



| MXC Smart-Factor™

CAN-BUS CONTACTOR

Introduction

Automatic trip function 350 amp and 600 amp versions CAN-BUS Communication



SPECIFICATIONS

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 orientation sensitive
Reference	MIL-R-6106, RoHS

Coil Ratings (25°C, Currents & Power At Nominal V)

Series	15 (350A)		16 (600A)		
	B	C	B	C	
Coil P/N Designation	B	C	B	C	
Coil Voltage (Nominal)	12	24	12	24	V
Coil Voltage (max)	16	32	16	32	V
Coil Voltage (min)	9	17	9	17	V
Inrush Current (max)	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*	0				V
Transient on all pins	+50V 13ms				
Reverse polarity on all pins	-80				V

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

Contacts

Series	15 (350A)	16 (600A)
Contact form	SPST-NO	
Contact Voltage Rating	12-48V	
Insulation resistance, A1-A2 and A1&A2 to controls	500V, 100M Ω (50M Ω after life)	
Dielectric, A1-A2 and A1&A2 to controls	2200VAC, 60Hz, 1mA	
Contact Resistance (max)	1.5 m Ω (.4 avg)	
Current (see chart for Temp. derating)	350A 400MCM	600A 500MCM
90s	1000A	1500A
10s	2000A	3000A
1s	3000A	4000A

Resistive Load Switching

Series	15 (350A)	16 (600A)
Fault interrupt (1 cycle)	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

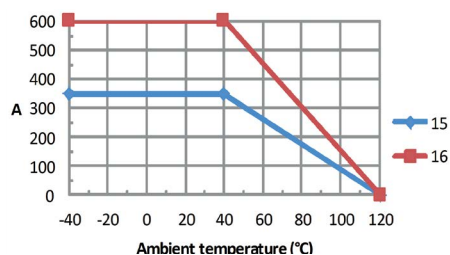
Series	15 (350A)	16 (600A)
Weight (Max, with hardware)	1.6lbs, 725g	2lbs, 910g
Vibration (10 - 2000Hz)	15G	
Shock, 1/2 Sine, 11ms	20G	
Temperature Range (ambient)	-40°C to 85°C	
Max Terminal Temperature	125°C	
Water Resistance	IP67 and IP69K	
Seal: Hermetic Vacuum Braze, tested to E-9 std cc/sec		
Steam/Water-Jet/Boiling Water	105psi Steam/2750psi Jet/ Submersion in BW	
Chemicals, Corrosion, Fungal Growth	Resistant	

Timing (Max Values @ 25°C)

Series	15 (350A)	16 (600A)		
Operate (including bounce)	20ms			
Inrush	75ms			
Release	12ms	7ms		
For details, contact factory for App. Note	#8	#9	#12	#13



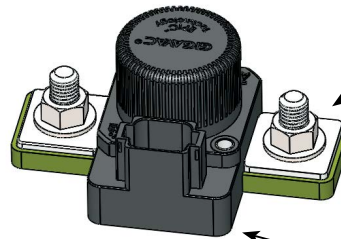
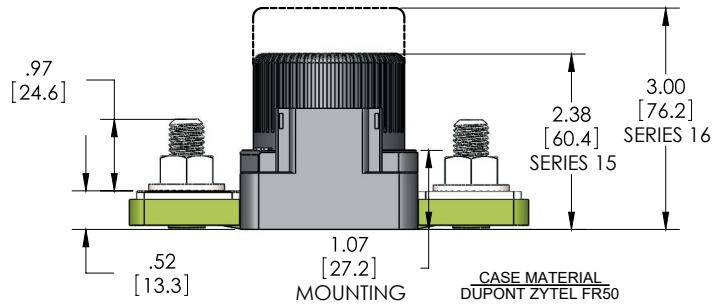
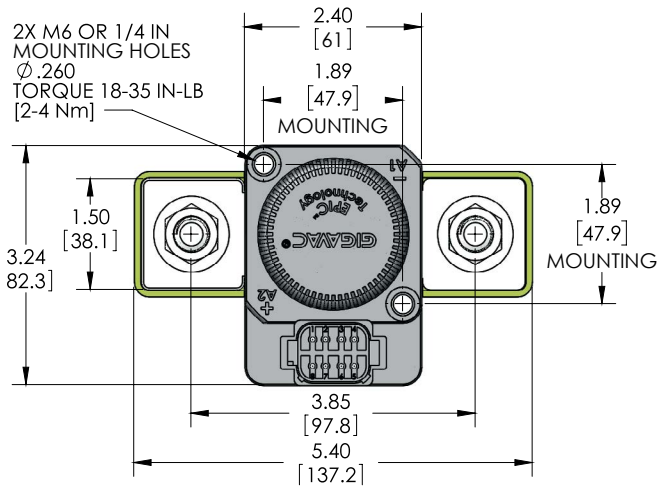
CURRENT CARRY





DIMENSIONS

Dimensions are in millimeters [inches]
Coil terminal polarity is X1 (+) and X2 (-)



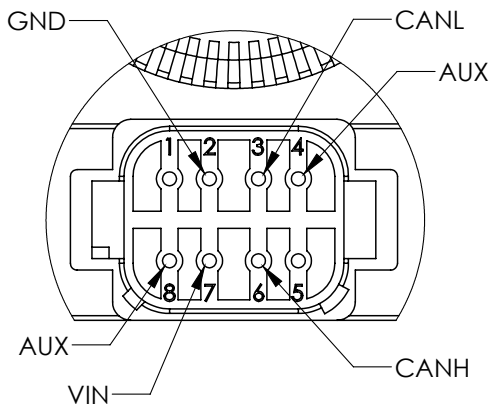
POWER CONNECTION
ZINC PLATED, M12X1.75 BOLT
STAINLESS M12X1.75 FLANGED NUT
TORQUE 200-300 IN-LB [22-33 Nm]

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

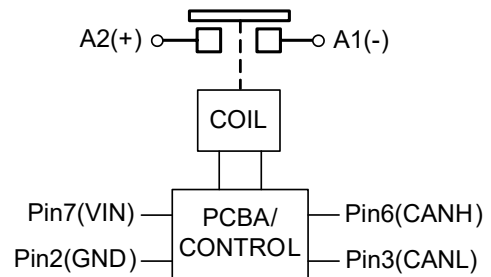
* AVAILABLE AS AN ASSEMBLY [\(0857-9/10\)](#)



POWER CIRCUIT AND INSTALLATION



To enable internal 120Ω CAN termination: Jumper Pin1 and Pin5.



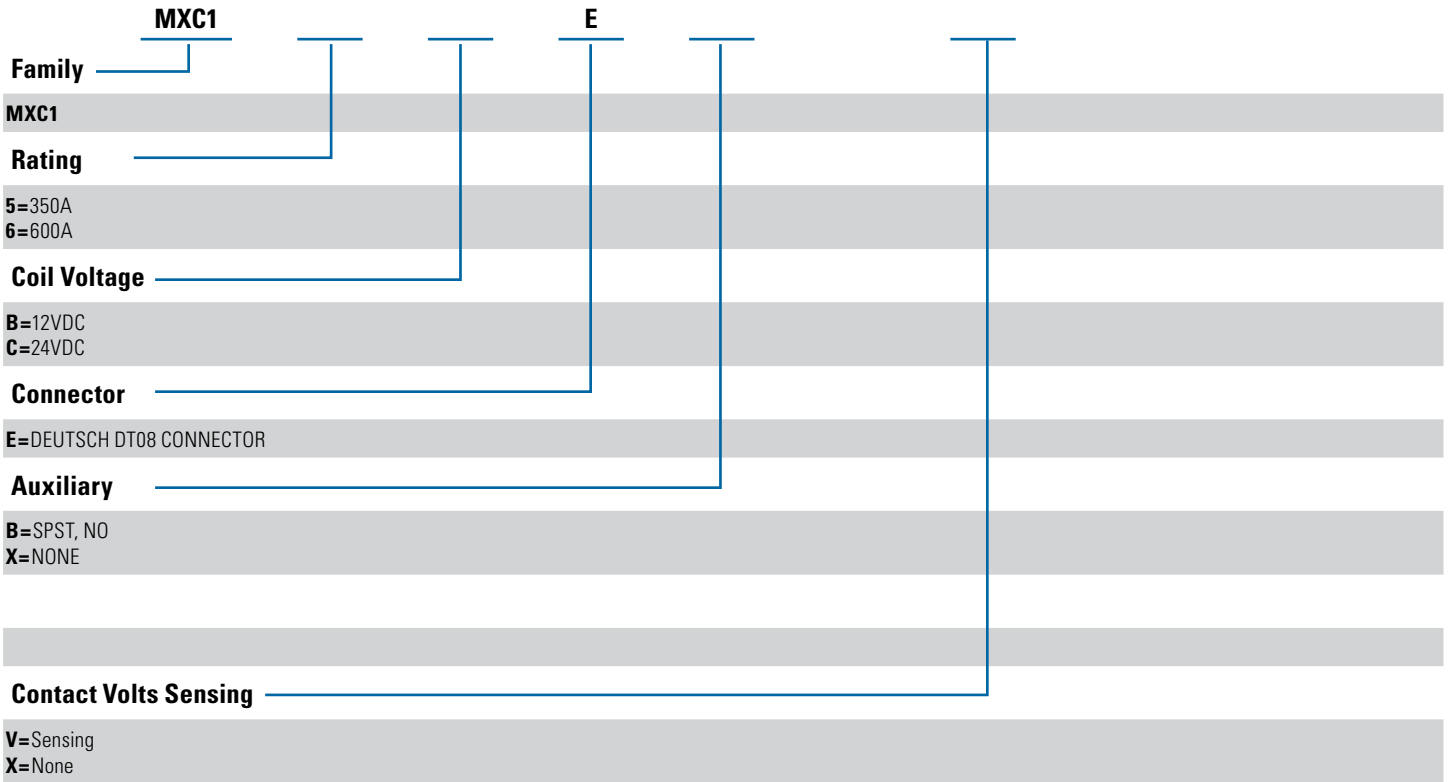
Settings Parameters

Current Sense Accuracy	±7%
Over Current Response Time	2ms + release time 20ms



ORDERING OPTIONS

Example : MXC16CEBV



GENERAL NOTES

1. 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.
2. Control and Communication Protocol: J1939 (Link to DBC file to be added)
3. Features:
4. Read: device ID, firmware version, current, temperature, contactor cycle-log and optional nonisolated contact-volts sensing.
5. Read/Write: power supply under-voltage-shutoff, contactor (open/close), trip points, trip delays, power up default (open/close).
6. Visit www.gigavac.com for the latest CAN-BUS protocol information.

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Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA.

Americas

Sensata GIGAVAC
 Contactor Center of Excellence
 6382 Rose Lane
 Carpinteria, CA 93013
 USA

Tel: +1 (805) 684 8401
 Email: gigavac@sensata.com
 Sensata Global Headquarters
 Sensata Technologies
 529 Pleasant Street
 Attleboro, MA 02703
 USA

Europe, Middle East & Africa

Sensata Technologies Holland B.V.
 Jan Tinbergenstraat 80
 7559 SP Hengelo
 The Netherlands
 Tel: +31743578000
 Email: gigavac-info-eu@list.sensata.com

CONTACT US

Asia Pacific

China
 Sensata Technologies China Co., Ltd.
 BM Intercontinental Business Center
 30th Floor
 100 Yu Tong Road
 Shanghai 200070
 People's Republic of China
 Tel: +8621 2306 1500
 Email: contactorasia@list.sensata.com

Japan
 Sensata Technologies Japan Ltd.
 Shin Yokohama Square Bldg. 7F
 2-3-12 Shin-yokohama
 Kohoku-ku, Yokohama-shi,
 Kanagawa 222-0033
 Tel: +81 45 277 7001
 Email: contactorasia@list.sensata.com