

SolaHD Technical Support: "Question of the Week"

Question:

Is it possible to use SolaHD's Line Reactors for a 240V three phase application?

Answer:

Yes - SolaHD's line reactors are rated for three phase 480V input/output. Rule of thumb is if the line to line voltage will be halved, impedance will be doubled. Impedance is a function of inductance while inductance affects the effectiveness of the reactor.

Since voltage is inversely proportional to impedance, any change in voltage will affect the reactor's impedance. One important note is that the Catalog Numbers are rated for a particular Horse Power at 480Vac. If your voltage is cut in half (240Vac), your current would double for the same Horse Power. You should not exceed the output amperage listed in the following selection table:

Catalog Number	Power	Output Amperage	Impedance (%Z)	mH	Phase	I/O Voltage	Mounting	Dimensions (H x W x D)	Ship Weight (lbs)
SLR-2H-480-3	2 HP	3.4 A	3.0	5513	3	480 Vac	DIN Rail	4.93" x 4.73" x 3.40"	6
SLR-3H-480-3	3 HP	4.8 A	3.0	3675	3	480 Vac	DIN Rail	4.93" x 4.73" x 3.40"	6
SLR-5H-480-3	5 HP	7.6 A	3.0	2757	3	480 Vac	DIN Rail	4.93" x 4.73" x 3.40"	6
SLR-7H-480-3	7.5 HP	11.0 A	3.0	1838	3	480 Vac	DIN Rail	4.93" x 4.73" x 3.40"	7
SLR-10H-480-3	10 HP	14.0 A	3.0	1376	3	480 Vac	DIN Rail	4.93" x 4.73" x 3.40"	7
SLR-15H-480-3	15 HP	21.0 A	3.0	1050	3	480 Vac	DIN Rail	4.88" x 5.91 x 4.25"	9
SLR-20H-480-3	20 HP	27.0 A	3.0	817	3	480 Vac	DIN Rail	4.88" x 5.91 x 4.25"	16

Example: Customer needs a line reactor for a 3HP SCR Drive at 240 Vac, 60Hz. Since the current would be twice the value of a 480 Vac 3 HP SCR Drive (9.6 A), you would need to go to Catalog Number SLR-7H-480-3. The reason is that the SLR-7H-480-3 is designed to handle a maximum output amperage of 11 A. The impedance would be approximately 6.0%.

Please feel free to contact me at 800-377-4384 (option 2) if you have any questions or comments regarding this message or any SolaHD products. I look forward to hearing from you.

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