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

TECHNICAL DATA — HARMONY-1™

Energy Efficient Harmonic Mitigating Transformer

GENERAL SPECIFICATIONS:

PRIMARY
3-phase, 3-wire, 60Hz

SECONDARY
3-phase, 4-wire, 60Hz

OPERATING TEMPERATURE RISE[5]
130°C [150°C] [115°C] [80°C]

***INSULATION* CLASS**
220°C

ANGULAR DISPLACEMENT[1]
Select 0° or 30° 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

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, [Orange]

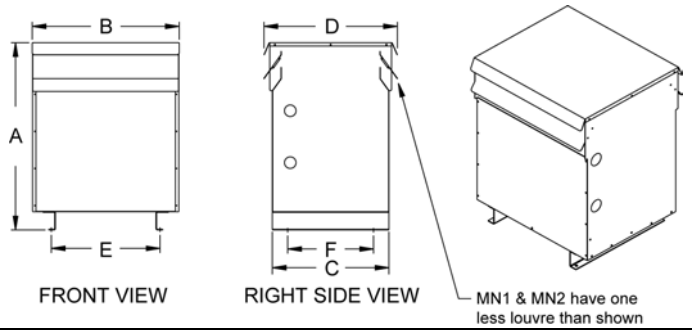
ELECTROSTATIC SHIELD
Single, [double]

OPTIONS:

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

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

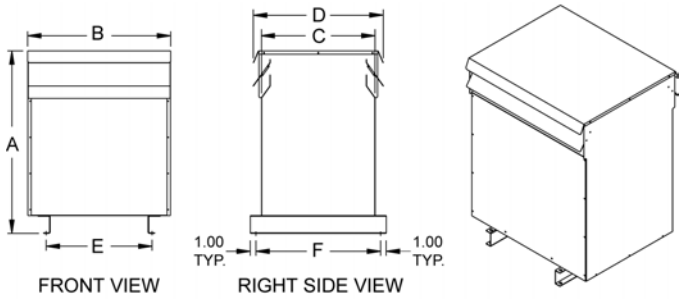
'MN' STYLE ENCLOSURE



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:

H1 t - dd - hhh - xxx - kVA - X

- **t** — Transformer Type: T = (isolation), A = (autotransformer)
- **dd** — Angular Displacement: 00, 30
- **hhh** — Primary L-L Voltage: 208, 480, 600
- **xxx** — Primary kVA: 15, 30, 45, 75, 112.5, 150, 225, 300, 500
- **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	Zero Sequence Zo	Zero Sequence Xo	Primary 208V	Primary 480V	Primary 600V	Secondary 120/208V	Secondary Neutral
15	MN1	250 *[115]*	200W	280W	2.8-3.5%	< 0.95%	< 0.3%	#2-#14	#6-#14	#6-#14	#6-#14	2x#2-#14
30	MN2	375 *[170]*	340W	603W	2.8-3.5%	< 0.95%	< 0.3%	2/0-#6	#2-#14	#2-#14	2/0-#6	2x2/0-#6
45	MN2	500 *[230]*	375W	871W	2.8-3.5%	< 0.95%	< 0.3%	250MCM-#6	#2-#14	#2-#14	250MCM-#6	2x250MCM-#6
75	MN3	850 *[386]*	540W	1489W	2.8-3.5%	< 0.95%	< 0.3%	600MCM-#4	2/0-#6	2/0-#6	600MCM-#4	2x600MCM-#4
112.5	MN4	1000 *[455]*	730W	2052W	3.2-4.5%	< 0.95%	< 0.3%	2x350MCM-#6	250MCM-#6	2/0-#6	2x350MCM-#6	4x350MCM-#6
150	MN4	1200 *[544]*	810W	2898W	3.2-4.5%	< 0.95%	< 0.3%	2x350MCM-#6	350MCM-#6	250MCM-#6	2x350MCM-#6	4x350MCM-#6
225	LN1	1800 *[820]*	1400W	4025W	3.2-4.5%	< 1.0%	< 0.5%	Copper Pad	Copper Pad	Copper Pad	Copper Pad	Copper Pad
300	LN1	2500 *[1135]*	1470W	5500W	3.2-4.5%	< 1.0%	< 0.5%	Copper Pad	Copper Pad	Copper Pad	Copper Pad	Copper Pad
500	LN3	3200 *[1451]*	1600W	9000W	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.
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. 15kVA transformers have 115 ° C operating temperature rise and 180 ° C insulation class.