



## MCR HARDWIRED SERIES: LINE CONDITIONING WITH VOLTAGE REGULATION

The MCR Hardwired Series provides excellent noise filtering and surge protection to safeguard connected equipment from damage, degradation or misoperation. Combined with the excellent voltage regulation inherent to SolaHD's ferroresonant design, the MCR can increase the actual Mean Time Between Failure (MTBF) of protected equipment. The MCR is a perfect choice where dirty power, caused by impulses, swell, sags, brownouts and waveform distortion can lead to costly downtime because of damaged equipment.

### SUITABLE APPLICATIONS

- Industrial automation and control equipment PLCs
- Machine tools
- Computer loads and electronic equipment
- Robotics
- Semiconductor fabrication equipment

### FEATURES

- Superior voltage regulation of  $\pm 5\%$  for 50 Hz units,  $\pm 3\%$  for 60 Hz units
- Surge protection tested to ANSI/IEEE C62.41, Class A & B waveform
- Harmonic filtering
- Hardwired
- Acts as a step-up/step-down transformer
- Galvanic isolation provides exceptional circuit protection
- 25 year typical mean time between failure
- No maintenance required

Selection Tables: Single Phase  
Group 2 – MCR Series, 60 Hz

VA	Catalog Number	Voltage Input	Voltage Output	Height in (mm)	Width in (mm)	Depth in (mm)	Ship Weight lbs (kg)	Design Style	Elec Conn
120	<b>63-23-112-4</b>	120, 208, 240, 480	120	9 (229)	4 (102)	5 (127)	15 (7)	1	D
250	<b>63-23-125-4</b>	120, 208, 240, 480	120	10 (254)	6 (152)	8 (203)	27 (12)	1	D
500	<b>63-23-150-8</b>	120, 208, 240, 480	120, 208, 240	13 (330)	9 (229)	7 (178)	37 (17)	1	E
750	<b>63-23-175-8</b>	120, 208, 240, 480	120, 208, 240	14 (356)	9 (229)	7 (178)	52 (24)	1	E
1000 <sup>Ⓞ</sup>	<b>63-23-210-8</b>	120, 208, 240, 480	120, 208, 240	17 (432)	9 (229)	7 (178)	62 (28)	1	E
1500 <sup>Ⓞ</sup>	<b>63-23-215-8</b>	120, 208, 240, 480	120, 208, 240	17 (432)	13 (330)	9 (229)	95 (43)	1	E
2000 <sup>Ⓞ</sup>	<b>63-23-220-8</b>	120, 208, 240, 480	120, 208, 240	18 (457)	13 (330)	9 (229)	109 (49)	1	E
3000 <sup>Ⓞ</sup>	<b>63-23-230-8</b>	120, 208, 240, 480	120, 208, 240	19 (483)	13 (330)	9 (229)	142 (64)	1	E
5000 <sup>Ⓞ</sup>	<b>63-23-250-8</b>	120, 208, 240, 480	120, 208, 240	28 (711)	13 (330)	9 (229)	222 (101)	1	E
7500	<b>63-28-275-8</b>	208, 240, 480	120, 208, 240	27 (686)	26 (660)	9 (229)	362 (164)	2	F
10000	<b>63-28-310-8</b>	208, 240, 480	120, 208, 240	28 (711)	26 (660)	9 (229)	446 (202)	2	F
15000	<b>63-28-315-8</b>	208, 240, 480	120, 208, 240	28 (711)	38 (965)	10 (254)	710 (322)	3	F

<sup>Ⓞ</sup> Canadian option: US units must be ordered by changing "-8" (UL only) to "-C8". Dimensions are approximate. See user manual for exact dimensions.

**SOLAHD**

For product information:  
www.solahd.com  
1.800.377.4384



### CERTIFICATIONS AND COMPLIANCES

ALL MODELS

- RoHS Compliant

#### Selection Table: Group 2

- US Listed (120VA-750VA Units) (1-5kVa ("-C8") Units)  
- UL 1012, CSA C22.2 No. 107.1
- Listed (7.5kVA-15kVA Units) (1-5kVa ("-8") Units)  
- UL 1012

#### Selection Table: Group 3

- US Listed (500VA-3kVA Units)  
- UL 1012, CSA C22.2 No. 107.1
- Certified (5kVA-15kVA Units)  
- CSA C22.2 No. 66

#### Selection Table: Group 4

- US Listed  
- UL 1012, CSA C22.2 No. 107.1

Selection Tables: Single Phase  
Group 3 – MCR Series, 60 Hz

VA	Catalog Number	Voltage Input	Voltage Output	Height in (mm)	Width in (mm)	Depth in (mm)	Ship Weight lbs (kg)	Design Style	Elec Conn
500	63-31-150-8	600	120, 208, 240	13 (330)	9 (229)	7 (178)	38 (17)	1	B
1000	63-32-210-8	600	120, 208, 240	17 (432)	9 (229)	7 (178)	62 (28)	1	B
2000	63-32-220-8	600	120, 208, 240	18 (457)	13 (330)	10 (254)	109 (49)	1	B
3000	63-32-230-8	600	120, 208, 240	19 (483)	13 (330)	10 (254)	142 (64)	1	B
5000	63-29-250-8	208, 240, 480, 600	120, 208, 240	28 (711)	13 (330)	10 (254)	221 (100)	1	A
7500	63-29-275-8	208, 240, 480, 600	120, 208, 240	27 (686)	25 (635)	10 (254)	360 (163)	2	A
10000	63-29-310-8	208, 240, 480, 600	120, 208, 240	28 (711)	25 (635)	10 (254)	441 (200)	2	A
15000	63-29-315-8	208, 240, 480, 600	120, 208, 240	28 (711)	38 (965)	10 (254)	706 (320)	3	A

Group 4 – MCR Series, 50 Hz (±5% output voltage regulation)

VA	Catalog Number	Voltage Input	Voltage Output	Height in (mm)	Width in (mm)	Depth in (mm)	Ship Weight lbs (kg)	Design Style	Elec Conn
120	63-23-612-8	110, 120, 220, 240, 380, 415	110, 120, 220, 240	9 (229)	6 (152)	8 (203)	24 (11)	1	C
250	63-23-625-8	110, 120, 220, 240, 380, 415	110, 120, 220, 240	11 (279)	6 (152)	8 (203)	27 (12)	1	C
500	63-23-650-8	110, 120, 220, 240, 380, 415	110, 120, 220, 240	13 (330)	9 (229)	7 (178)	40 (18)	1	C
1000	63-23-710-8	110, 120, 220, 240, 380, 415	110, 120, 220, 240	18 (457)	9 (229)	7 (178)	64 (29)	1	C
2000	63-23-720-8	110, 120, 220, 240, 380, 415	110, 120, 220, 240	18 (457)	13 (330)	10 (254)	113 (51)	1	C
3000	63-23-730-8	110, 120, 220, 240, 380, 415	110, 120, 220, 240	27 (686)	13 (330)	10 (254)	162 (73)	1	C
5000	63-23-750-8	110, 120, 220, 240, 380, 415	110, 120, 220, 240	30 (762)	13 (330)	10 (254)	266 (121)	1	C
7500	63-28-775-8	220, 240, 380, 415	110, 120, 220, 240	28 (711)	26 (660)	10 (254)	393 (178)	2	C1
10000	63-28-810-8	220, 240, 380, 415	110, 120, 220, 240	30 (762)	26 (660)	10 (254)	490 (222)	2	C2
15000	63-28-815-8	220, 240, 380, 415	110, 120, 220, 240	30 (762)	38 (965)	10 (254)	776 (352)	3	C2

SPECIFICATIONS

Parameter	Condition	Value
<b>Input</b>		
<b>Voltage</b>	Continuous at full load (lower input voltage possible at lighter load)	+10% to -20% of nominal
	For temporary surge or sags	+20% to -35% of nominal
<b>Current</b> ①	at Full Load & 80% of nominal input voltage	$I_n \cong (VA/.89)/(V_{in} \times 80\%)$
<b>Frequency</b>	Please refer to catalog for more details.	50 Hz or 60 Hz depending on model
<b>Output</b> ②		
<b>Line Regulation</b>	$V_{in} > 80\%$ and $< 110\%$ of nominal	± 5% for 50 Hz units, ± 3% for 60 Hz units
<b>Overload Protection</b>	At Nominal Input Voltage	Current limited at 1.65 times rated current
<b>Output Harmonic Distortion</b>	At full load within input range	3% total RMS content
<b>Noise Attenuation</b>	Common Mode	120 dB
	Transverse Mode	60 dB
<b>General</b>		
<b>Efficiency</b>	At Full Load	Up to 92%
<b>Storage Temperature</b>	Humidity <95% non-condensing	-20° to +85°C
<b>Operating Temperature</b>	Humidity <95% non-condensing	-20° to 50°C
<b>Audible Noise</b>	Full Resistive Noise	35 dBA to 65 dBA
<b>Warranty</b>	10 + 2 year limited warranty	

① Consult user manual for fuse sizing.

② It is recommended that the unit run at a minimum of 40-50% load. Dimensions are approximate. Please refer to catalog for more details.



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