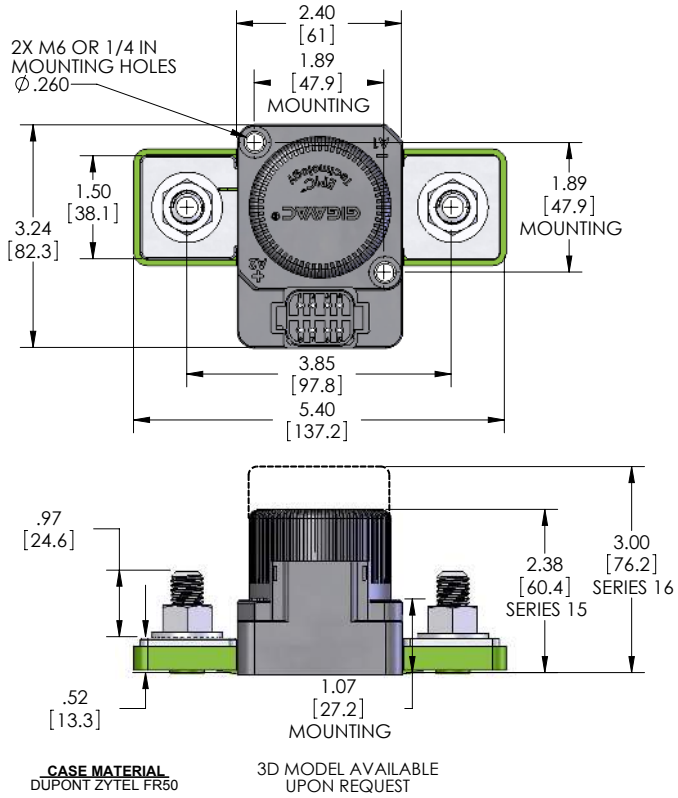
GIGAVAC®
ADVANCED SWITCHING SOLUTIONS

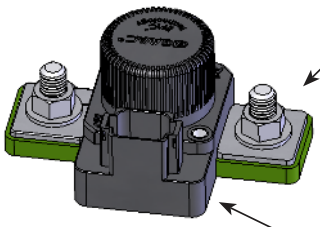
Current Sensing Contactor
350 amp and 600 amp versions

MXSB
Smart-Tactor™



CASE MATERIAL
DUPONT ZYTEL FR50

3D MODEL AVAILABLE
UPON REQUEST



POWER CONNECTION
ZINC PLATED, M12X1.75 BOLT
STAINLESS M12X1.75 FLANGED NUT

TORQUE 200-300 IN-LB (22-33 Nm)

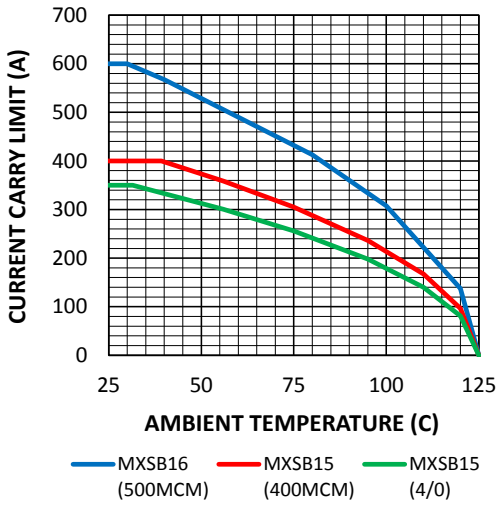
MATING DEUTSCH CONNECTOR *	
PART NUMBER	**DESCRIPTION**
DT06-08SA	CONNECTOR HOUSING
0462-201-16141	SOCKET
114017	SEALING PLUG
HDT-48-00	RECOMMENDED CRIMPER
W8S	WEDGE

* AVAILABLE AS AN ASSEMBLY (0857-1/2)

Key Features

EPIC® Seal	Ceramic to metal braze. Gas filled hermetic chamber protects key components. Exceeds IP69K standard
Contacts / Form	Silver / SPST / NO
Coil	Efficient two coil design with no PWM or EMI emissions.
Suppression	Coil suppression built in
High Shock and Vibration	For rugged environments, off-road and tracked vehicles
Installation	Not direction sensitive
Reference	MIL-R-6106, RoHS

Current Carry



Coil Ratings *(25ºC, Currents & Power At Nominal V)*

Series	15		16		
Coil P/N Designation	B	C	B	C	
Coil Voltage (Nominal)	12	24	12	24	V
Maximum Safe Voltage	16	32	16	32	V
Pickup Voltage (max)	8.0	16.0	9.0	18.0	V
Dropout Voltage (min)	0.5	2.0	1.0	2.0	V
Dropout Voltage (max)	4.0	7.5	4.5	7.0	V
Inrush Current (max, includes both coils)	3.9	1.6	3.8	1.9	A
Hold Current after inrush (max)	0.23	0.097	0.64	0.32	A
Coil Hold Power (max)	2.8	2.3	7.7	7.8	W
Coil Back EMF	55				V
Transient on all pins	+50V 13ms				
Reverse polarity on all pins	-80				V

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Environmental And Switching Specification				
Series	15	16		
Contacts				
Contact form	SPST-NO			
Contact Voltage Rating	12-48V			
Insulation resistance, A1-A2 and A1&A2 to ctrls	500V, 100MΩ (50MΩ after life)			
Dielectric, A1-A2 and A1&A2 to controls	2200VAC, 60Hz, 1mA			
Contact Resistance (max)	1.5 mΩ (0.4 avg)			
Current (see chart for Temp. derating)	350A 400MCM	600A 500MCM		
90s	1000A	1500A		
10s	2000A	3000A		
1s	3000A	4000A		
Optional Aux, SPST, NO or NC	2A @ 28V			
Resistive Load Switching				
Fault interrupt	3000A	5000A		
Resistive switching @ 28V	100,000 cycles @ 350A	100,000 cycles @ 600A		
Please contact factory for more detailed resistive switching specifications.				
Mechanical life	300,000 cycles			
Environmental Specifications				
Weight (Max, with hardware)	1.6lbs, 725g	2lbs, 910g		
Vibration (10 - 2000Hz)	15G			
Shock, 1/2 Sine, 11ms	20G			
Temperature Range, Operating (ambient)	-55ºC to 85ºC			
Temperature Range, Storage (ambient)	-55ºC to 150ºC			
Max Terminal Temperature	125ºC			
Water Resistance	IP67 and IP69K			
Seal: Hermetic Vacuum Braze, tested to E-9 std cc/sec				
Steam/Water-Jet/ Boiling Water	105psi Steam/2750psi Jet/ Submersion in BW			
Chemicals, Corrosion, Fungal Growth	Resistant			
Timing (Max Values @ 25ºC)				
Operate (including bounce)	20ms			
Inrush	75ms			
Release	12ms		7ms	
For details, contact factory for App. Note	#8	#9	#12	#13

NOTES:

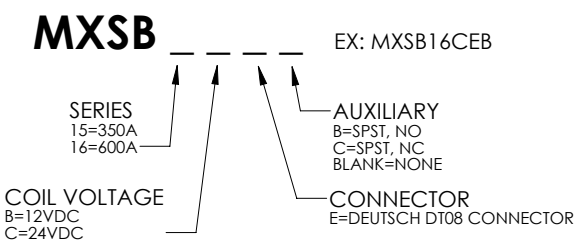
1. Operation: Contactor is energized by applying power to Coil+ and Coil- (GND). The current sensing circuit is isolated from the coil and requires power at Sense Vin and Sense Gnd. There are two Sense Vout pins, each with a different 0 amp voltage and range. They both indicate the current through the main contacts (A2 & A1).

Pin 5:
0 to 5V
Sense Vout = I/240 + 2.5

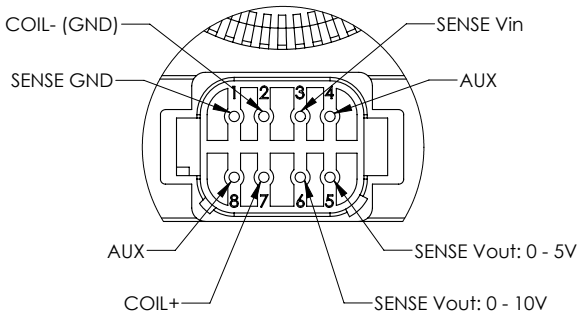
Pin 6:
0 to 10V
Sense Vout = I/120 + 5.0

2. Contactor has two coils. Both are used for pull-in. After approximately 75 milliseconds, one coil is electronically removed from the coil drive circuit. The remaining coil supplies low continuous hold power sufficient for the contactor to meet all of its specified performance specifications. This provides the lowest coil power possible without the use of PWM electronics that have been known to cause EMI emissions and/or crosstalk on system control power.

Ordering Key



Power Circuit and Installation



Settings Parameters		
Current Sense Range	-600 to +600	A
Current Sense Accuracy (including temperature)	± 7%	
Sense Vin	12-33	V
Sense Circuit Current (typical)	20m	mA

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