

# Crane Control Class 8501

Catalog

# 17



## CONTENTS

<b>Description</b> .....	<b>Page</b>
Pricing Information and Application Data .....	128
Dimensions .....	129



The Electric Controller and  
Manufacturing Company, LLC

CRANE CONTROL  
CLASS 8501

# Crane Control Class 8501 Type SZF Frequency Relay



Class 8501 Type SZF1  
Frequency Relay

## PRICING INFORMATION AND APPLICATION DATA

Class 8501 Type SZF Static Frequency Sensitive Relays are recommended for use in AC wound rotor motor circuits to monitor motor rotor frequency and operate an output relay at a specific programmed frequency.

- User programmable
- Frequency set points for relay pick-up and drop-out
- Output relay contact is user programmable as normally open or normally closed (as supplied from factory)
- Indicating light monitors output contact status

### Application Data

The Class 8501 Type SZF1 Frequency Relay is a solid state, frequency sensitive device. The relay is capable of detecting and annunciating (through an output contact operation) that the input frequency is above, below, or within selected bounds. An indicating light is used to denote the state of the output contact. A removable cover allows access to the programmable, 12 position, DIP switch to set the frequency set points and mode of operation.

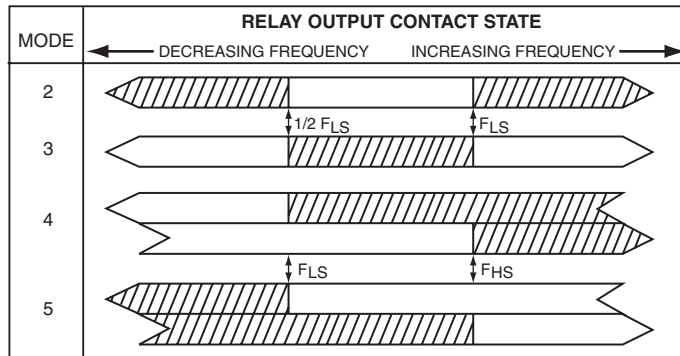
The relay is a general purpose control device. However, it is specifically intended to be used as an acceleration, plugging, overspeed, or non-hoist relay on AC crane controllers where the relay detects the frequency of the rotor voltage of a wound rotor motor.

The programmable frequency set points  $F_{LS}$  (low set frequency) and  $F_{HS}$  (high set frequency) are defined by the following equations:

$$F_{LS} = 6 \text{ Hz} + A \text{ Hz} \quad (A = 1 \text{ thru } 127 \text{ in increments of } 1)$$

$$F_{HS} = F_{LS} + B \text{ Hz} \quad (B = 2, 5, 20, 22, 23, 25, 40, \& 43)$$

NOTE:  $F_{HS}$  only applies to modes 4 and 5.



□ denotes contacts (terminals 11-12) open

▨ denotes contacts (terminals 11-12) closed

Type	Price
SZF1	100.00 €
<b>Input voltage range</b>	0 - 1250 VAC
<b>Input frequency range</b>	0 - 200 Hz
<b>Relay output range</b>	1.5 A @ 120 VAC or 230 VDC
<b>Operating temperature</b>	- 20° C to + 70° C
<b>Power supply</b>	30 VAC @ 50 - 60 Hz, 5 VA

NOTE: Maximum continuous voltage input is 600 VAC

### Factory Installed Modifications

Form	Description	Price
B	Relay mounted on replacement ZF relay base.	8% .
BP ▲	Relay mounted on replacement ZF relay base with power supply and fuse. Power supply can be used to power 4 additional SZF relays.	892.

▲ Power supply is 230/460 VAC to 30 VAC @ 50 - 60 Hz 30 VA

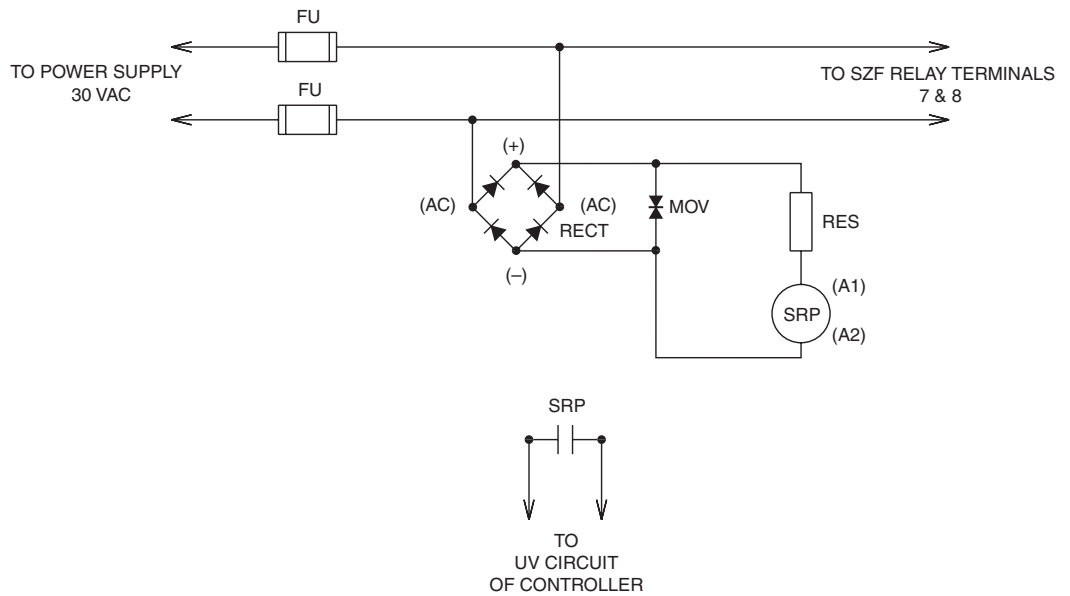
SCH B



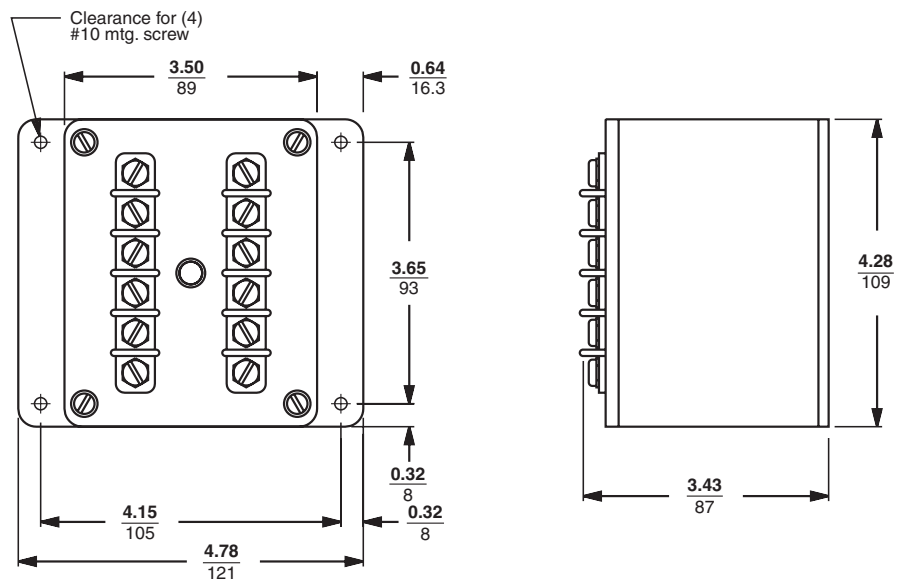
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## APPLICATION DATA

### Suggested Circuit



### APPROXIMATE DIMENSIONS



Dual Dimensions  $\frac{\text{inches}}{\text{mm}}$

### Ordering Information Required:

1. Class
2. Type
3. Form
4. Voltage Code: V80 for 230 V input, V81 for 460 V input