



## SOLID STATE CONTACTORS



# SSFR-75 and 100 Amp

## Solid State Forward/Reverse Switches

AMETEK Switch is known for reliability and performance. With nearly 100 years in the industry, we have been working on continually perfecting the switching of power. Our new Solid State Switches offer our customers significant advantages over the use of electromechanical switches.

Unlike an electromechanical switch that has a magnetic coil that physically moves a contact assembly to open and close the contacts, the Solid State Switch has no moving parts. The Solid State Switch uses semiconductors to switch on and off the current signal. This offers a number of key advantages over a mechanical switch. With no moving parts, the switch can be mounted in any orientation. Since no electromagnetic coils are affected, these switches also have a greater immunity to being placed in areas with high electromagnetic signals present. Additionally, because there aren't moving parts, no parts physically wear out. This allows these switches to have a life of over one million cycles.

Being that these new switches have no contacts to create an arc when closing or opening, they are ideal for placement in environments where there may be combustible gases present. These switches also have a completely sealed design, allowing them to be in a very harsh environment with little to no impact on their life and operation.

Our new Solid State Switches offer more than just an electronic current switch. We utilize a microprocessor embedded in each switch to give both the switch and your equipment an added level of protection. We have over/under voltage protection to keep your motors from operating at damaging voltage levels. These can be preprogrammed at the factory to your specific needs. We also offer over current protection to ensure that the switch is not operating in an unsafe operating condition. Safety is always paramount in electrical applications and our reverse battery protection helps ensure that systems are not accidentally miswired.

### COMMON APPLICATIONS:

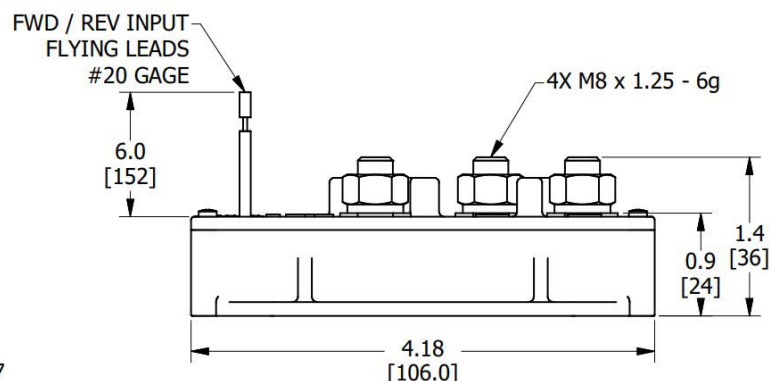
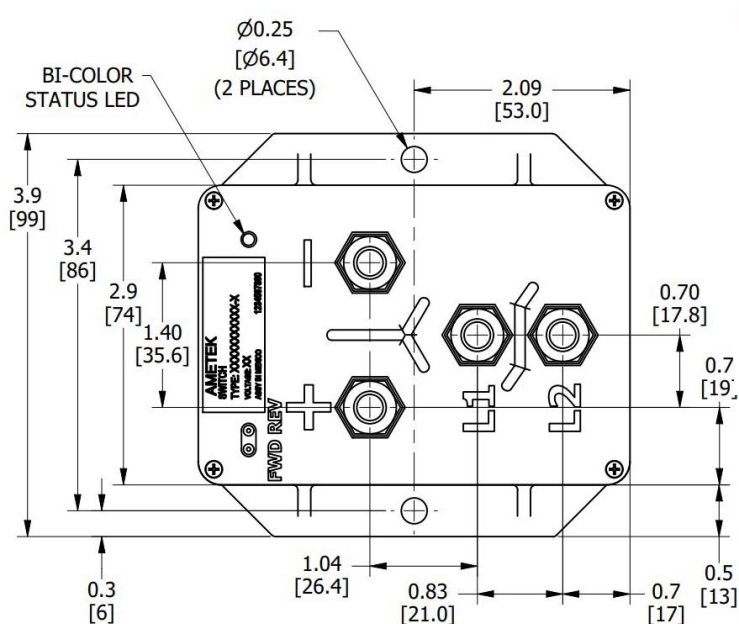
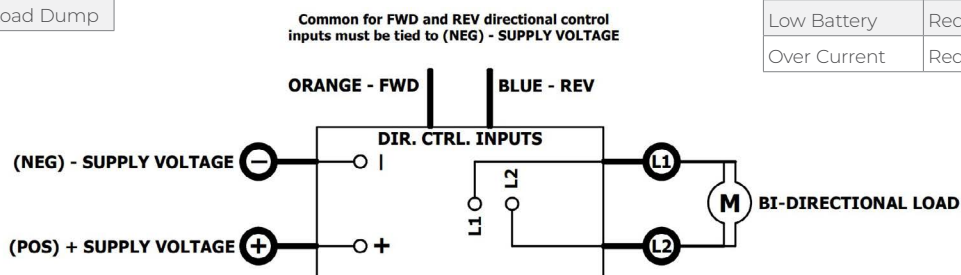
- 1 Bi-Directional Motor Control
- 2 Material Handling
- 3 Boat Lifts
- 4 Motor Speed Control Using PWM

### GENERAL SPECIFICATIONS:

- 1 Lower Power Consumption
- 2 Not Sensitive to Mounting Position
- 3 No Arcing Contacts
- 4 Works with PWM Control Signals
- 5 Fast Response - <100 uSec
- 6 Long Life - 1 Million+ Operations
- 7 Sealed Design
- 8 No Heatsink Required
- 9 Custom Mounting & Packaging Available

Contact your sales representative for more information on how we can help you move to the next generation of switching products.

CONFIGURATION		INPUT SPECIFICATIONS		OTHER SPECIFICATIONS	
Bi-directional		Operating Voltage	8.5 - 14.4 VDC	Temperature	-40°C to 50°C
OPERATING TIMES		FWD/REV Input Voltage	70% of Operating Voltage Min.	IP Code	IP67 Per IEC 60529
Close	200 mS	Maximum Off State Current Draw	<50 mA	Approximate Weight	0.4 lbs (0.18 kg)
Open	400 mS	OUTPUT SPECIFICATIONS		Recommended Torque, M6	52 In-Lb (5.9 Nm) MAX.
ELECTRICAL LIFE		I Thermal (Ith)	80 A @ 50°C	Soft Ramp On Close and Open	
Cycles per EN1175	>1 M	Resistive Load	80 A @ 14.4 VDC MAX	Potted Housing	
Cycles Resistive Load	>1 M	Inductive Load	80 A @ 14.4 VDC MAX	Integral Bracket	
PROTECTION MODES		Inrush	225 A @ 55°C, 1tc = 440 uS	RoHS Compliant	
Over Voltage Protection		Max On-state Resistance	1.65 m Ohms	No Heat Sink Required	
Under Voltage Protection		Duty	Continuous	BI-COLOR STATUS LED	
Reverse Battery Protection		Over Current	>130 A ± 20% / 500 mS	Forward	Green 90% Duty On
Over Current Protection				Reverse	Green 20% Duty On
Compliant with ISO 16750 Load Dump				High Battery	Red 50% Duty On
Compliant with ISO 7637 Load Dump				Low Battery	Red 20% Duty On
				Over Current	Red 100% Duty On



#### WORLD HEADQUARTERS

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**SWITCH**

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