MIRUS International Inc.

31 Sun Pac Blvd., Brampton, Ontario, Canada L6S 5P6

TECHNICAL DATA

Sizes [60Hz]

DPNL™

Connections

DISSIMILAR PITCH NEUTRAL LIMITING REACTOR

Losses

GENERAL SPECIFICATIONS:	
VOLTAGE	
690V or less, 3-ph, 3 or 4-wire, 60 or 50Hz	_
OPERATING TEMPERATURE RISE	R
130°C (Max. Ambient of 40 deg C)	N
INSULATION CLASS	
220°C	
SYSTEM CONNECTION	_
Series connected in the common neutral	
of generator groups with dissimilar	_
winding pitches	_
	_
$V_7 T_{\rm orm}$: 45%	
1-2 Tellil. ~ 45%	
	K
	N
INSULATING VARNISH IMPREGNATION	
Polyester Resin	
AUDIBLE SOUND LEVEL	
As per NEMA ST-20 & CSA C9	
Based on equivalent kVA	
VENTILATION	
Convection air cooled	
WINDING MATERIAL	-
Copper	
ENCLOSURE	5
Type: NEMA-3R, ventilated	
Paint: Polvester powder coated	
Colour: ANSI 61 Grev	-
TEMPERATURE SWITCHES	_
170°C and 200°C	L
OVER-LOAD ALARM	
AI M2: Overload Alarm with horn and	
flashing light (requires separate power	
supplied by customer)	
supplied by customer)	
'MT1', 'MT2' ENCLOSURE	
	F
	F
7,75	F
┝──E ──	1
FRONT VIEW RIGHT SIDE VIEW BACK VIEW	2
MI3, MI4 ENCLOSURE	
Cable	3.
A (Both Sides)	
F E	4
FRONT VIEW RIGHT SIDE VIEW	4.

Product Code:

Size [Return Neutr 200, 500, 1000 2000, 2500, 30	al Amps] Frequency [Hz] 0, 1500 000 50, 60
DPNL - AAA - V	VV - Hz - En
Line Voltage	Enclosure —
All standard	E0 = No Enclosure
voltages up	E1 = Standard Enclosure
to 690 VAC	E1E = Type 3R Enhanced

DPNL Rating (Amps) ^[3]		Total Capacity of all Paralleled Sources kW [kVA] ^{[2] [3]}			Case	Weight I	@ Full	Mechani Prov	cal Lugs ided	
Return Neutral	Circu- lating	208-240V	460-480V	575-600V	660-690V	Style I	lb [kg] ^[1]	(Watts)	Y and Z Terminals	X Terminal
200	100	68 [85]	250 [312]	320 [400]	360 [450]	MT1	150 [68]	150	250MCM-#6	250MCM-#6
500	250	160 [200]	640 [800]	800 [1000]	900 [1120]	MT2	330 [150]	315	600MCM-#2	2x600MCM-#2
1000	500	335 [420]	1280 [1600]	1600 [2000]	1800 [2250]	MT2	408 [185]	515	2x350MCM-#6	4x350MCM-#6
1500	750	500 [625]	2000 [2500]	2400 [3000]	2720 [3400]	MT2	463 [210]	765	Copper Pad	Copper Pad
2000	1000	675 [840]	2500 [3126]	3200 [4000]	3600 [4500]	MT3	540 [245]	800	Copper Pad	Copper Pad
2500	1250	840 [1050]	3200 [4000]	4000 [5000]	4500 [5625]	MT3	700 [317]	965	Copper Pad	Copper Pad
3000	1500	1000 [1250]	3800 [4750]	4800 [6000]	5475 [6843]	MT4	860 [390]	1120	Copper Pad	Copper Pad
	Sizes [50Hz]									ctions
DPNL F (Amp	Rating s) ^[3]	Total Capacity of al kW [k'		II Paralleled	Case	Weight	@ Full	Mechanical Lugs Provided		
						0000				
Return Neutral	Circu- lating	208-240V	380-440V	575-600V	660-690V	Style	lb [kg] ^[1]	(Watts)	Y and Z Terminals	X Terminal
Return Neutral 200	Circu- lating 100	208-240V 68 [85]	380-440V 120 [150]	575-600V 320 [400]	660-690V 360 [450]	Style	Ib [kg] ^[1] 160 [73]	(Watts) [1] 210	Y and Z Terminals 250MCM-#6	X Terminal 250MCM-#6
Return Neutral 200 500	Circu- lating 100 250	208-240V 68 [85] 160 [200]	380-440V 120 [150] 300 [375]	575-600V 320 [400] 800 [1000]	660-690V 360 [450] 900 [1120]	Style MT1 MT2	Ib [kg] ^[1] 160 [73] 262 [119]	(Watts) [1] 210 360	Y and Z Terminals 250MCM-#6 600MCM-#2	X Terminal 250MCM-#6 2x600MCM-#2
Return Neutral 200 500 1000	Circu- lating 100 250 500	208-240V 68 [85] 160 [200] 335 [420]	380-440V 120 [150] 300 [375] 620 [775]	575-600V 320 [400] 800 [1000] 1600 [2000]	660-690V 360 [450] 900 [1120] 1800 [2250]	Style MT1 MT2 MT2	Ib [kg] ^[1] 160 [73] 262 [119] 527 [239]	(Watts) [1] 210 360 630	Y and Z Terminals 250MCM-#6 600MCM-#2 2x350MCM-#6	X Terminal 250MCM-#6 2x600MCM-#2 4x350MCM-#6
Return Neutral 200 500 1000 1500	Circu- lating 100 250 500 750	208-240V 68 [85] 160 [200] 335 [420] 500 [625]	380-440V 120 [150] 300 [375] 620 [775] 920 [1150]	575-600V 320 [400] 800 [1000] 1600 [2000] 2400 [3000]	660-690V 360 [450] 900 [1120] 1800 [2250] 2720 [3400]	Style MT1 MT2 MT2 MT2	Ib [kg] ^[1] 160 [73] 262 [119] 527 [239] 637 [289]	(Watts) [1] 210 360 630 850	Y and Z Terminals 250MCM-#6 600MCM-#2 2x350MCM-#6 Copper Pad	X Terminal 250MCM-#6 2x600MCM-#2 4x350MCM-#6 Copper Pad
Return Neutral 200 500 1000 1500 2000	Circu- lating 100 250 500 750 1000	208-240V 68 [85] 160 [200] 335 [420] 500 [625] 675 [840]	380-440V 120 [150] 300 [375] 620 [775] 920 [1150] 1200 [1500]	575-600V 320 [400] 800 [1000] 1600 [2000] 2400 [3000] 3200 [4000]	660-690V 360 [450] 900 [1120] 1800 [2250] 2720 [3400] 3600 [4500]	Style MT1 MT2 MT2 MT2 MT3	Ib [kg] ^[1] 160 [73] 262 [119] 527 [239] 637 [289] 749 [340]	(Watts) [1] 210 360 630 850 1050	Y and Z Terminals 250MCM-#6 600MCM-#2 2x350MCM-#6 Copper Pad Copper Pad	X Terminal 250MCM-#6 2x600MCM-#2 4x350MCM-#6 Copper Pad Copper Pad
Return Neutral 200 500 1000 1500 2000 2500	Circu- lating 100 250 500 750 1000 1250	208-240V 68 [85] 160 [200] 335 [420] 500 [625] 675 [840] 840 [1050]	380-440V 120 [150] 300 [375] 620 [775] 920 [1150] 1200 [1500] 1540 [1930]	575-600V 320 [400] 800 [1000] 1600 [2000] 2400 [3000] 3200 [4000] 4000 [5000]	660-690V 360 [450] 900 [1120] 1800 [2250] 2720 [3400] 3600 [4500] 4500 [5625]	Style MT1 MT2 MT2 MT2 MT3 MT3	lb [kg] ^[1] 160 [73] 262 [119] 527 [239] 637 [289] 749 [340] 837 [380]	(Watts) [1] 210 360 630 850 1050 1250	Y and Z Terminals 250MCM-#6 600MCM-#2 2x350MCM-#6 Copper Pad Copper Pad	X Terminal 250MCM-#6 2x600MCM-#2 4x350MCM-#6 Copper Pad Copper Pad Copper Pad

CASE	STYLE		ENCLOSURE DIMENSIONS - inches [mm]						
Standard	Enhanced	Α	В	С	D	E	F	G	
MT1	MT1-E	29.00 [737]	16.75 [425]	15.00 [381]	19.00 [483]	13.75 [349]	13.00 [330]	19.50 [495]	
MT2	MT2-E	38.00 [965]	21.50 [546]	19.50 [495]	23.50 [597]	17.00 [432]	17.50 [445]	25.00 [635]	
MT3	MT3-E	45.00 [1143]	26.00 [661]	21.00 [534]	25.00 [635]	21.50 [546]	19.00 [483]		
MT4	MT4-E	51.50 [1308]	32.00 [813]	25.50 [648]	29.50 [749]	23.50 [597]	23.50 [597]		



Notes: 1. Estimated values

- 2. To size the DPNL, determine the total capacity in kW or kVA of all paralleled generators. Select the DPNL that corresponds to this value in the appropriate system voltage column. This will size the unit for a return neutral current rating that is at least 50% of the full current rating of the application. For 208-240V and 380-440V units, the return neutral rating will be at least 85% of the full current rating.
- 3. It is the Users responsibility to ensure that the actual return neutral current will not exceed the rating of the DPNL. If the return neutral current from all phase-to-neutral loads in 4-wire applications is expected to exceed the recommended DPNL rating, then select a larger size DPNL or use a Mirus NCE-FAI to reduce neutral current (consult factory for sizing). For 3-wire applications, or applications where return neutral current is known to be lower, the next smaller size can be selected.
- 4. The high impedance between Y-Z terminals prevents the flow of circulating current (predominantly triplen frequency) between the dissimilarly pitched generator groups. X-Y and X-Z impedances are the values to be used for 1-phase fault level calculations and are with core saturated. The DPNL will have no effect on 3-phase fault level.
- 5. DPNL is inserted in the common neutral where two or more generators of dissimilar pitch are connected together (see Connection Diagrams) or where generators are paralleled with an alternate source, such as the Utility. The DPNL is inserted in the neutral between the dissimilar groups.
- 6. The neutral should be grounded in only one location. If grounded at the switchboard or any other location, terminal X on the DPNL should not be grounded.
- 7. For additional information refer to: Typical Specifications, Application Notes, Internal Layout and Connection Diagrams.
- 8. End User is responsible for ensuring that the DPNL installation and wiring satisfies all applicable electrical and safety code requirements.
- 9. Specifications are subject to change without notice.