



Solid State Relays



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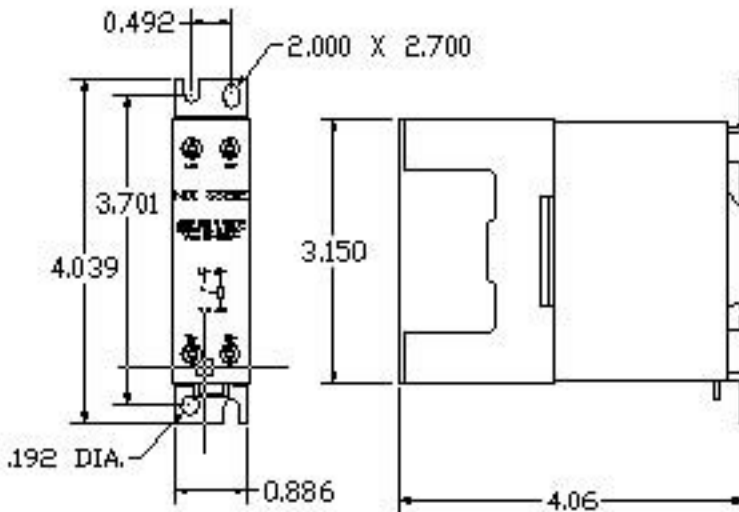
MDI

Solid State Relays With Integrated Heatsink 20 & 30 AMP series



- * AC Semiconductor contactor
- * Zero switching
- * Direct-Copper bonding (DCB) technology
- * LED indication
- * Cage clamp terminals
- * 2 input ranges: 4-32 VDC and 24-275 VAC/24-48VDC
- * Operational ratings up to 30 AACrms and 600 VAC
- * Non-repetitive voltage: up to 1200 Vp
- * Opto isolation > 4000 VACrms
- * Operating temperature -30° to +80° C
- * Junction temperature 125° C

Product Description



MDI Solid State Relays are advantageous in industrial heating applications requiring high cycle rates. These relays have integral heat sinks and are ready to mount on chassis or DIN-rail.

The standard housing dimensions enable straightforward replacement of alternative products and allow for two standard terminal configurations. Cage clamp terminals are used to ensure secure load connection with cable up to 10 AWG.

An LED indicates the status of the control input. The superior heat-transfer efficiency combined with a robust power management system makes this a high reliability product that can meet the most stringent functional requirements.

Selection Guide

MODEL	Control voltage	Rated current
SS20AE	24-275 VAC 24-48 VDC	20 AMP
SS20AU	24-275 VAC 24-48 VDC	20 AMP
SS20DE	4-32 VDC	20 AMP
SS20DU	4-32 VDC	20 AMP
SS30AU	24-275 VAC 24-48 VDC	30 AMP
SS30DU	4-32 VDC	30 AMP

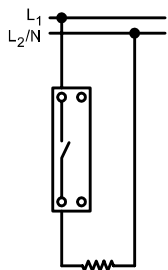
Output Specifications

	20 AMP	30 AMP
Rated operational current		
AC51 @TA=25° C	20 AACrms	30 AACrms
AC53a @Ta=25° C	5 AACrms	15 AACrms
Min. operational current	350 mAACrms	150mAACrms
Rep. overload current t - 1s	< 35 AACrms	< 125 AACrms
Non rep. surge current Tj(init.) =25° C and t = 10 ms	250Ap	400 Ap
Off-state leakage current @ rated voltage and frequency	< 3 mArms	< 3 mArms
I ² t for fusing t = 10 ms	310 A ² s	1800 A ² s
Critical di/dt	≥ 10 A/μs	≥ 100 A/μs
On-state volt drop @ rated Amps.	1.6 Vrms	1.6 Vrms
Critical dv/dt commutating	500 V/μs	500 V/μs
Critical dv/dt off-state	500 V/μs	500 V/μs

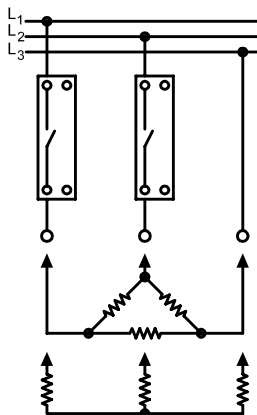
Applications

SS20AE SS20AU SS30AU
SS20DE SS20DU SS30DU

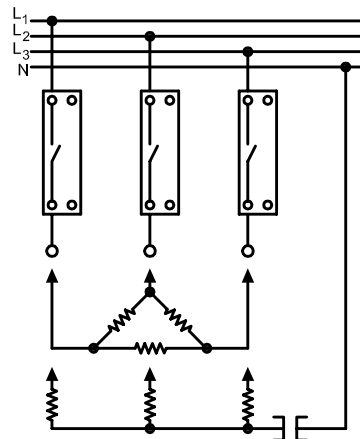
Single pole relay application
Line-Neutral, Line-Line



2 single pole relays in 3-phase application
Delta and star connection (economy switch)

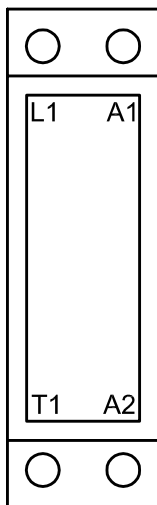


3 single pole relays in 3-phase application
Delta, Star, Star with neutral

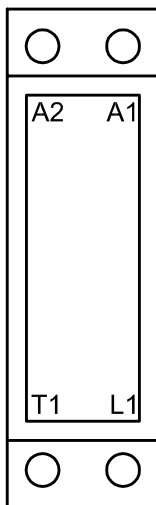


Terminal Layout

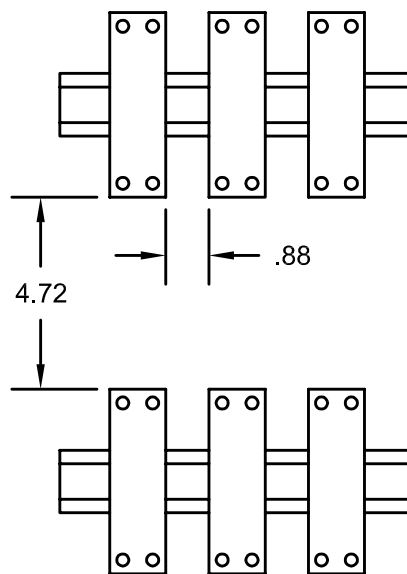
SS...E



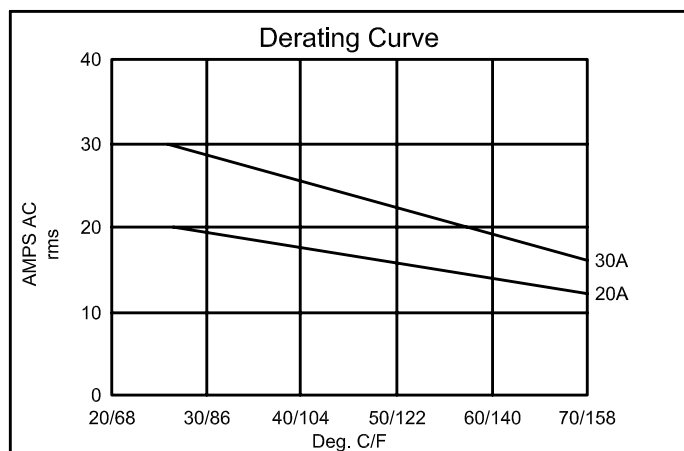
SS...U



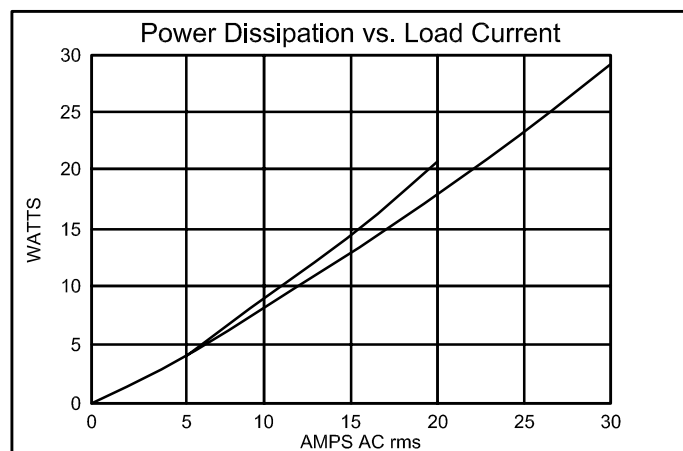
Panel Mounting



Derating Curve



Dissipation Curve





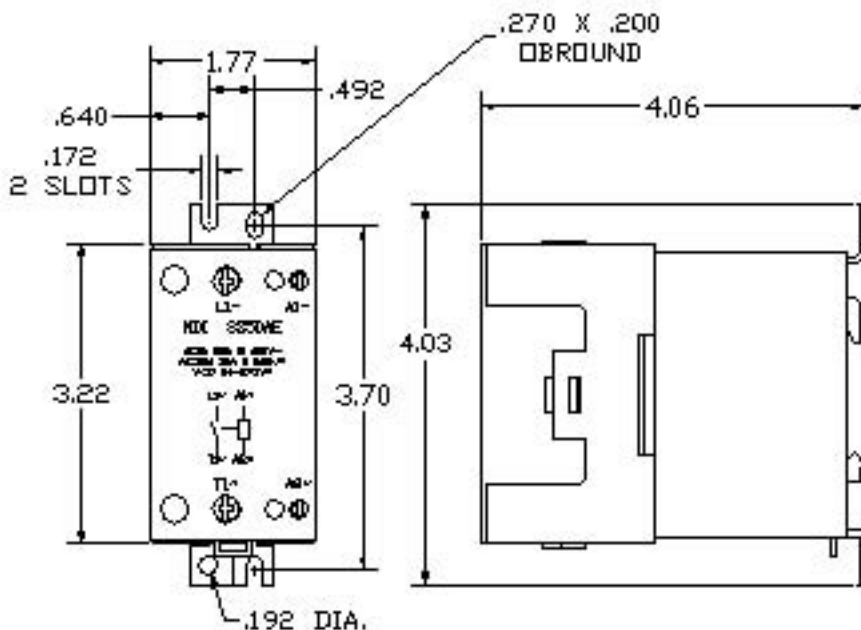
Solid State Relays With Integrated Heatsink

50 AMP series



- * AC Semiconductor contactor
- * Zero switching
- * Direct-Copper bonding (DCB) technology
- * LED indication
- * Cage clamp terminals
- * 2 input ranges: 4-32 VDC and 24-275 VAC/24-48VDC
- * Operational ratings up to 50 AACrms and 600 VAC
- * Non-repetitive voltage: up to 1200 Vp
- * Opto isolation > 4000 VACrms
- * Operating temperature -30° to +80° C
- * Junction temperature 120° C

Product Description



MDI Solid State Relays are advantageous in industrial heating applications requiring high cycle rates. These relays have integral heat sinks and are ready to mount on chassis or DIN-rail.

The standard housing dimensions enable straightforward replacement of alternative products and allow for two standard terminal configurations. Cage clamp terminals are used to ensure secure load connection with cable up to 3 AWG or 2 wires at 6 AWG. An LED indicates the status of the control input. The superior heat-transfer efficiency combined with a robust power management system makes this a high reliability product that can meet the most stringent functional requirements.

Selection Guide

MODEL	Control voltage	Rated current
SS50AE	24-275 VAC 24-48 VDC	50 AMP
SS50AU	24-275 VAC 24-48 VDC	50 AMP
SS50DE	4-32 VDC	50 AMP
SS50DU	4-32 VDC	50 AMP

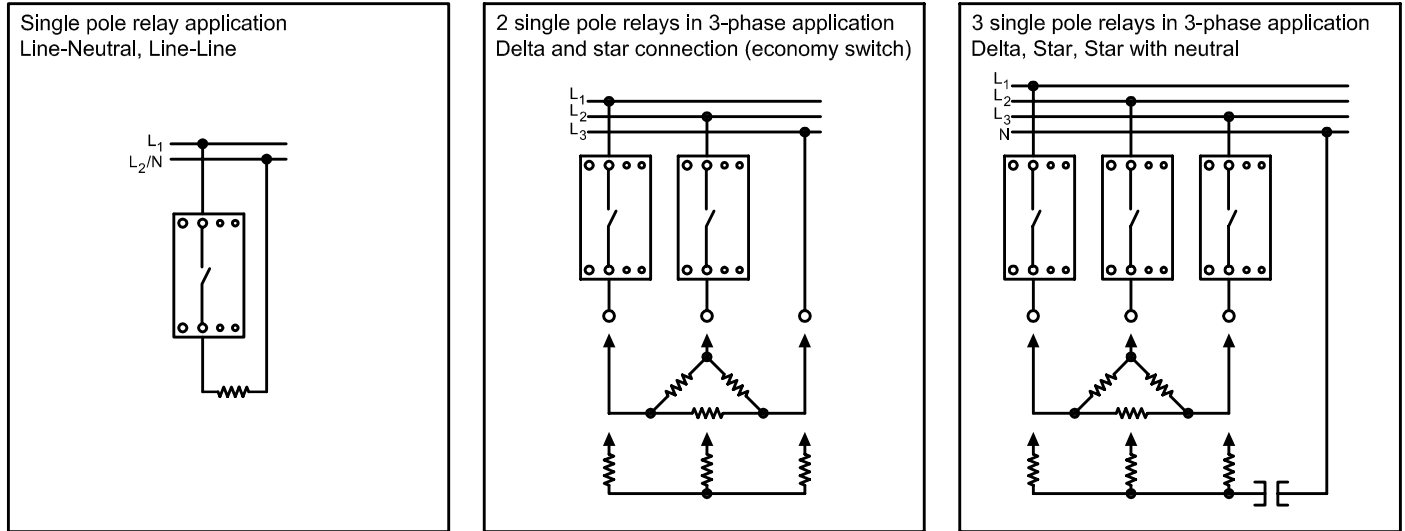
Output Specifications

50 AMP

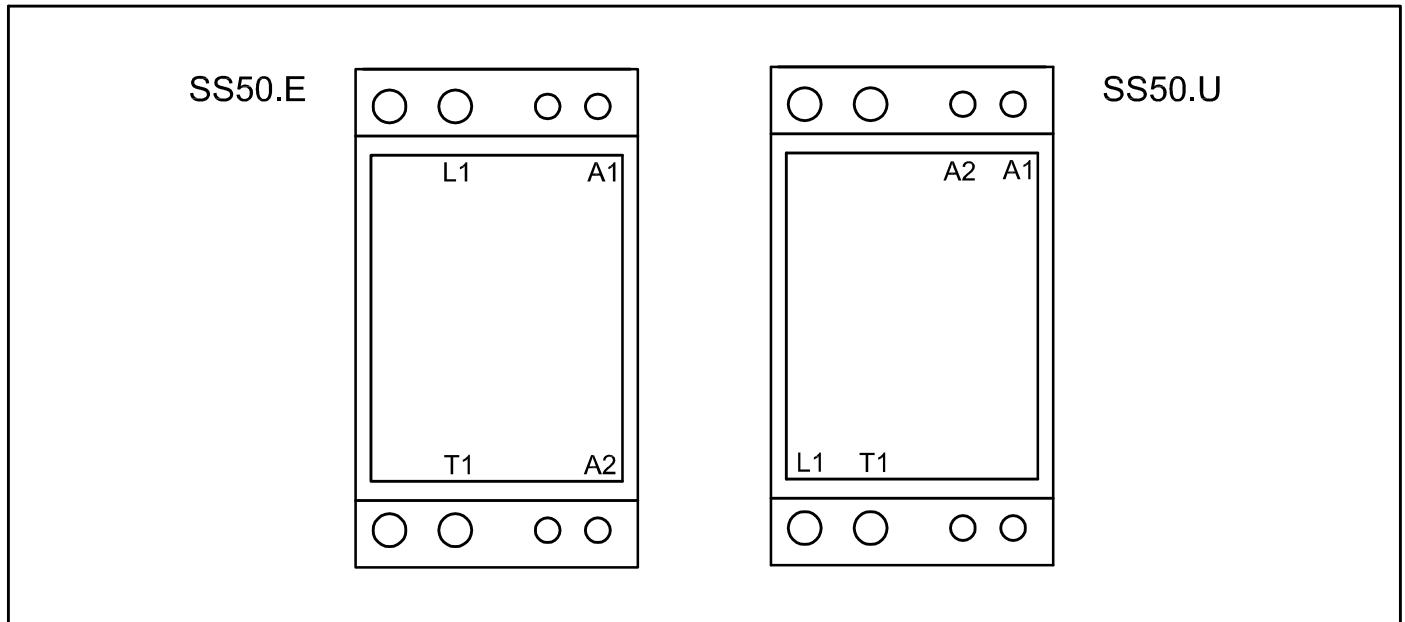
Rated operational current	
AC51 @TA=25° C	50 AACrms
AC53a @Ta=25° C	30 AACrms
Min. operational current	150 mAACrms
Rep. overload current t - 1s	< 200 AACrms
Non rep. surge current Tj(init.)	
=25° C and t = 10 ms	1900 Ap
Off-state leakage current @	
rated voltage and frequency	< 3 mArms
I ² t for fusing t = 10 ms	18000 A ² s
Critical di/dt	≥ 150 A/μs
On-state volt drop @ rated Amps.	1.6 Vrms
Critical dv/dt commutating	500 V/μs
Critical dI/dt off-state	500 A/μs

SS50AE SS50AU SS50DE SS50DU

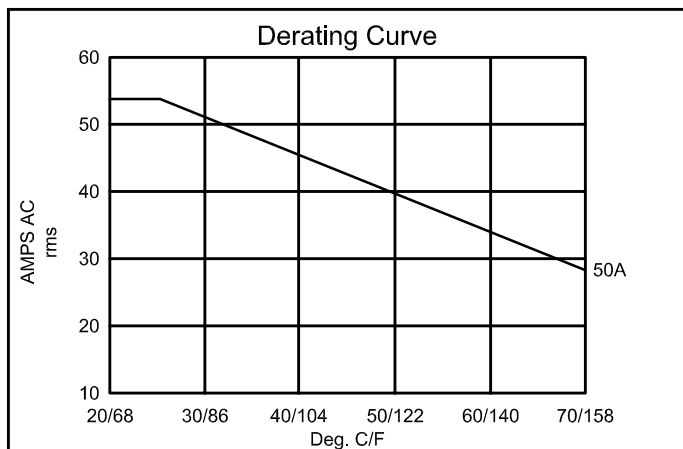
Applications



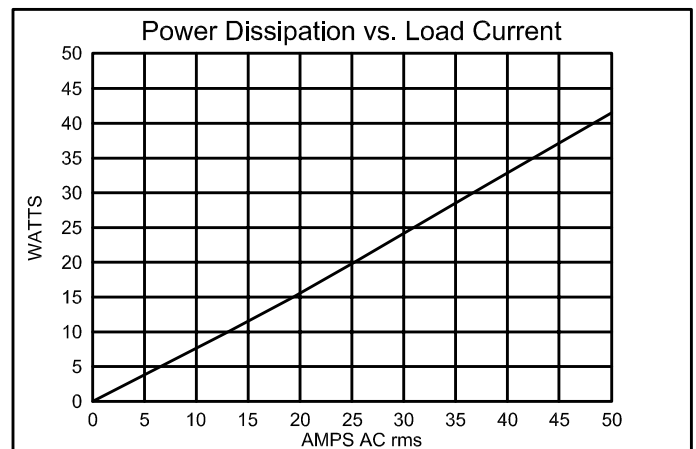
Terminal Layout



Derating Curve



Dissipation Curve



MDI

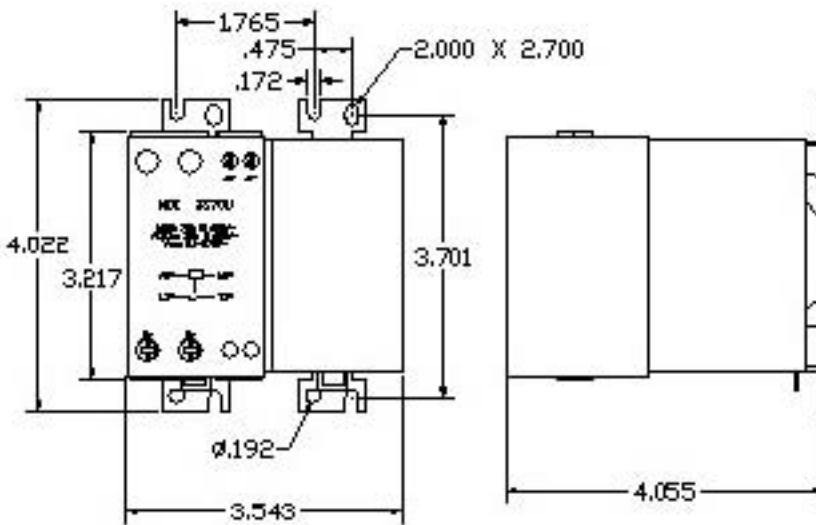
Solid State Relays With Integrated Heatsink

70 AMP series



- * AC Semiconductor contactor
- * Zero switching
- * Direct-Copper bonding (DCB) technology
- * LED indication
- * Cage clamp terminals
- * 2 input ranges: 4-32 VDC and 24-275 VAC/24-48VDC
- * Operational ratings up to 70 AACrms and 600 VAC
- * Non-repetitive voltage: up to 1200 Vp
- * Opto isolation > 4000 VACrms
- * Operation temperature -30° to +80° C
- * Junction temperature 125° C

Product Description



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Selection Guide

MODEL	Control voltage	Rated current
SS70AU	24-275 VAC 24-48 VDC	70 AMP
SS70DU	4-32 VDC	70 AMP

Output Specifications

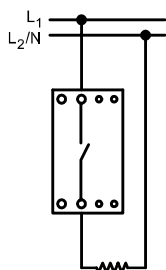
70 AMP

Rated operational current	
AC51 @TA=25° C	70 AACrms
AC53a @Ta=25° C	30 AACrms
Min. operational current	150 mAACrms
Rep. overload current t - 1s	< 200 AACrms
Non rep. surge current Tj(init.) =25° C and t = 10 ms	1900 Ap
Off-state leakage current @ rated voltage and frequency	< 3 mArms
I²t for fusing t = 10 ms	18000 A²s
Critical di/dt	≥ 150 A/μs
On-state volt drop @ rated Amps.	1.6 Vrms
Critical dv/dt commutating	500 V/μs
Critical dv/dt off-state	500 V/μs

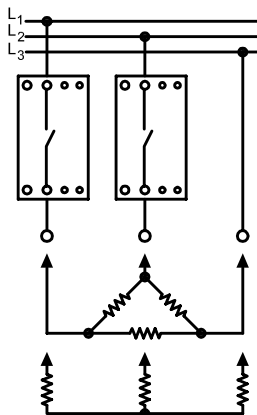
Applications

SS70AU SS70DU

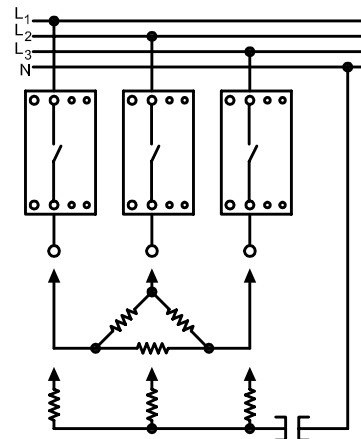
Single pole relay application
Line-Neutral, Line-Line



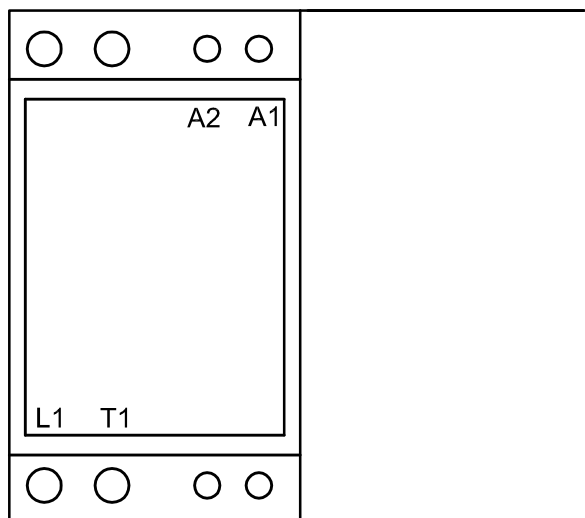
2 single pole relays in 3-phase application
Delta and star connection (economy switch)



3 single pole relays in 3-phase application
Delta, Star, Star with neutral

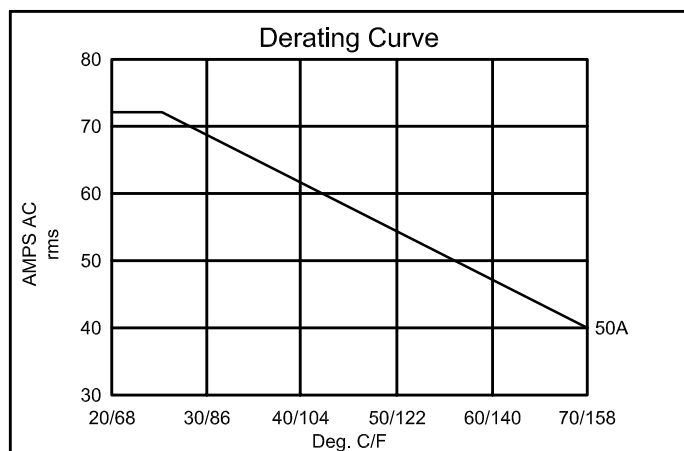


Terminal Layout



SS70.U

Derating Curve



Dissipation Curve

