERMINATED AT TOP FRONT
– LV1 TERMINATED AT BOTTOM FRONT

FOR APPROVAL ONLY

Hammond Power Solutions Inc.

TITLE: 3PH DISTRIBUTION TRANSFORMER

NO.	DATE	BY	REVISION

DES: LCEN
DATE: 10/02/24
SCALE: NTS

SHEET 2 OF 2

EDB SMT13K075KKSH6

0.1 root 2010/02/24 16:15

FOR APPROVAL ONLY

Hammond Power Solutions Inc.

LR 3902

DRY TYPE TRANSFORMER
77U5
E112313
LISTED

GUELPH, ONT. BARABOO,WI COMPTON, CA MONTERREY, MX

THREE PHASE DRY TYPE TRANSFORMER
TRANSFORMATEUR SEC TRIPHASÉ

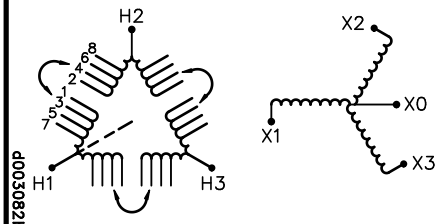
HV/HT	480V
BIL	–
TERM. BORNES	H1 H2 H3

VOLTS	CURRENT COURANT	% RATED VOLTAGE % TENSION NOMINALE	CONNECTION EACH PHASE CONNEXION PAR PHASE
504	129	105	1–2
492	132	102.5	2–3
480	135	100	3–4
468	139	97.5	4–5
456	142	95	5–6
444	146	92.5	6–7
432	150	90	7–8

LV/BT	208Y/120V
BIL	–
TERM. BORNES	X0 X1 X2 X3

Cust. Ref. Réf. du client	
Serial No. No. de série	
Part No. No. de pièce	SMT13K112KBS
kVA	112.5
TYPE	K
Cooling Refroidissement	ANN
Temp. Rise Echauffement	115 ° C
Temp. Class Classe de Temp.	220 ° C
Frequency Fréquence	60 Hz
Impédance % @ 135 °C	3.5
Encl. Type Type de boîtier	NEMA–3R
Wt LBS Poids en lbs.	1250
Winding Enroulement	AL

	CSA	NEMA
Energy Efficiency Economie d'energie	EXCEEDS C802.2–00	EXCEEDS TP 1–2002



d0030820

SPACINGS BETWEEN ANY VENTILATED ENCLOSURE PANEL AND ANY ADJACENT WALL SHALL BE A MINIMUM OF 5 INCHES

ELECTROSTATIC SHIELD

SUITABLE FOR NON–SINUSOIDAL CURRENT LOAD WITH A K–FACTOR NOT TO EXCEED 13

VERIFIED
CSA Energy Performance Rendement Énergetique
VÉRIFIÉ

Hammond Power Solutions Inc.

TITLE: 3PH DISTRIBUTION TRANSFORMER
NAMEPLATE INFORMATION

NO.	DATE	BY	REVISION

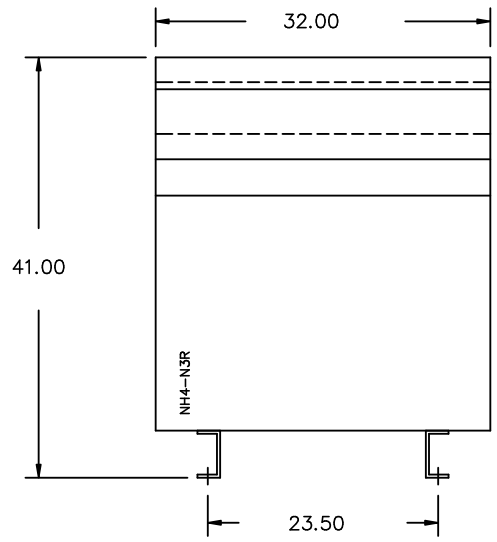
DES: LCEN
DATE: 10/02/24
SCALE: NTS

SHEET 1 OF 2

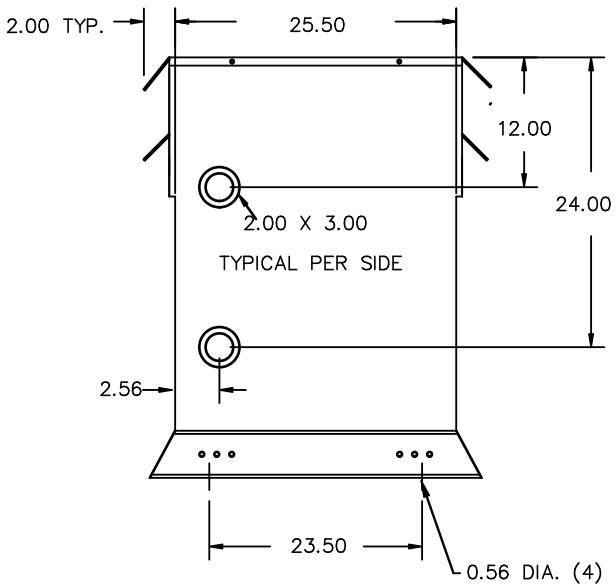
EDBSMT13K112KBS

0.4 root 2010/02/24 16:08

FRONT VIEW



SIDE VIEW



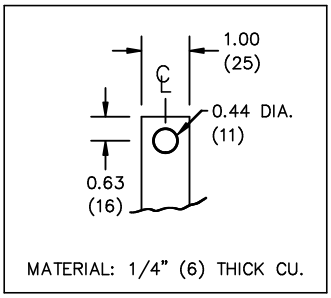
All Dimensions in inches

ENCLOSURE COLOR :ANSI 61 GREY – OUTDOOR

H.V.1. TERMINAL DETAIL

MECHANICAL TYPE LUGS INCLUDED
SUITABLE FOR 250MCM-6 CU/AL
CONDUCTORS
1 CONDUCTOR PER PHASE

L.V.1. TERMINAL DETAIL



MATERIAL: 1/4" (6) THICK CU.

CUSTOMER NOTES:
- HV1 TERMINATED AT TOP FRONT
- LV1 TERMINATED AT COIL FACE

FOR APPROVAL ONLY

Hammond Power Solutions Inc.

TITLE: 3PH DISTRIBUTION TRANSFORMER

NO.	DATE	BY	REVISION

DES: LCEN
DATE: 10/02/24
SCALE: NTS

SHEET 2 OF 2

EDBSMT13K112KBS

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