ONICS™ by MIRUS

Harmonic Mitigating Power Center (HMPC)

Outstanding harmonic mitigation in a complete power distribution package.

Taking the HARM out of HARMONICS!

The raised floor environment is packed with harmonic generating power electronic equipment. To ensure electromagnetic compatibility with these non-linear loads, the power distribution system must be equipped with transformers that treat harmonics, rather than just tolerate them.

At the heart of the ONICS HMPC is MIRUS' patented and proven high efficiency Harmony-2E™ Harmonic Mitigating Transformer (HMT)* technology. The unique secondary winding configuration of the Harmony-2E™ minimizes output voltage distortion and flat-topping by canceling 3rd, 5th, 7th and 9th harmonic fluxes, preventing these harmonic currents from appearing in the primary winding. Consequently, voltage distortion will be within IEEE Std 519 limits despite the application of substantial harmonic loads.

The HMPC integrates harmonic mitigation with noise suppression, electronic grade grounding, non-linear load distribution panels, TVSS, monitoring and alarms for a complete power quality package.

Taking the harm out of harmonics has never been easier.

* Harmony-1E™ and Harmony-3™ models also available

Features:

Harmonic Treatment

- Treats all four major current harmonics (3rd, 5th, 7th & 9th) by flux cancellation using a patented configuration of secondary windings
- Triplens are prevented from circulating in the primary windings
- Meets IEEE Standard 519 harmonic limits
- Genuine 100% non-linear load compatibility

Power Conditioning

- Improves power quality by minimizing voltage flat-topping
- Reduces input current distortion
- Improves power factor and phase current balance seen on primary side
- Dual electrostatic shield for noise suppression

Monitoring

- Comprehensive Monitoring and Alarms
- Remote Communications

Reliability

- Proven Harmony™ Transformer reliability
- Manufactured in compliance with ISO9001 Quality System Standards

Cost Savings

- Lowers harmonic losses both within transformer and in upstream distribution
- Frees up UPS or upstream distribution capacity by improving power factor

Specifications:

Input Rating:
Voltage: 208, 480, 600VAC
Frequency: 60Hz, ± 5Hz
Phase: 3 ⎓ , 3 Wire + Ground

Output Rating:
Voltage: 208 / 120 VAC
Phase: 3 ⎓ , 4 Wire + Ground

Efficiency: Energy Star compliant under both linear and non-linear loading (H1E & H2E models)

Input Connection:
To Input Main CB terminals

Signal & Control Connections:
To terminals, input conduit landing

Grounding: Convection Cooled

Ventilation:
Single point computer ground connection for zero signal reference

Alarms and Controls
EPO & Overtemp standard
(Other alarms available with optional monitoring)

Power Monitoring (Optional):
Basic (M1)
Advanced (M2)

Noise Isolation:
Dual electrostatic shields

Harmonic Mitigating Transformer
Low zero sequence impedance with phase shifted outputs to treat 3rd, 5th, 7th & 9th harmonics simultaneously *(patented design)*
Zero Sequence Impedance < 0.95%
Zero Sequence Reactance < 0.3%

Output Distribution Panelboards:
Cutler-Hammer 84 pole (standard)
225 Ampere, Neutral: 450 Amp
(Square D NQOD optional)

Cable Access:
Bottom for raised floor
(Standard Top Access)

Design Standards:
UL1950 NEMA ST20
CSA950 CSA C9

Additional Standard Features:
Casters, levelers, removable swing-out dead front

MIRUS International Inc.

HARMONIC MITIGATING POWER CENTER (HMPC) Technical Specifications

HMPC Model Numbers

HMPC - 0 8 4 - 4 2 - 1 2 5 - H2E - M 1 A

Pole Positions
084 = 2 Panelboards, 84 poles
126 = 3 Panelboards, 126 poles[a]
168 = 4 Panelboards, 168 poles
252 = 6 Panelboards, 252 poles[b]
a. Requires Harmony-3™ Transformer
b. Available with Harmony-2E™ or Harmony-3™

Input Voltage
2 = 208
4 = 480
6 = 600
P = Special

Output Voltage
2 = 120 / 208
X = Special

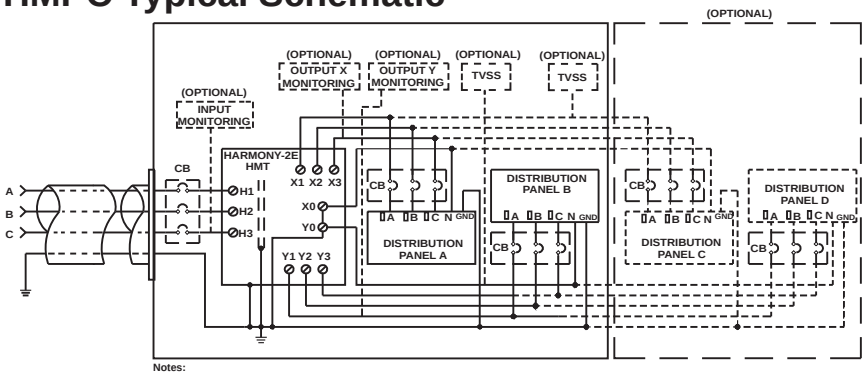
KVA
050 = 50kVA
075 = 75kVA
100 = 100kVA
125 = 125kVA
150 = 150kVA
200 = 200kVA
225 = 225kVA
300 = 300kVA

Monitoring Configuration
A = Single Monitor (Input only on models other than Harmony-1E™)
B = Output X Monitor & Output Y Monitor

Monitor
M0 = No Power Monitor
M1 = Power Monitor
M2 = Advanced Power Monitor

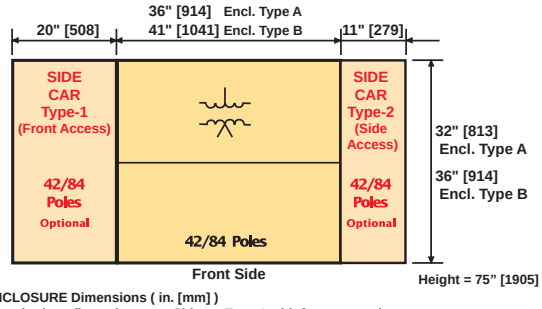
Harmony™ HMT
H2E = Harmony-2E™
H1E = Harmony-1E™
H3 = Harmony-3™

HMPC Typical Schematic



Notes:
A. Standard 2 Panel or optional 4 Panel configuration shown.
B. The Harmony-2E™ is an isolation transformer and is considered to be a separately derived source.

HMPC Enclosure Configuration



ENCLOSURE Dimensions (in. [mm])
(Standard configuration uses Sidecar Type-1 with front access)

TYPE	42/84 Poles (W x D)	TYPE	126/168 Poles (W x D)	TYPE	252 Poles (W x D)
A	36 [914] x 32 [813]	A1	56 [1422] x 32 [813]	A2	76 [1930] x 32 [813]
B	41 [1041] x 36 [914]	B1	61 [1549] x 36 [914]	B2	81 [2057] x 36 [914]

Transformer (kVA)	Input Voltage (V)[1]	Input Current (A)	Input CB Frame (A)	Input CB Trip (A)	Input CB IC (kA)	Heat Rejection (BTU/hr.)[2]	84 pole ENCL. TYPE w/ XFMR H1E	84 pole ENCL. TYPE w/ XFMR H2E	84 pole Weight lbs [kg]	126 pole ENCL. TYPE w/ XFMR H1E	126 pole ENCL. TYPE w/ XFMR H3	126 pole Weight lbs [kg]	168 pole ENCL. TYPE w/ XFMR H1E	168 pole ENCL. TYPE w/ XFMR H2E	168 pole Weight lbs [kg]	252 pole ENCL. TYPE w/ XFMR H1E	252 pole ENCL. TYPE w/ XFMR H2E	252 pole Weight lbs [kg]
50	208	139	225	175	65	4,400	A	A	1150 [522]									
	480	60	225	80	35	4,400	A	A	1150 [522]									
	600	48	225	60	18	4,400	A	A	1150 [522]									
75	208	208	400	250	65	6,800	A	A	1320 [599]	A1	A1	1795 [814]	A1	A1	1820 [825]			
	480	90	225	125	35	6,800	A	A	1320 [599]	A1	A1	1795 [814]	A1	A1	1820 [825]			
	600	72	225	100	18	6,800	A	A	1320 [599]	A1	A1	1795 [814]	A1	A1	1820 [825]			
100	208	278	400	350	65	9,100	A	A	1550 [703]	A1	A1	2025 [918]	A1	A1	2050 [930]			
	480	120	225	150	35	9,100	A	A	1550 [703]	A1	A1	2025 [918]	A1	A1	2050 [930]			
	600	96	225	125	18	9,100	A	A	1550 [703]	A1	A1	2025 [918]	A1	A1	2050 [930]			
125	208	347	600	450	65	10,900	A	A	1600 [726]	A1	A1	2075 [941]	A1	A1	2100 [952]			
	480	150	225	200	35	10,900	A	A	1600 [726]	A1	A1	2075 [941]	A1	A1	2100 [952]			
	600	120	225	150	18	10,900	A	A	1600 [726]	A1	A1	2075 [941]	A1	A1	2100 [952]			
150	208	416	600	600	65	10,900	A	A	1600 [726]	A1	A1	2075 [941]	A1	A1	2100 [952]			
	480	180	225	225	35	12,800	A	A	1700 [771]	A1	A1	2175 [986]	A1	A1	2200 [998]			
	600	144	225	200	18	12,800	A	A	1700 [771]	A1	A1	2175 [986]	A1	A1	2200 [998]			
200	480	241	400	300	35	17,500	A	B	2100 [952]	A1	B1	2575 [1168]	A1	B1	2600 [1179]	A2	B2	3100 [1406]
	600	192	400	250	25	17,500	A	B	2100 [952]	A1	B1	2575 [1168]	A1	B1	2600 [1179]	A2	B2	3100 [1406]
225	480	271	400	350	35	18,400	A	B	2300 [1043]	A1	B1	2775 [1259]	A1	B1	2800 [1270]	A2	B2	3300 [1497]
	600	241	400	300	25	18,400	A	B	2300 [1043]	A1	B1	2775 [1259]	A1	B1	2800 [1270]	A2	B2	3300 [1497]
300[3]	480	361	450	450	35	19,500	B		2700 [1227]	B1		3195 [1449]	B1		3220 [1464]	B2		3740 [1700]
	600	289	400	400	25	19,500	B		2700 [1227]	B1		3195 [1449]	B1		3220 [1464]	B2		3740 [1700]

1. Contact sales office for voltages & configurations not shown.
2. Heat based on 100% resistive load; actual will increase only slightly with non-linear loading.
3. HMPC rated at 300kVA are only available with Harmony-1E Transformers.

HMPC-PS01-D1
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