

MCR Hardwired Series – Power Line Conditioning with Voltage Regulation

The MCR Hardwired Series provides excellent noise filtering and surge suppression to protect connected equipment from damage, degradation or misoperation. Combined with the excellent voltage regulation inherent to Sola's patented ferroresonant design, the MCR can increase the actual Mean Time Before 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.



MCR Hardwired Series

Features

- Noise attenuation.
 - 120 dB common mode
 - 60 dB transverse mode
- Surge suppression tested to ANSI/IEEE C63.41 Class A & B Waveform:
 - <10 V let through typical
- Acts as a step-up or step-down transformer.
- Harmonic filtering.
- Hardwired.
- Galvanic isolation.
- 25 year typical MTBF.
- No maintenance required.

Applications

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

Selection Tables: Single Phase

Group II – MCR Series, 60 Hz



VA	Catalog Number	Voltage Input	Voltage Output	Height (inch)	Width (inch)	Depth (inch)	Ship Weight (lbs)	Design Style	Elec Conn
120	63-23-112-4	120, 208, 240, 480	120	9	4	5	15	1	D
250	63-23-125-4	120, 208, 240, 480	120	10	5	8	27	1	D
500	63-23-150-8	120, 208, 240, 480	120, 208, 240	13	8	7	37	1	E
750	63-23-175-8	120, 208, 240, 480	120, 208, 240	14	8	7	52	1	E
1000*	63-23-210-8	120, 208, 240, 480	120, 208, 240	17	8	7	62	1	E
1500*	63-23-215-8	120, 208, 240, 480	120, 208, 240	16	11	9	95	1	E
2000*	63-23-220-8	120, 208, 240, 480	120, 208, 240	17	11	9	109	1	E
3000*	63-23-230-8	120, 208, 240, 480	120, 208, 240	19	11	9	142	1	E
5000*	63-23-250-8	120, 208, 240, 480	120, 208, 240	28	11	9	222	1	E
7500**	63-28-275-8	208, 240, 480	120, 208, 240	27	24	9	362	2	F
10000**	63-28-310-8	208, 240, 480	120, 208, 240	28	24	9	446	2	F
15000**	63-28-315-8	208, 240, 480	120, 208, 240	28	36	9	710	3	F

*Canadian option: CSA certified units must be ordered by changing "-8" to "-C8".

**Not CSA certified. Use Group III.

1 Surge Suppression and Power Conditioning

Selection Tables: Single Phase

Group III – MCR Series, 60 Hz (Canadian version)



VA	Catalog Number	Voltage Input	Voltage Output	Height (inch)	Width (inch)	Depth (inch)	Ship Weight (lbs)	Design Style	Elec Conn
500	63-31-150-8	600	120, 208, 240	13	8	7	38	1	B
1000	63-32-210-8	600	120, 208, 240	17	8	7	62	1	B
2000	63-32-220-8	600	120, 208, 240	17	11	9	109	1	B
3000	63-32-230-8	600	120, 208, 240	19	11	9	142	1	B
5000	63-29-250-8	208, 240, 480, 600	120, 208, 240	28	11	9	221	1	A
7500	63-29-275-8	208, 240, 480, 600	120, 208, 240	27	24	9	360	2	A
10000	63-29-310-8	208, 240, 480, 600	120, 208, 240	28	24	9	441	2	A
15000	63-29-315-8	208, 240, 480, 600	120, 208, 240	28	36	10	706	3	A

Group IV – MCR Series, 50 Hz.



VA	Catalog Number	Voltage Input	Voltage Output	Height (inch)	Width (inch)	Depth (inch)	Ship Weight (lbs)	Design Style	Elec Conn
120	63-23-612-8	110, 120, 220, 240, 380, 415	110, 120, 220, 240	9	4	8	24	1	C
250	63-23-625-8	110, 120, 220, 240, 380, 415	110, 120, 220, 240	11	4	8	27	1	C
500	63-23-650-8	110, 120, 220, 240, 380, 415	110, 120, 220, 240	13	8	7	40	1	C
1000	63-23-710-8	110, 120, 220, 240, 380, 415	110, 120, 220, 240	18	8	7	64	1	C
2000	63-23-720-8	110, 120, 220, 240, 380, 415	110, 120, 220, 240	17	11	9	113	1	C
3000	63-23-730-8	110, 120, 220, 240, 380, 415	110, 120, 220, 240	27	11	9	162	1	C
5000	63-23-750-8	110, 120, 220, 240, 380, 415	110, 120, 220, 240	30	11	9	266	1	C
7500	63-28-775-8	220, 240, 380, 415	110, 120, 220, 240	28	24	9	393	2	C1
10000	63-28-810-8	220, 240, 380, 415	110, 120, 220, 240	30	24	9	490	2	C2
15000	63-28-815-8	220, 240, 380, 415	110, 120, 220, 240	30	36	10	776	3	C2

Specifications

Parameter	Condition	Value
Input		
Voltage	Continuous at full load (lower input voltage possible at lighter load)	+20% to -35% of nominal
Current ¹	at Full Load & 80% of nominal input voltage	$I_m \cong (VA / .89) / (V_m * 80\%)$
Frequency	See Operating Characteristics section for details.	50 Hz or 60 Hz depending on model
Output		
Line Regulation	$V_m > 80\%$ and $< 110\%$ of nominal	$\pm 3\%$
Overload Protection	At Nominal Input Voltage	Current limited at 1.65 times rated current
Noise Attenuation	-Common Mode -Transverse Mode	120 dB 60 dB
Let-Through	ANSI/IEEE C62.41 Class A & B Waveform	<10V typical
General		
Efficiency	at Full Load	92% Typical
Storage Temperature	Humidity < 95% non-condensing	-20° to +85°C
Operating Temperature	Humidity < 95% non-condensing	-20° to 50°C
Audible Noise		35 dBA to 65 dBA
Approvals	60 Hz Models 50 Hz Models	UL1012 ² ; CSA ² CE (EMC & LVD)
Warranty	See General Information section for details	10 + 2 Years
Notes		
1 - Values are generalized for simplicity, consult user manual for fuse sizing.		
2 - Depending on model, see selection tables to confirm agency approvals for specific model numbers.		