

File E73741  
Project 95NK10700

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REPORT

on

SWITCHES INDUSTRIAL CONTROL

Watlow Winona, Inc.  
Winona, MN

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## DESCRIPTION

## PRODUCT COVERED:

USL, CNL Solid-State Power Controller without cooling fan, Part No. DB followed by 1, 2, 3, 4, 8 or 9; followed by 0, followed by 02, 24 or 60, followed by CX, FX, K1, K2, K3, followed by 0, or S, followed by any three letters or numbers.

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## RATINGS:

These devices are either single phase, three phase two leg, or three phase three leg, and rated as shown below:

Input or Input Command Signal Ratings - 24, 120, or 240 V ac, at 13 mA, 50/60 Hz, 4.5 to 32 V dc, 7 mA per pole, or 4 to 20 mA dc.

Output Ratings - 24 - 48 V ac, 120-240 V ac or 277-600 V ac, 50/60 Hz.

Models Without Cooling Fan - at 50°C

35 A - 1-pole

25 A - 2-pole

17 A - 3-pole

Control Mode Rating - 4.5 to 32 V dc

24 V ac

120 V ac

240 V ac

4 to 20 mA dc

These devices may be used in ambients found as part of the de-rating curve in ILL. 1. These ratings must be de-rated above 50°C.

## NOMENCLATURE:

<u>DB</u>	<u>X</u>	<u>0</u>	<u>XX</u>	<u>XX</u>	<u>X</u>	<u>X</u>	<u>XX</u>
I	II	III	IV	V	VI	VII	VIII
I	-	DB-Basic Designator					
II	-	Phase					
		1 - Single phase (1-pole)					
		2 - Three phase two leg (2-pole)					
		3 - Three phase three leg (3-pole)					
		4 - Three phase three leg 4 wire WYE connected load.					
		8 - Two single pole zones (input C or K only)					
		9 - Three single pole zones (input C or K only)					
III	-	Cooling Options					
		0 - Standard Heatsink - natural convection.					
IV	-	Output Voltage					
		02 - 24 to 48 V ac					
		24 - 100 to 240 V ac					
		60 - 277 to 600 V ac					
V	-	Control Mode					
		C0 - 4.5 to 32 V dc contactor mode					
		F0 - 4 to 20 mA variable burst mode					
		F1 - 12 to 20 mA variable burst mode					
		K1 - 24 V ac contactor mode					
		K2 - 120 V ac contactor mode					
		K3 - 240 V ac contactor mode					
VI	-	Alarm Options					
		0 - No alarm available					
		<b>S - Shorted SCR Alarm</b>					
VII	-	User Manual Language Options					
*		0 - English					
		<b>1 - German</b>					
		2 - Spanish					
*		3 - French					
VIII	-	Custom Options					
		00 - Standard Product					
		Any two letters or number - custom logo's and other Class 2 options.					

## ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVES USE):

General - These devices are open solid state power controllers intended for controlling electric resistance heating.

Spacings - Spacings were evaluated to UL 508 Table 34.1. PC board spacings were evaluated to UL 840.