

Features

HIGH CURRENT CARRY AND HIGH VOLTAGE

Inert gas filled arc chamber suitable for high voltage switching

COMPACT STRUCTURE, LOW NOISE

Small, low-profile design with low noise while carrying or switching loads

COIL ECONOMIZER

Economized coil for low power consumption

SAFE FOR EXPLOSIVE ENVIRONMENTS

No arc leakage due to a hermetically sealed design

HIGH RELIABILITY DESIGN

Hermetic sealing creates a stable environment for high voltage switching

NO SPECIFIC MOUNTING ARRANGEMENT

Mountable in any orientation without reduction of performance

VARIOUS APPLICATIONS

Battery disconnect, EV charging, energy storage systems, photovoltaics, power control, circuit protection and much more

Sealing Type: Ceramic

- ✓ Low profile chassis mount power terminals
- ✓ Integrated connector for coil and auxiliary contacts



Certification Information

1. Meet RoHS (2011/65/EU)
2. CE certified
3. UL pending

Nomenclature

AGX16 B E B

Series code:
"AGX16" = AGX16

Coil Voltage Code:
"B" = 12VDC
"C" = 24VDC
"E" = 48VDC

Coil Termination
"E" = 8 Pin Deutsch Connector

Auxiliary Contact
Blank = None
"B" = SPST, Normally Open
"C" = SPST, Normally Closed

High Voltage DC Contactor
AGX16 Series
600A+/800VDC



Product Data Sheet

MAIN CONTACT

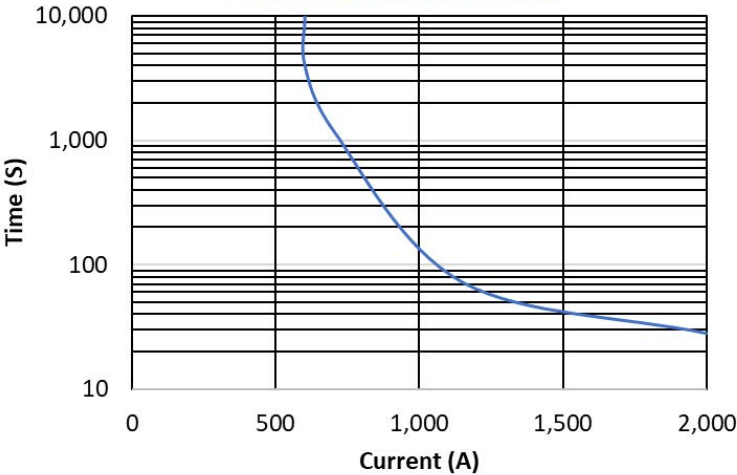
Contact Arrangement	1 Form X (SPST-NO)	
Rated Operating Voltage	800 VDC	
Rated Current	600 A	
Contact resistance	0.4 mOhm	
Max Short Circuit Current	2000A @320VDC	
Dielectric Withstanding Voltage (initial)	Between Open Contacts	4000Vms, 1min, <1mA
	Between Contacts to Coil	2200Vms, 1min, <1mA
Insulation Resistance (initial)	Terminal to Terminal	New: 100M Ω
	Terminals to Coil	End: 50M Ω

AUX CONTACT

Aux. Contact Arrangement	1 Form A
Aux. Contact Current Max.	2A@30VDC / 3A@125VAC
Aux Contact Current Min	100mA@8V
Aux. Contact Resistance Max	0.417ohms@30VDC 0.150ohms@125VAC

Carry Current
@85°C Ambient

600A Max (400 MCM)



OPERATE / RELEASE TIME

Operate Time	20ms
Release Time	7ms

ENVIRONMENTAL DATA

Shock	Functional	196m/s ² Sine half-wave pulse
	Destructive	490m/s ² Sine half-wave pulse
Operating Temperature		-55°C to +85°C
Altitude		<4000m
Weight		1.984Lb (900g)

COIL DATA

Nominal Voltage	12VDC	24VDC	48VDC
Coil Voltage (Max.)	16V	32V	64V
Max. Pick-up Voltage	8V	16V	40V
Drop-out Voltage (25°C)	0.5-4V	2-7.5V	4-15V
Pick-Up Current, Max (75 ms)	3.9A	1.6A	0.97A
Coil current (25°C)	0.23A	0.097A	0.042A
Coil Power (25°C)	2.8W	2.3W	2.0W
Internal Coil Suppression			
Coil Back EMF	55V	55V	125V
Transients, Max(13ms)	±50V	±50V	±75V
Reverse Polarity	16V	32V	64V

EXPECTED LIFE

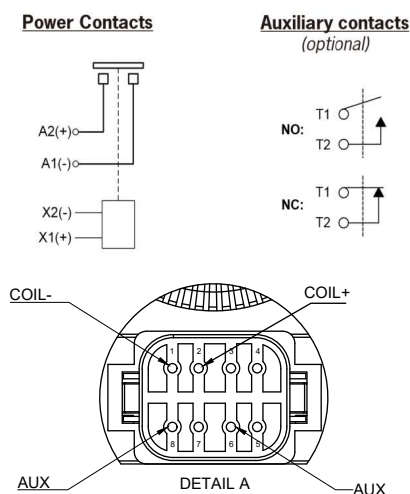
Mechanical Life	1 million Cycles
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*Please see the cycling table below

Estimated Make and Break Resistive Load Ratings



Outline Dimensions (in) and Pin Schematic



***Note: 8 Pin Deutsch Connector**

Wire Size	20AWG
Mounting Thread	M12x1.75mm

Application Notes

1. To prevent loosening, split washers should be used whenever the contactor is installed. All terminals or copper conductor must be in direct contact with the contactor's main terminals. Please control the nut tightening torque of each part within the specified range in the table below. If the torque exceeds the recommended range, it may cause damage to the sealed cavity and thread damage.
- Mounting torque: 203 - 300 lb. in. (23-43 N.m) Max.
2. This contactor features internal diode for coil suppression. No external diodes should be added across the coil. The use of additional external coil suppression can slow the release time and invalidate the life cycle ratings or can cause the contactor not to be able to interrupt the maximum current specified. If lower coil back EMF is required, please contact Altran for assistance.
3. Power switching lifecycles are based on current flow from A2(+) to A1(-). For best breaking performance, the contactor should be installed so that current flows from A2(+) to A1(-). There are cases where the contactor will interrupt power in the opposite direction but please contact Altran to confirm suitability. Direction of current flow is not relevant during make or when flowing on closed contacts. For bi-directional contactors, please contact Altran.
4. Applications with capacitors will require a pre-charge circuit.
5. Electrical life rating is based on resistive load with 27μH maximum inductance in circuit. Because your application may be different, we suggest you test the contactor in your circuit to verify life is as required.
6. End of life is defined as when the dielectric, insulation resistance or contact resistance fails the specifications listed.
7. Coil drive power must be greater than coil power or it will reduce performance capability.
8. Do not allow debris and oil to the main terminals; make sure that the main terminals are in reliable contact with the load conductor, otherwise the temperature rise of the terminal/conductor connection may be too high due to the excessive contact resistance.
9. Do not use if dropped.
10. Avoid mounting the relay in strong magnetic fields (near a transformer or magnet) or close to an object that radiates heat.
11. It is impossible to determine all the performance parameter in each specific application, therefore, customers should choose the products matching them according to their own conditions of use. If in doubt, contact Altran. The customer will be responsible for validating that the products meet their application.
12. Altran reserves the right to make product changes as needed. Customers should reconfirm the contents of the specification or ask for us to supply a new specification if necessary.