

**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 (0857-7)

Coil Ratings (25°C, Currents & Power At Nominal V)			
Series	16		
Coil P/N Designation	B	C	
Coil Voltage (Nominal)	12	24	V
Maximum Safe Voltage	16	32	V
Inrush Current (max, includes both coils)	3.8	1.9	A
Hold Current after inrush (max)	0.64	0.32	A
Coil Hold Power (max)	7.7	7.8	W
Coil Back EMF <sup>1</sup>	0		V
Transient on all pins	+50V 13ms		
Reverse polarity on all pins	-80		V

<sup>1</sup> Coils are switched internally with a FET, so no fly-back/suppression voltage is seen at the coil inputs.

## Selectable Time Delay On Break Contactor | MXST16

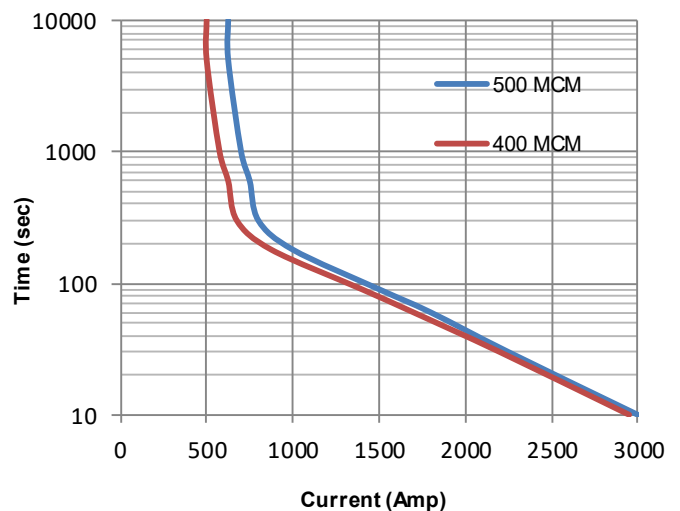
Smart-Tactor™



### Key Features

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

### Current Carry vs Time with 85°C terminal temperature rise



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Environmental And Switching Specification			
Series	16		
Contacts			
Contact form	SPST-NO		
Contact Voltage Rating	12-48V		
Insulation resistance, A1-A2 and A1&A2 to controls	500V, 100MΩ (50MΩ after life)		
Dielectric, A1-A2 and A1&A2 to controls	2200VAC, 60Hz, 1mA		
Contact Resistance (max)	1.5 mΩ (.4 avg)		
Current (see chart for Temp. derating)	600A, 500MCM		
90s	1500A		
10s	3000A		
1s	4000A		
Optional Aux, SPST, NO or NC	2A @ 28V		
Resistive Load Switching			
Fault interrupt	5000A		
Resistive switching @ 28V	100,000 cycles @ 600A		
Please contact factory for more detailed resitive switching specifications.			
Mechanical life	300,000 cycles		
Environmental Specifications			
Weight (Max, with hardware)	2lbs, 910g		
Vibration (10 - 2000Hz)	15G		
Shock, 1/2 Sine, 11ms	20G		
Temperature Range (ambient)	-40°C to 85°C		
Max Terminal Temperature	125°C		
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 @ 25°C)			
Operate (including bounce)	20		ms
Inrush	75		ms
For details, contact factory for App. Note	12	13	#

#### NOTES:

1. The MXST Delay on Break contactor is designed for applications that require electrical power to be maintained for a specific amount of time after the engine is shut off. The contactor is triggered by an "OFF" signal - usually from the ignition key - and then maintains power for a programmed amount of time before it turns OFF (open).

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.

3. The Bypass pin overrides the timing circuit and can be used in cases where an immediate opening of the contactor is required. The Bypass pin does not need to be connected if this function is not required.

4. Caution: In Voltage Control Mode, Pin 1 is digital input - leave it open or pull it low. Pin 6 is digital output - leave it open only.

5. Also available with I<sup>2</sup>C option that allows customer to program and control the time delay feature. Please contact GIGAVAC for more details.

### Ordering Key

**MXST16 -mm-ss** EX: MXST16B-30-00

COIL VOLTAGE  
B=12VDC  
C=24VDC

DELAY-SECONDS  
ss=SECONDS FROM 00 TO 59

DELAY-MINUTES  
mm=MINUTES FROM 00 TO 99

### Power Circuit and Installation

**Voltage Control Mode Connection** (See Note 4):

**I<sup>2</sup>C Control Mode Connection** (See Note 5):

**Timing Diagram:**

Settings Parameters			
Coil Voltage	B	C	
Vin Input Voltage Range	10-16	20-30	V
Vcontrol Pin (10kΩ input resistance)	30 max		V
Vcontrol_Close	≥2.0		V
Vcontrol_Open	≤0.8		V
Bypass_Active	Pull Low (0)		V
Bypass_Inactive	Leave Open (5)		V
Max Sink Current on LED Driver Pin	10		mA

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