



## 特性 Features

1. 高强度环氧树脂密封，无电弧泄露风险，确保寿命内不起火、不爆炸；  
Sealed with high-strength epoxy resin, no risk of arc leakage, ensuring no fire or explosion within the service life.
2. 灌封以氮气为主的气体，有效防止触点氧化、烧损，接触电阻低且稳定，触点部分可满足IP67防护等级；  
Potting with mainly nitrogen inert gas improves arc extinguishing performance and effectively prevents contact oxidation and burnout. The contact resistance is low and stable, and the contact part can meet the IP67 protection grade.
3. 50A 85°C长时间载流能力；  
50A 85°C long time current carrying capacity.
4. 绝缘电阻达100MΩ（1000VDC），触点与线圈间耐压3.5kV；  
The insulation resistance reaches 100MΩ (1,000VDC), and the withstand voltage between the contact and the coil is 3.5kV.
5. 符合IEC 60664-1, GB/T14048.1和GB/T14048.4要求；  
Compliant with IEC 60664-1, GB/T14048.1 and GB/T14048.4 requirements.
6. 符合RoHs（2015/863/EU），REACH（1907/2006/EC）要求；  
Compliant with RoHS (2015/863/EC) and REACH (1907/2006/EC) requirements.
7. 安规认证：CE、CCC、RoHS。  
Safety certificate: CE, CCC, RoHS.

### 主触点参数

#### Main Contact Specification

触点形式 Contact Arrangement	1K (1NO)
触点极性 Contact Polarity	无极性 Non-polarity
接触电阻 Contact Resistance	≤0.5mΩ (at 100A)
最大切换电压 Max. Switching Voltage	1,000VDC
最大分断电流 Max. Breaking Current	1,000A (320VDC) 1次(Ops)
电耐久性（阻性负载） Electrical Endurance (Resistive Load)	1,000次(Ops) (1,000VDC, 50A)
	1,500次(Ops) (750VDC, 50A)
	5,000次(Ops) (500VDC, 50A)
	20,000次(Ops) (110VDC, 50A)
机械耐久 Mechanical Endurance	300,000次(Ops)
电流耐受 Withstand Current	50A, 持续 50A, Continuous
	130A, 60min
	180A, 5min
	300A, 30S

### 辅助触点参数

#### Auxiliary Contact Parameter

辅助触点形式 Aux. Contact Arrangement	FK/FB/FZ (1NO/1NC/1CO)
辅助触点额定电流 Aux. Contact Rated Current	5A
辅助触点最大分断电压 Aux. Contact Max. Breaking Voltage	120VDC

### 性能参数 (at 23°C)

#### Performance Parameter (at 23°C)

吸合电压 Pickup Voltage	见线圈参数表 See Coil Parameter Tables	
释放电压 Dropout Voltage	见线圈参数表 See Coil Parameter Tables	
吸合时间 Pickup Time	≤25ms	
触点弹跳时间 Contact Bounce Period	≤5ms	
释放时间 Dropout Time	≤10ms	
介质耐压 Dielectric Strength	主触点间 Between Main Contacts	3,500VDC 1min
	主触点与线圈间 Between Main Contact and Coil	3,500VDC 1min
绝缘电阻 Insulation Resistance	初始状态 Initial State	100MΩ 1min
	电寿命后 After Electrical Life	50MΩ 1min
冲击 Shock	稳定性 Stability	20g (通电) 20g (Power On)
	强度 Strength	50g
振动 Vibration	10g, 10~500Hz, 1/2正弦波 (通电) 10g, 10~500Hz, 1/2 Sine Wave (Power On)	
湿度 Relative Humidity	5%~95%RH	
温度 Temperature	-40°C~85°C	
负载端引出端型式 Load Terminal	M5内螺纹 M5 Internal Thread	
重量 Weight	约About 230g	
外形尺寸 Dimension	55x42x64mm	
/	/	
/	/	

## ADH50S线圈参数 ADH50S Coil Parameters

线圈电压 Coil Voltage	吸合电压 Pickup Voltage VDC	释放电压 Dropout Voltage VDC	线圈电阻 Coil Resistance	线圈功耗 Coil Power
12V	≤70%Us	5%-40%Us	24Ω±10%	6W±10%
24V	≤70%Us	5%-40%Us	96Ω±10%	6W±10%
48V	≤70%Us	5%-40%Us	384Ω±10%	6W±10%
60V	≤70%Us	5%-40%Us	600Ω±10%	6W±10%
72V	≤70%Us	5%-40%Us	864Ω±10%	6W±10%

## ADH50E线圈参数 ADH50E Coil Parameter

线圈电压 Coil Voltage	吸合电压 Pickup Voltage VDC	释放电压 Dropout Voltage VDC	线圈电阻 Coil Resistance	启动功率 Starting Power	保持功耗 Holding Power
9-36V	9-36V	5-7V	3.5Ω±10%	25W±10% (<100ms)	2W±10%

## ADH100W线圈参数 ADH100W Coil Parameter

线圈电压 Coil Voltage	吸合电压 Pickup Voltage VDC	释放电压 Dropout Voltage VDC	线圈电阻 Coil Resistance	启动功率 Starting Power	保持功耗 Holding Power
32-96V	32-96V	16-20V	40.5Ω±10%	25W±10% (<100ms)	2W±10%

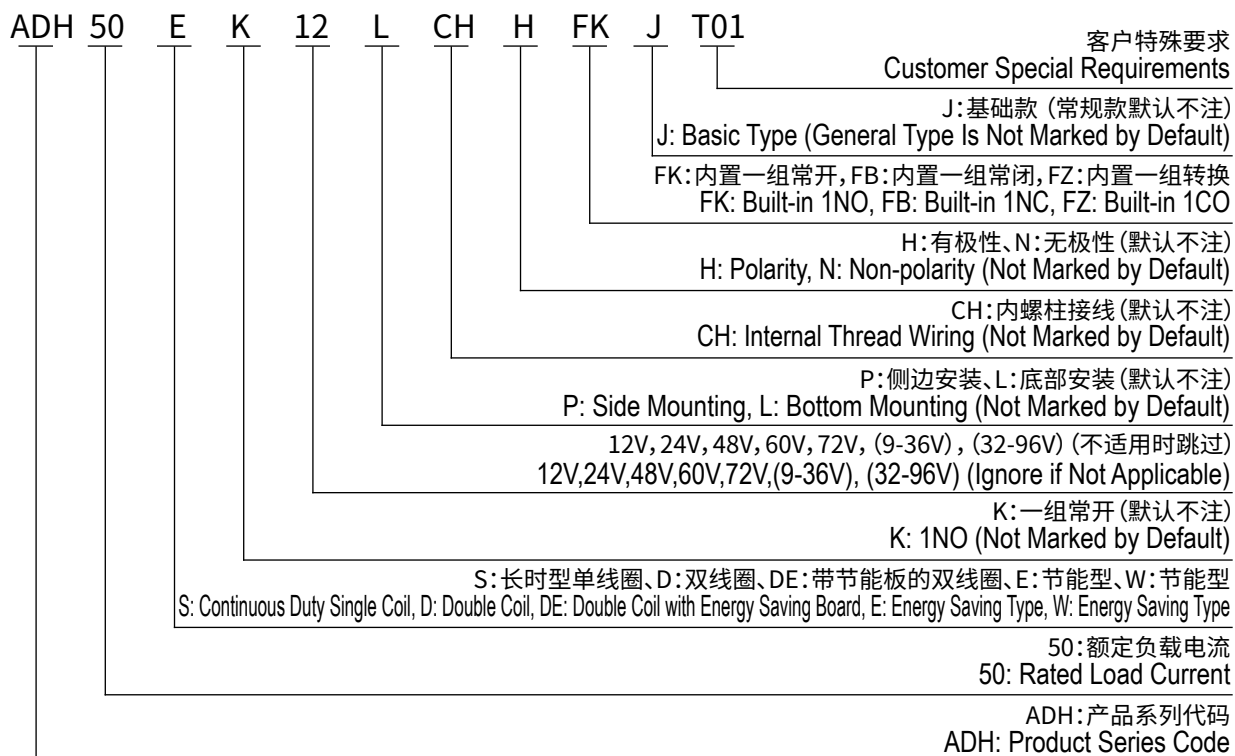
## ADH50D线圈参数 ADH50D Coil Parameter

线圈电压 Coil Voltage	吸合电压 Pickup Voltage VDC	释放电压 Dropout Voltage VDC	线圈电阻 Coil Resistance		启动功率 Starting Power	保持功耗 Holding Power
			启动 Starting	保持 Holding		
12V	≤70%Us	5%-40%Us	3.3Ω±10%	48Ω±10%	45W±10%	3W±10%
24V	≤70%Us	5%-40%Us	13.3Ω±10%	190Ω±10%	45W±10%	3W±10%
48V	≤70%Us	5%-40%Us	52.8Ω±10%	768Ω±10%	45W±10%	3W±10%
60V	≤70%Us	5%-40%Us	82.5Ω±10%	1,200Ω±10%	45W±10%	3W±10%
72V	≤70%Us	5%-40%Us	118Ω±10%	1,730Ω±10%	45W±10%	3W±10%

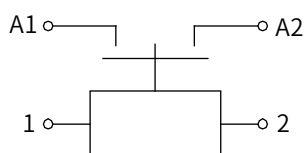
## ADH50DE线圈参数 ADH50DE Coil Parameters

线圈电压 Coil Voltage	吸合电压 Pickup Voltage VDC	释放电压 Dropout Voltage VDC	线圈电阻 Coil Resistance		启动功率 Starting Power	保持功耗 Holding Power
			启动 Starting	保持 Holding		
12V	≤70%Us	5%-40%Us	3.3Ω±10%	48Ω±10%	45W±10%	3W±10%
24V	≤70%Us	5%-40%Us	13.3Ω±10%	190Ω±10%	45W±10%	3W±10%
48V	≤70%Us	5%-40%Us	52.8Ω±10%	768Ω±10%	45W±10%	3W±10%
60V	≤70%Us	5%-40%Us	82.5Ω±10%	1,200Ω±10%	45W±10%	3W±10%
72V	≤70%Us	5%-40%Us	118Ω±10%	1,730Ω±10%	45W±10%	3W±10%

## 型号说明 Model Coding



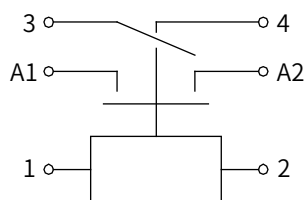
## 接线原理图 Wiring Diagram



不带辅助接线图  
Wiring Diagram without  
Auxiliary Contact

注: A1、A2主端子接线无极性  
3、4辅助接线端子  
1、2线圈接线端子无极性

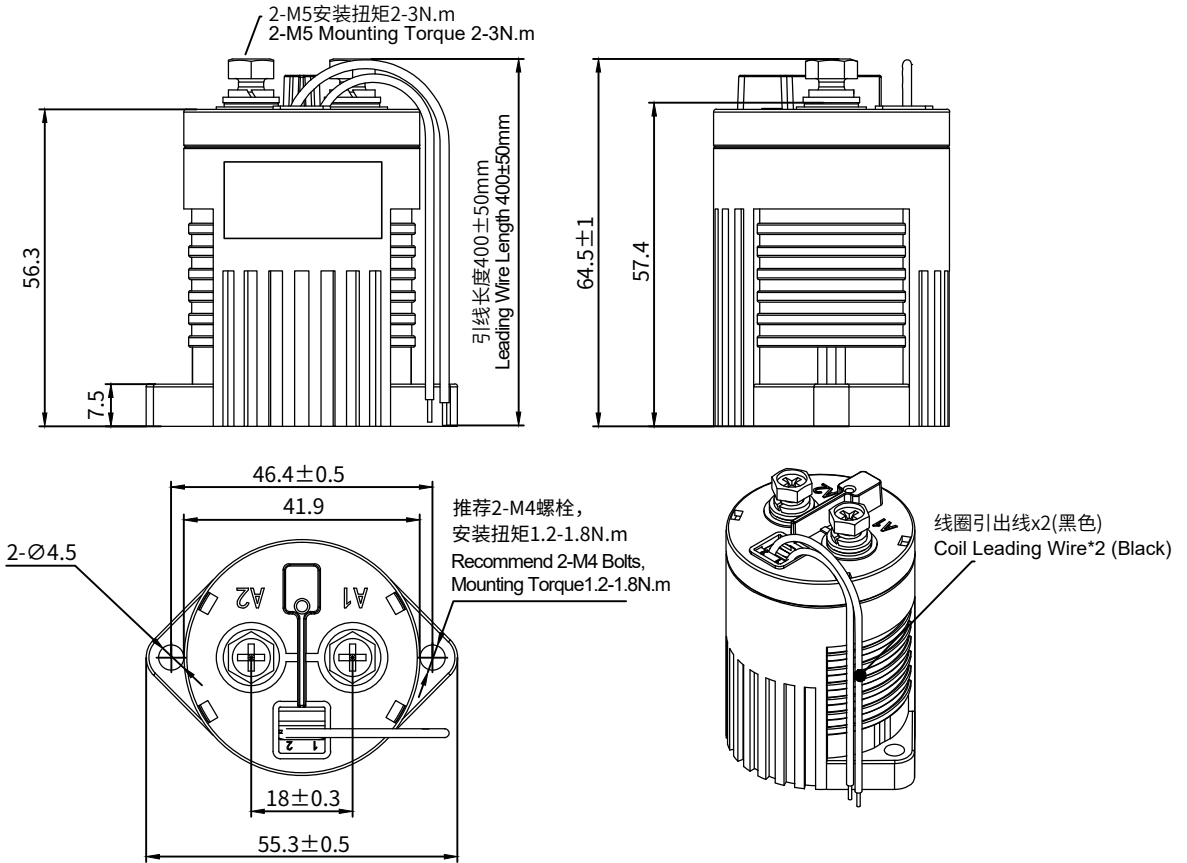
Note: A1&A2 main terminals with non-polarity,  
3&4 auxiliary contact terminals,  
1&2 coil terminals with non-polarity.



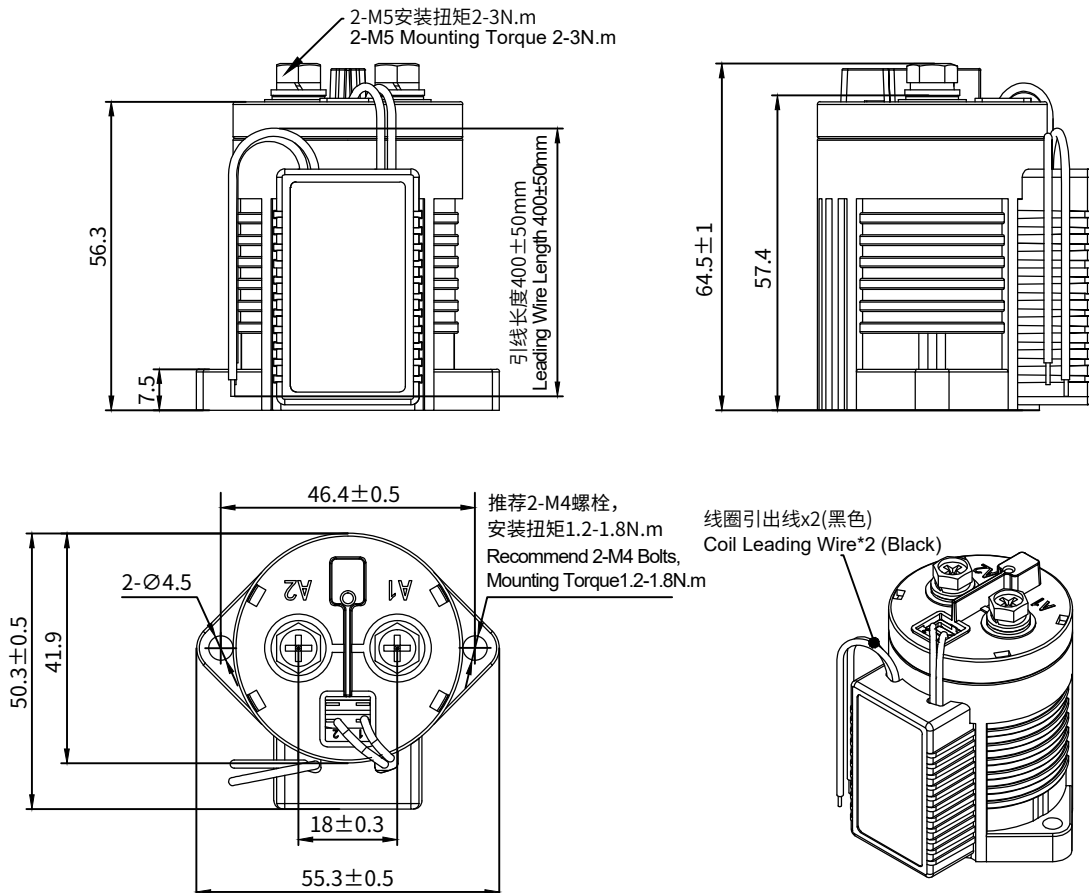
带常开辅助接线图  
Wiring Diagram with 1NO  
Auxiliary Contact

# 外形安装尺寸图 Outline Installation Dimension Drawing

ADH50S ADH50D

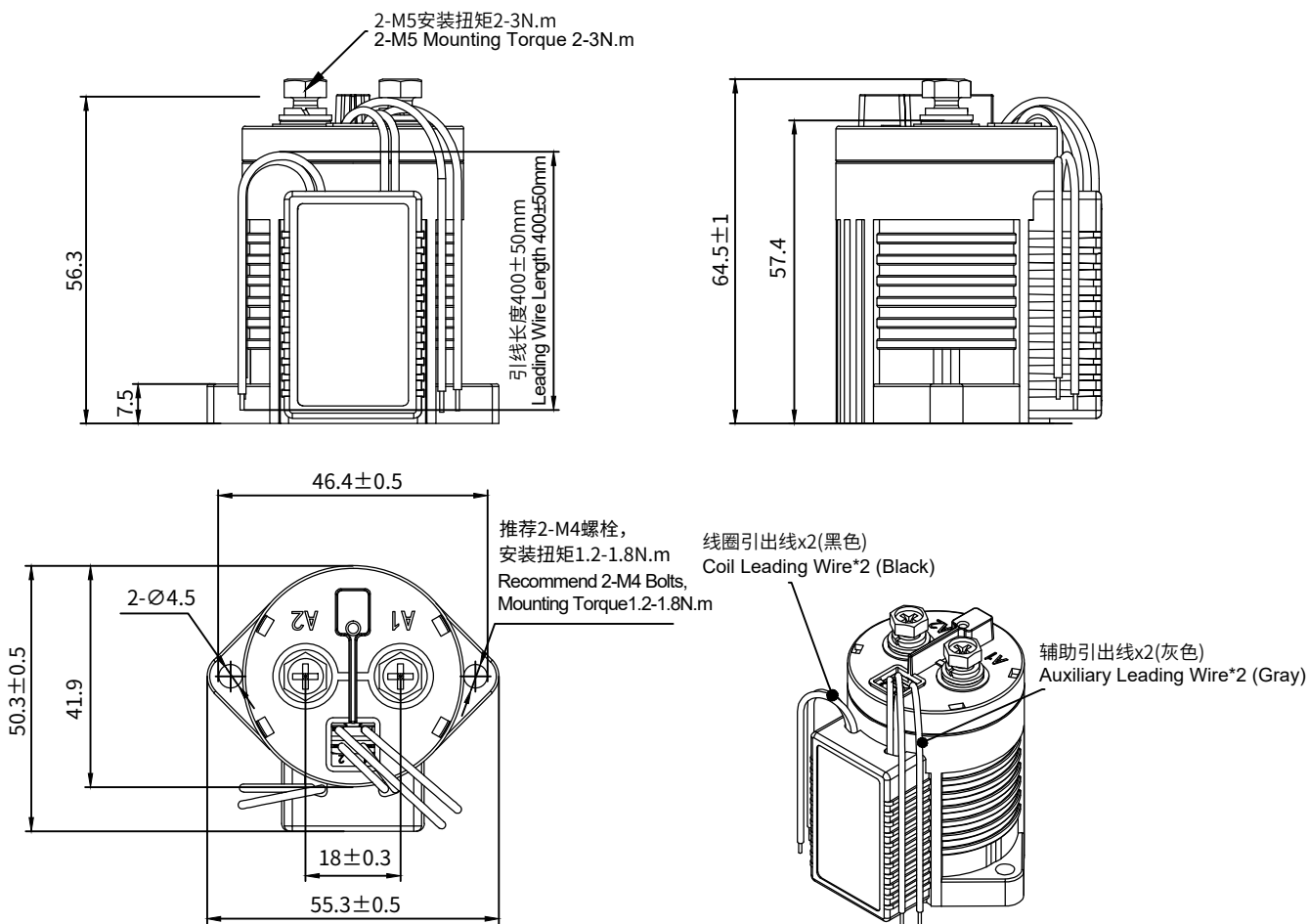


ADH50E 不带辅助  
ADH50E Without Auxiliary Switch



# 外形安装尺寸图 Outline Installation Dimension Drawing

ADH50 带辅助  
ADH50 With Auxiliary Switch



## 使用注意事项 Usage Cautions

1. 关于本产品的应用,请客户在选型产品时,根据自己的具体使用条件和环境要求,选择与之相匹配的产品,其中未明确规定的要求条件,请与奥凯联系,以便获取更多的技术支持。

Regarding the application of this product, please select the matching product according to your specific use conditions and environmental requirements when selecting the product. If the requirements are not clearly specified, please contact AOKAI to obtain more technical support.

2. 安装使用本产品时,无论接线还是固定安装,均要求使用防松弹垫。

When installing and using this product, regardless of wiring or fixed installation, it is required to use anti-loose spring washers.

3. 安装紧固件的扭矩应在本规范要求的标准范围内,扭矩低于扭矩最小值或超出扭矩最大值,可能导致安装不牢固或破坏产品。  
The torque for installing fasteners should be within the standard range required by this specification. It may cause the unstable installation or damaging the product if the torque is lower than the minimum torque or higher than the maximum torque.

4. 避免把本接触器安装在强磁场的地方(如变压器或强磁铁处),或靠近有热辐射的物体,建议配合安装散热风扇使用。

Do not install the contactor in places with strong magnetic fields (such as transformers or strong magnets), or close to objects with thermal radiation. It is recommended to use it with a cooling fan.

5. 禁止在有油污的环境下使用该产品,尤其是未接线前,主端子被油污污染会严重影响导电性,影响产品寿命。

It is forbidden to use the product in an environment with oil pollution, especially before wiring, it will seriously affect the main terminals conductivity if they are polluted by oil pollution, and affect the product life.

6. 禁止超出额定电寿命使用该产品,额定电寿命到达时虽然产品还可以继续工作,但有失效、爆炸、不断开引起燃烧的风险。

It is forbidden to use the product beyond the rated electrical life. When the rated electrical life is reached, although the product can continue to work, there is a risk of failure, explosion, and burning because of non-breaking.

7. 当主电路电压 $\geq 48V$ 时,如果产品标签中有H符号出现,表示主电路接线区分电流方向,“+”端或点有红漆的接线柱端必须连接电源(电池)的正极。

When the main circuit voltage is  $\geq 48V$ , if the H suffix appears on the product label, it means that the main circuit wiring has the current direction, and the "+" terminal or the terminal with red paint must be connected to the positive pole of the power supply (battery).

8. 该产品不能作为保护器使用,使用时线路必须串联保护器。

This product cannot be used as a protector, and the circuit must be connected with a protector in series when using.

9. 奥凯仅做阻性电寿命验证和质量保证,产品用于有感性负载或容性负载的环境时,建议回路并联浪涌保护装置。

AOKAI only does the resistive electrical life verification and quality assurance. When the product is used in an environment with inductive load or capacitive load, it is recommended that the circuit should be connected in parallel with a surge protection device.

10. 持续工作后,断开后立即重启,会因产品处于发热状态而影响吸合电压,吸合电压会升高属合理现象。

After continuous work, restart immediately after disconnection, the pickup voltage will be affected due to the heating state of the product, and it is reasonable that the pickup voltage will increase.

11. 严禁带电接线。

It is strictly prohibited to wiring when power on.

12. 在接触器坠落的情况下(高度 $\geq 30cm$ ),原则上请不要再使用。

In principle, please do not use the contactor when it has dropped (height $\geq 30cm$ ).

13. 奥凯保留对产品更改的权利,客户在首次下单之前应确认此规格书内容,必要时可要求我司提供新的规格书。

AOKAI reserves the right to change the product. Customers should confirm the content of this specification before the first order, and can ask our company to provide a new specification if necessary.