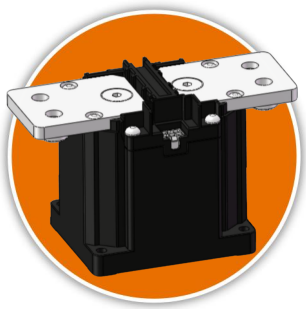
EVH9A Series

1,500V DC / 1,000A DC Contactor Specification

Product description［产品描述］

■ Features［特性］

- ✓ Ceramic packaging, the contacts are protected by gas, preventing oxidation, strong cooling arc capacity.［陶瓷封装，触点由气体保护，防止氧化，具有极强的冷却电弧能力］
- ✓ High-voltage, high-current control capable.［具有高电压、大电流控制能力］
- ✓ Compact & low operating sound.［紧凑和低操作声音］
- ✓ Safety and high contact reliability.［安全和高接触可靠性］
- ✓ Can be installed in any direction.［可任意方向安装］
- ✓ Not freezing and condensing at low temperature.［在低温下不冻结和冷凝］



■ Applications［应用］

- ✓ Photovoltaic system［光伏系统］
- ✓ Energy storage equipment［储能系统］
- ✓ Power battery system［动力电池系统］
- ✓ High voltage inverter［高压变频器］

■ For product details and the latest product specifications, please visit the following website［产品详细信息及最新产品说明书请浏览以下网站］

Google **www.alq-dccontactor.com**

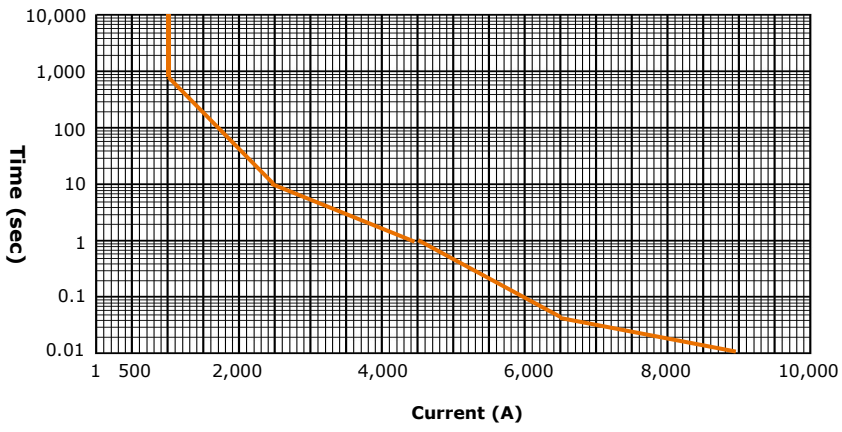
www.zgalq.com

Performance data［性能数据］

■ Power contact［主触点］

Parameter［参数］	Data［数据］
Contact arrangement［触点形式］	1 Form X (SPST-NO-DM) ［常开］
Contact polar［触点极性］	Without polarity［无极性］
Power contact material［主触点材料］	Copper ［铜］
Rated operating voltage［额定工作电压］	1,500V DC
Max. Continuous current (at 23℃) ［最大连续电流］	1,000A

Short term withstand current［短时耐受电流］(at 85℃)



Notes［备注］:

1. The curve data is for buyers design reference, and the selection of DC contactor and short circuit matching fuse is subject to the actual verification［该曲线数据供用户设计参考，直流接触器选型与短路匹配熔断器时以实际验证为准］
2. Conductor size see ALQ-SPEC-000【DC Contactor User Manual】［导体尺寸请查看ALQ-SPEC-000【直流接触器使用说明书】］
3. The set curve for the DC contactor power contacts has a safety temperature upper limit of 180℃; the functional temperature upper limit is 130℃.［该曲线设定的直流接触器主触点安全温度上限为180℃；功能温度上限为130℃］

Electrical life ［电气寿命］	Resistive load (R load)［阻性负载］ L/R ≤ 0.1ms ON : OFF = 0.6s :60s	Break［分断］	1,500V DC	100 cycles (at 750A)
			1,000V DC	100 cycles (at 1000A)
			800V DC	500 cycles (at 1000A)
			450V DC	1,000 cycles (at 1000A)
Max. cut-off current［最大切断电流］			8,000A (3ms)	1 cycle
Mechanical life［机械寿命］ (ON : OFF = 1s : 9s)			200,000cycles	
Initial contact resistance (at 800A) ［初始接触电阻］			0.5mΩ	
Operate Time (at 23℃) ［动作时间］		Close［吸合］	50ms Max. ⟨01	
		Bounce［弹跳］	5ms Max.	
		Release［释放］	30ms Max. ⟨02	

⟨01 Coil nominal voltage, includes contact bounce time.［线圈施加额定工作电压，含触点弹跳时间］
⟨02 Coil nominal voltage, includes arcing, without diode.［线圈施加额定工作电压，含电弧，无续流二极管］

■ Auxiliary contact［辅助触点］

Parameter［参数］	Data［数据］
Contact arrangement［触点形式］ ⟨03	1 Form A (SPST-NO)［常开］
Contact polar［触点极性］	Without polarity［无极性］
Rated load［额定负载］	0.1A (at 12V DC)
Contact resistance, Max.［最大接触电阻］	100mΩ (at 12V DC)
Electrical life［电气寿命］(Resistive load［阻性负载］, L/R ≤ 0.1ms)	10,000cycles (at 12V DC/0.1A)

⟨03 The auxiliary contact is mechanically linked to the main power contacts.［辅助触点与主电源触点进行机械连接］

■ Coil（at 23℃）［线圈］

Parameter［参数］	Data［数据］
Coil type［线圈形式］	Single coil + PWM［单线圈+PWM］ ⟨04
Rated voltage［额定工作电压］	12V DC / 24V DC
Pick-up (close) voltage Max.［吸合电压］ ⟨05	9V DC
Drop-out (open) voltage Min.［释放电压］ ⟨05	5V DC
Pick-up (close) current Max.［最大吸合电流］	3.8A
Holding current (Avg.)［保持电流（平均值）］	0.33A (at 12V DC) 0.17A (at 24V DC)
Coil power Max.［线圈功率］ ⟨05	4W
Operating voltage range［工作电压范围］	9 - 36V DC

⟨04 The product has been configured with coil surge absorption circuit (TVS), buyers do not need to configure.［该产品已配置线圈浪涌吸收电路（TVS），用户无需配置。］
⟨05 Because the DC contactor is operated by a coil that changes resistance with temperature: When the temperature is higher than 23℃, coil resistance, pick-up voltage and drop-out voltage will be higher than the nominal value, and the coil power will be lower than the nominal value. When the temperature is below 23℃, coil resistance, pick-up voltage and drop-out voltage will be lower than the nominal value, and the coil power will be higher than the nominal value.［因为直流接触器是通过一个随温度变化电阻的线圈来操作的。当温度高于 23℃时，线圈电阻、吸合电压和释放电压会高于标称值，而线圈功率会低于标称值。当温度低于 23℃时，线圈电阻、吸合电压和释放电压会低于标称值，而线圈功率会高于标称值。］

■ Insulation［绝缘］

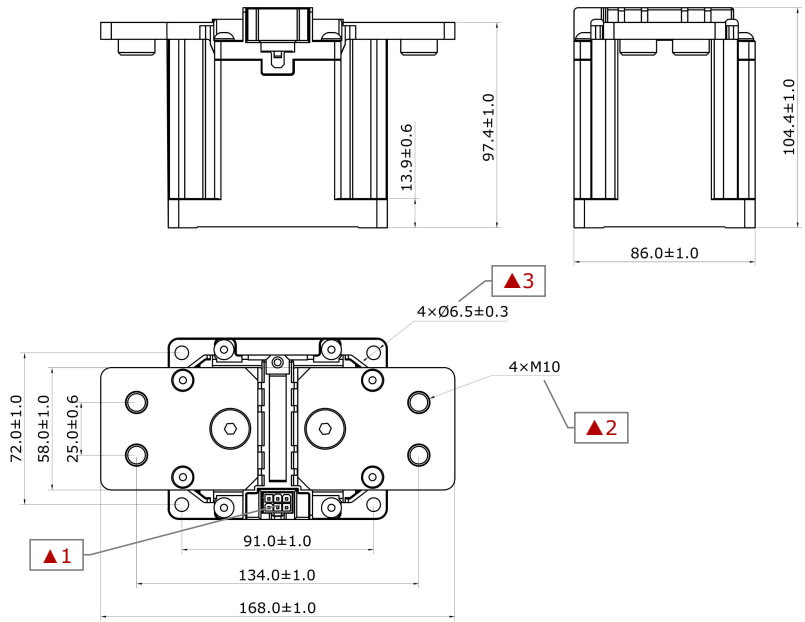
Parameter［参数］		Data［数据］
Insulation resistance（at 1500V DC）［绝缘电阻］〈06		Initial［初始］: 1000MΩ Min.
		End of life［寿命终结］: 50MΩ Max.
Dielectric withstanding voltage［介质耐压］(at sea level［海平面］)	Between open contacts［主触点间］	AC 4,000 Vrms for 1min. 〈07
	Between contacts and coil［主触点与线圈间］	

〈06 Measurement at same location as "Dielectric withstanding voltage" section.［测量位置与“介质耐压”部分相同］
〈07 Leakage current［漏电流］: 10mA

■ Environmental［环境］

Parameter［参数］		Data［数据］
Shock［冲击］	Functional ［稳定性］	10G（Duration 11ms）
	Destructive［强度］	50G（Duration 6ms）
Vibration, Sinusoidal（10-500Hz Peak）［正弦振动］		5G
Environmental seal［环境密封］		IP67 & IP69K
Salt fog［盐雾］		GB/T2423.17 / IEC60068-2-11
Operating ambient temp range［使用环境温度］		-40℃ to +85℃
Storage ambient temp range［储存环境温度］		-40℃ to +85℃
Ambient humidity［环境湿度］		5%～95% RH
Altitude［海拔高度］		≤4000m

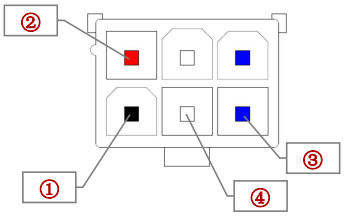
Dimensions［尺寸］ (Dimensions are in mm［尺寸单位为毫米］)



- **Coil、auxiliary contacts and temperature sensor connection［线圈、辅助触点和温度传感连接］**

▲1 Quick-connect terminal［连接器］:

- ✓ Supplier［供方］: MOLEX
- ✓ Part number［型号］: 874270602
- ✓ Wiring form［接线形式］:



①: Black = - coil lead［黑色=负极线圈导线］
②: Red = + coil lead［红色=正极线圈导线］
③: Blue = Auxiliary contact lead［蓝色=辅助触点导线］
④: White = Temperature sensor lead［白色=温度传感导线］
(Auxiliary contact and temperature sensor connection are optional, refer to part numbering system［辅助触点和温度传感连接可选配，参照零件编码系统］)

- **Mounting［安装］**

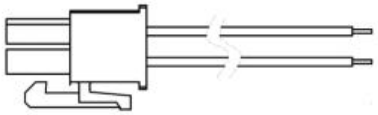
▲2 M10 Power terminals［M10］
Torque 18 to 22Nm (typical 20Nm) ［扭矩 18 至 22Nm（典型 20Nm）］

▲3 Base［底座］
Torque 4 to 6Nm (Typical 5Nm)［扭矩 4 至 6Nm（典型 5Nm）］
Mounting hardware (not supplied)［安装硬件（不提供）］:
4 X M6 Bolt［4 个 M6 螺栓］
4 X M6 Washer［4 个 M6 平垫圈］
4 X M6 Spring washer［4 个 M6 弹簧垫圈］

Harness assembly instructions［线束组件说明］

■ Harness assembly ［线束组件］

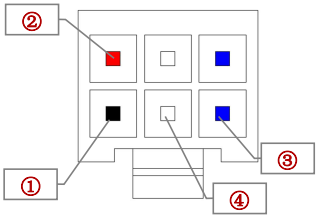
- **Harness assembly**［线束组件］



▲4 Quick-connect terminal［连接器］:

- ✓ Terminal box model：039012065（MOLEX）
  ［端子盒型号：039012065（MOLEX）］
  Type of terminal ：039000038（MOLEX）
  ［端子型号：039000038（MOLEX）］
- ✓ Lead length 400±10mm ［导线长度 400±10mm］

- **Wiring form**［接线形式］



①: Black = - coil lead［黑色=负极线圈导线］
②: Red = + coil lead［红色=正极线圈导线］
③: Blue = Auxiliary contact lead［蓝色=辅助触点导线］
④: White = Temperature sensor lead［白色=温度传感导线］

The wiring harness assembly needs to be purchased separately, and the product itself does not include this component.［线束组件需另行购买，产品本身不包含该组件。］

Part numbering system［零件编码系统］

EVH9A	X	-	1000	X	1	B	C	XXX

- **Series［系列］:**
  "**EVH9A**"=EVH9A series［EVH9A 系列］
- "**X**"=Customer code［客户代码］〈11
- **Rated maximum current［额定最大电流］:**
  "**1000**" = 1,000A
- **Contact form［触点形式］:**
  "**E**" = Power contact (1 Form X) without polarity, without auxiliary contact［主触点（一组常开）无极性，无辅助触点］
  "**G**" = Power contact (1 Form X) without polarity, with 1 auxiliary contact (1 Form A)［主触点（一组常开）无极性，有 1 个辅助触点（一组常开）］
  "**X**" = Power contact (1 Form X) without polarity, with 1 auxiliary contact (1 Form A), with 1 temperature sensor lead［主触点（一组常开）无极性，有 1 个辅助触点（一组常开），有 1 个温度传感导线 ］
- **Coil voltage［线圈电压］:**
  "**1**" = 12 / 24V DC
- **Mounting method［安装方式］:**
  "**B**" = Base upright mounting, power contacts internal thread［底座为立式安装，主触点为内螺纹］
- **Power contact material［主触点材料］:**
  "**C**" = Copper［铜］
- **Special client code［特殊客户代码］:**
  When buyers have special requirements, buyer special requirements are determined by ALQ after review, whether they are numbers or letters (they do not affect the construction and performance). Omit when no special requirements［当用户存在特殊要求时使用，用户特殊要求由安来强评审后确定数字或字母（它们不影响构造和性能）。无特殊要求时省略］

〈11 Customer Code: " X ", identified by letters A-Z，may be omitted.［客户代码：“X”，用 A-Z 字母标识，可省略。］

Please refer to the ALQ-SPEC-000 "DC Contactor User Manual" for more information, which is an inseparable part of this document.［请查看 ALQ-SPEC-000【直流接触器使用说明书】获取更多内容，该文件是本文件不可分割的一部分］