LAURENCE INSTRUCTIONS
Explosion Proof Soli-Con® Actuators

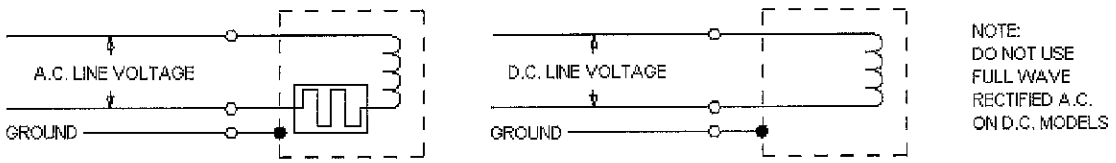
Laurence Explosion Proof actuators are Factory Mutual System Approved for use in hazardous locations, indoors and outdoors, specified in the National Electrical Code as Class I, Division 1, Groups B, C, and D; and Class II, Division 1, Groups E, F, and G.

Coil Insulation Class H (Electronic components maximum temperature rating is 125°C)

Table 1 – SCA/SCB/SCD/SCE Soli-Con® Model Information (Approx.)

Model No.	Voltage	Holding Current	Inrush Current	Max. Cycles	Fuse Amperage
SC7A-120-E10	110/115/120 Volts, 50/60 Hertz	.10 Amps	4.7 Amps	6 per minute	2
SC7A-240-E10	220/230/240 Volts, 50/60 Hertz	.10 Amps	4.7 Amps	6 per minute	2
SC7D-130-E10	90 - 140 Volts, Direct Current	.01 Amps	5.3 Amps	4 per minute	2
SC9A-120-E10	110/115/120 Volts, 50/60 Hertz	.20 Amps	14.2 Amps	3 per minute	2
SC9D-130-E10	90-140 Volts, Direct Current	.04 Amps	13.5 Amps	3 per minute	2
SC9A-120-E10-L	110/115/120 Volts, 50/60 Hertz	.20 Amps	14.2 Amps	1 per minute	2-1/2

CAUTION To prevent ignition of hazardous atmospheres, this actuator should not be installed in an area where vapors or gases have an ignition temperature less than the temperature rating stated on the actuator label. Note: The rated temperature is based on a 25°C ambient temperature; therefore, corrections should be made for applications in higher ambient temperature locations. *Maximum ambient temperature is 85°C for all models.* The coil is equipped with a thermal cut-off, designed to interrupt the circuit at 192°C.



CIRCUIT DIAGRAMS

The actuator must be connected to the voltage source through rigid explosion proof conduit. Conduit must be of an approved type. At least five full threads must be engaged in conduit connections.

Electrical supply line to actuator should be fused with a FUSETRON® FRS-R type fuse (see Table 1 for amp rating). Rated amperage is based on the fuse in a 25°C ambient temperature. Select wire size appropriate to fuse rating and length of run of wire, but in no case use less than 18 AWG for all Model No.'s listed. *Full inrush current at rated voltage* must be delivered to the actuator to ensure proper operation. *Green colored wire* is for protective grounding.

No maintenance is required for this actuator. Any questions should be referred to our Tampa, Florida, USA, factory.

LAURENCE INSTRUCTIONS
Explosion Proof Soli-Con® Actuators

FM C US APPROVED

Phone (813) 978-1000 • Fax (813) 977-0174

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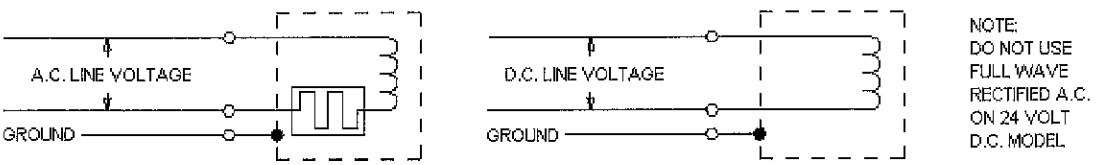
Coil Insulation Class H (Electronic components maximum temperature rating is 125°C)

Table 2 – SCG/SCH Soli-Con® Model Information (Approx.)

Model No.	Voltage	Holding Current	Inrush Current	Max. Cycles	Fuse Amperage
SC1D-024-E10	24 Volts, Direct Current	0.80 Amps	14.0 Amps	2 per minute	2
SC1B-VAR-E10	48 Volts, 50/60 Hertz	0.70 Amps	10.0 Amps	2 per minute	2
SC1B-VAR-E10	120 Volts, 50/60 Hertz	0.50 Amps	7.0 Amps	2 per minute	2
SC1B-VAR-E10	220 Volts, 50/60 Hertz	0.35 Amps	6.0 Amps	2 per minute	2
SC1B-VAR-E10	48 Volts, Direct Current	0.50 Amps	10.0 Amps	2 per minute	2
SC1B-VAR-E10	125 Volts, Direct Current	0.30 Amps	6.0 Amps	2 per minute	2
SC1B-VAR-E10	250 Volts, Direct Current	0.25 Amps	5.0 Amps	2 per minute	2

CAUTION To prevent ignition of hazardous atmospheres, this actuator should not be installed in an area where vapors or gases have an ignition temperature less than the temperature rating stated on the actuator label. Note: The rated temperature is based on a 25°C ambient temperature; therefore, corrections should be made for applications in higher ambient temperature locations. *Maximum ambient temperature is 85°C for all models.*



CIRCUIT DIAGRAMS

The actuator must be connected to the voltage source through rigid explosion proof conduit. Conduit must be of an approved type. At least five full threads must be engaged in conduit connections.

Electrical supply line to actuator should be fused with a FUSETRON® FRS-R type fuse (see Table 2 for amp rating). Rated amperage is based on the fuse in a 25°C ambient temperature. Select wire size appropriate to fuse rating and length of run of wire, but in no case use less than 14 AWG for Model No. SC1D-024-E10 and 18 AWG for Model No. SC1B-VAR-E10. *Full inrush current at rated voltage* must be delivered to the actuator to ensure proper operation. *Green/yellow colored wire* is for protective grounding.

No maintenance is required for this actuator. Any questions should be referred to our Tampa, Florida, USA, factory.

LAURENCE INSTRUCTIONS

FlameProof Soli-Con® Actuators

IEC Ex

CE Ex

THIS DRAWING MAY NOT BE ALTERED WITHOUT WRITTEN AUTHORIZATION FROM FACTORY MUTUAL

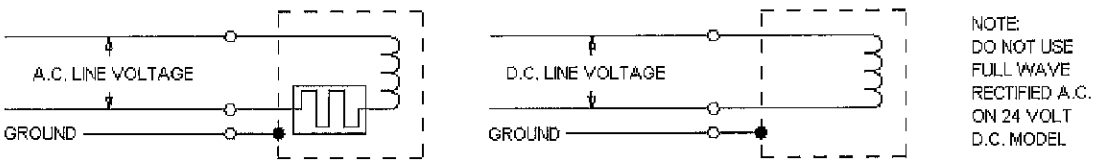
Laurence Explosion Proof Electromagnet Actuators are International Electrotechnical Commission (IEC) and CE / ATEX compliant for use in hazardous locations, indoors and outdoors, per IEC 60079-1 Ex d, Zone 1, Group IIB+H_2, T4, IP66. Per ATEX Equipment Group II, Category 2 GD for Gas and Dust.

Coil Insulation Class H (Electronic components maximum temperature rating is 125° C)

Table 1 – SCH-NIR Soli-Con® Model Information (Approx.)

Model No.	Voltage	Holding Current	Max. Cycles	Fuse Amperage
SC2B-VAR-E10	24 Volts, 50/60 Hertz	1.0 Amps	2 per minute	1
SC2B-VAR-E10	48 Volts, 50/60 Hertz	0.70 Amps	2 per minute	1
SC2B-VAR-E10	120 Volts, 50/60 Hertz	0.50 Amps	2 per minute	1
SC2B-VAR-E10	220 Volts, 50/60 Hertz	0.35 Amps	2 per minute	1
SC2B-VAR-E10	24 Volts, Direct Current	0.80 Amps	2 per minute	1
SC2B-VAR-E10	48 Volts, Direct Current	0.50 Amps	2 per minute	1
SC2B-VAR-E10	125 Volts, Direct Current	0.30 Amps	2 per minute	1
SC2B-VAR-E10	250 Volts, Direct Current	0.25 Amps	2 per minute	1

CAUTION To prevent ignition of hazardous atmospheres, this actuator should not be installed in an area where vapors or gases have an ignition temperature less than the temperature rating stated on the actuator label. *Maximum ambient temperature is 85° C for all models.*



CIRCUIT DIAGRAMS

Conduit connection is ½-14 FNPT. At least five full threads must be engaged in conduit connections.
The apparatus has flying lead conductors that exit the enclosure. A suitable certified Ex d or Ex e terminal box is required to be connected to apparatus enclosure for completing to external supply circuits.

Installation to be conducted per applicable electrical codes, such as, National Electrical Code, NFPA 70; Canadian Electrical Code C22.1; EN60079-14 and IEC 60079-14 Electrical Installation Design, Selection and Erection.

LAURENCE INSTRUCTIONS
Flameproof Soli-Con® Actuators

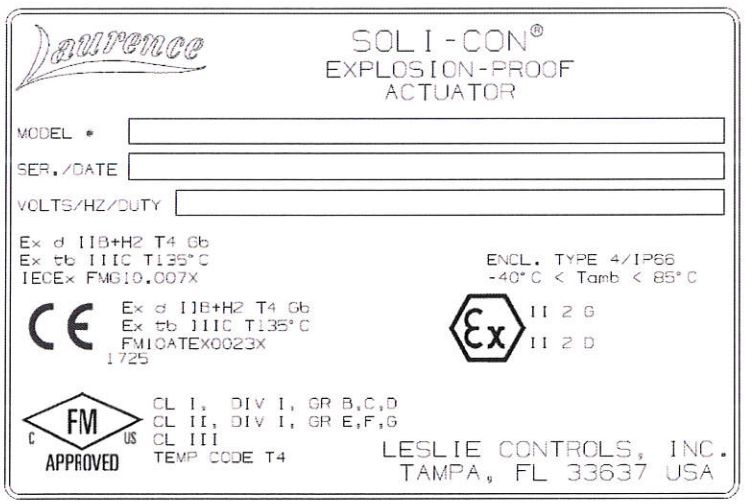
Over-current protection fuse is required during installation to external supply circuit
Electrical supply line to actuator should be fused with a FUSETRON® FRS-R type fuse (see Table 1 for amp rating). Rated amperage is based on the fuse in a 25° C ambient temperature. Select wire size appropriate to fuse rating and length of run of wire, but in no case use less than 18 AWG or 1mm^2 for all models *Full current at rated voltage* must be delivered to the actuator to ensure proper operation. *Green/yellow colored wire* is for protective grounding.

Supply wire selection should be based on a minimum ambient temperature rating of 10° C above the maximum ambient temperature of installation location.

Solenoid features an external green terminal screw for ground connection of a 12 AWG or 4 mm^2 conductor.

Solenoid enclosure principle materials are carbon steel and stainless steel.

Identification Label on unit is as follows:



No maintenance is required for this actuator. Any questions should be referred to our Tampa, Florida, USA, factory.