MIRUS International Inc.
6805 Invader Cres., Unit #12, Mississauga, Ontario, Canada L5T 2K6

TECHNICAL DATA — HARMONY-2™

Energy Efficient Harmonic Mitigating Transformer

GENERAL SPECIFICATIONS:

PRIMARY
3-phase, 3-wire, 60Hz

DUAL SECONDARIES [each]
3-phase, 4-wire, 60Hz, 60% rated

OPERATING TEMPERATURE RISE[7]
130°C [150°C] [115°C] [80°C]

***INSULATION* CLASS**
220°C

ANGULAR DISPLACEMENT[1]
Select 0° or 15° lag

ZERO SEQUENCE IMPEDANCE
Zo < 0.95%, Xo < 0.3%
(or as per table below)

PRIMARY TAPS
15kVA (and all 208V): ± 1 x 5%
30kVA – 500kVA: ± 2 x 2.5%

K-FACTOR CAPABILITY
20

CREST FACTOR CAPABILITY
4.5

COMMON NEUTRAL BUS AMPACITY
200% of phase current

FULL LOAD EFFICIENCY
> 97%

MAGNETISING INRUSH
< 10 times FL RMS

WINDING MATERIAL
Copper

INSULATING VARNISH IMPREGNATION
Polyester Resin

AUDIBLE SOUND LEVEL
As per NEMA ST-20
15 - 45kVA: 45dB
75 – 150kVA: 50dB
225 – 300kVA: 55dB
500kVA: 60dB

ENCLOSURE
Type: NEMA-3R, ventilated
Paint: Polyester powder coated
Colour: ANSI 61 Grey

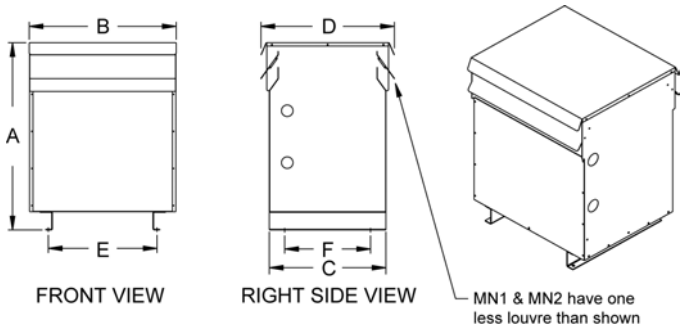
ELECTROSTATIC SHIELD
Single, [double]

OPTIONS:

OVER-TEMPERATURE SENSORS
[170°C], [200°C]

SOLID BOTTOM PLATE *(Case 'MN' only)*
[yes], [no]

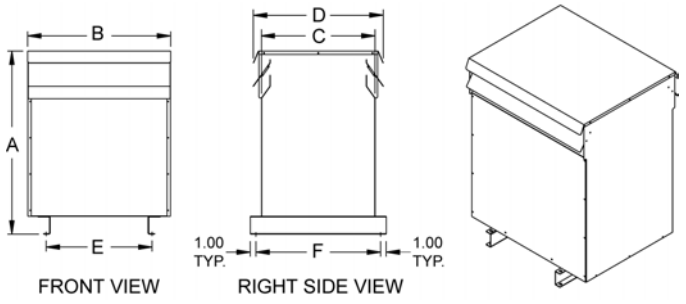
'MN' STYLE ENCLOSURE



DIMENSIONS - inches *[mm]*

CASE STYLE	A	B	C	D	E	F
MN1	22.00 *[559]*	16.75 *[425]*	15.00 *[381]*	19.00 *[483]*	13.75 *[349]*	13.00 *[330]*
MN2	29.00 *[737]*	21.50 *[546]*	19.50 *[495]*	23.50 *[597]*	17.00 *[432]*	17.50 *[445]*
MN3	38.00 *[965]*	26.00 *[661]*	21.00 *[534]*	25.00 *[635]*	21.50 *[546]*	19.00 *[483]*
MN4	41.00 *[1041]*	32.00 *[813]*	25.50 *[648]*	29.50 *[749]*	23.50 *[597]*	23.50 *[597]*

'LN' STYLE ENCLOSURE



DIMENSIONS - inches *[mm]*

CASE STYLE	A	B	C	D	E	F
LN1	51.50 *[1308]*	39.50 *[1003]*	30.00 *[762]*	34.00 *[864]*	24.00 *[610]*	32.00 *[813]*
LN2	59.00 *[1499]*	48.50 *[1232]*	34.00 *[864]*	38.00 *[965]*	27.50 *[699]*	36.00 *[915]*
LN3	66.00 *[1677]*	51.50 *[1308]*	39.00 *[991]*	43.00 *[1092]*	34.00 *[864]*	41.00 *[1042]*
LN6	70.00 *[1778]*	64.00 *[1626]*	40.00 *[1016]*	44.00 *[1118]*	40.00 *[1016]*	42.00 *[1067]*

Product Code:

H2 t - dd - hhh - xxx - kVA - 60% - X

- **t** — Transformer Type: T = (isolation), A = (autotransformer)
- **dd** — Angular Displacement: 00, 15
- **hhh** — Primary L-L Voltage: 208, 480, 600
- **xxx** — Secondary L-L Voltage: 15, 30, 45, 75, 112.5, 150, 225, 300, 500
- **kVA** — Primary kVA
- **60%** — Secondary Rating [each]: 60% (of primary kVA)
- **X** — Electrostatic Shield: X = (no shield), s = (single shield), ss = (double shield)

Sizes			Losses[2]		Impedances			Terminal Lugs Provided (Mechanical Type)				
kVA Primary	Case Style	Weight lb *[kg]*[2]	Iron	Copper (full load)	3 Phase Short Circuit[5]	Zero Sequence[6] Zo	Zero Sequence[6] Xo	Primary 208V	Primary 480V	Primary 600V	Each Sec. Phase 120/208V	Total on Common Neutral
15	MN1	250 *[115]*	230W	280W	2.8-3.5%	< 0.95%	< 0.3%	#2-#14	#2-#14	#2-#14	#2-#14	2x #2-#14
30	MN2	375 *[170]*	300W	530W	2.8-3.5%	< 0.95%	< 0.3%	2/0-#6	#2-#14	#2-#14	#2-#14	2x2/0-#6
45	MN2	500 *[227]*	370W	750W	2.8-3.5%	< 0.95%	< 0.3%	250MCM-#6	#2-#14	#2-#14	2/0-#6	2x250MCM-#6
75	MN3	750 *[340]*	540W	1450W	2.8-3.5%	< 0.95%	< 0.3%	600MCM-#4	2/0-#6	2/0-#6	250MCM-#6	4x350MCM-#6
112.5	MN4	1000 *[455]*	700W	2300W	2.8-3.5%	< 0.95%	< 0.3%	2x350MCM-#6	250MCM-#6	2/0-#6	350MCM-#6	4x350MCM-#6
150	MN4	1300 *[590]*	850W	2900W	3.2-4.5%	< 0.95%	< 0.3%	2x350MCM-#6	350MCM-#6	250MCM-#6	600MCM-#4	4x600MCM-#2
225	LN1	1800 *[820]*	1180W	4200W	3.2-4.5%	< 1.0%	< 0.5%	2x600MCM-#2	600MCM-#2	600MCM-#2	2x350MCM-#6	8x350MCM-#6
300	LN2	2500 *[1135]*	1470W	5500W	3.2-4.5%	< 1.0%	< 0.5%	Copper Pad	Copper Pad	Copper Pad	Copper Pad	Copper Pad
500	LN3	3500 *[1588]*	1600W	10000W	4.5-6.0%	< 1.5%	< 1.0%	Copper Pad	Copper Pad	Copper Pad	Copper Pad	Copper Pad

1. Secondary winding group X lags primary group H by the angular displacement. Secondary group Y lags secondary group X by a further 30 degrees.
2. Estimated Values.
3. For additional information refer to: Typical Specifications, Technical Guide, Internal Layout and Connection Diagrams.
4. Specifications are subject to change without notice.
5. Based on primary side kVA rating and measured with all secondaries short circuited.
6. Based on kVA rating of one secondary and measured with only one secondary short circuited.
7. Enclosure sizes may vary depending on temperature rise. [80°C] temp. rise is not available for 500kVA H2T. 15kVA transformers have 115° C operating temp. rise and 180° C insulation class.