

ASCB2-125J系列智能微型断路器

Series ASCB2-125J Smart MCB

安装使用说明书 V1.0

Installation and Operation Instruction V1.0

安科瑞电气股份有限公司

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申 明

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1. 概述

Introduction

ASCB2-125J系列智能微型断路器（以下简称智能微型断路器）用于户内建筑的低压终端配电网络，涉及工业、商业、民用建筑和基础设施等相关领域。智能微型断路器具有RS485通讯功能，搭配接收装置，可以通过软件平台监测用电线路的关键电气参数，例如：电压、电流、功率、温度、漏电、能耗等。还具有远程操控、异常预警、事故跳闸告警、电能计量统计等功能。

The series of ASCB2-125J Smart MCB is intended for low-voltage terminal distribution systems within indoor buildings, covering related sectors including industrial, commercial and civil buildings as well as infrastructures. Smart MCB is equipped with RS485 communication function. Matched with receiving devices, it can monitor key electrical parameters of power circuits via software platforms, such as voltage, current, power, temperature, leakage current and energy consumption. It also integrates functions including remote control, abnormal early warning, fault trip alarm and electric energy metering.

本系列产品可选单极、2极、3极、4极。

This series is available in 1P, 2P, 3P and 4P variants.

1. 产品型号

Product Model

- 智能微型断路器
- Smart MCB



表1 智能微型断路器功能描述表
Table1 Function Description Table of Smart MCB

产品型号 Product Model	功能描述 Function Description
ASCB2-125J	可实时监测电压、电流、功率、电能和温度等参量；具有过压、欠压、过载、短路、过流、和超温等多种保护功能；具有本地手动推杆、本地电动控制、本地锁定、远程遥控、定时控制等多种控制功能；导轨式安装，可选极数1P/2P/3P/4P；标配RS-485（MODBUS）通讯；可选脱扣曲线C型/D型。 It can monitor real-time parameters including voltage, current, power, electric energy and temperature. It is equipped with multiple protection functions such as overvoltage, undervoltage, overload, short-circuit, overcurrent and overtemperature protection. It supports various control modes: local manual toggle operation, local electric control, local locking, remote control and timing control. Adopting DIN rail mounting, it is available in 1P, 2P, 3P and 4P poles. RS-485 (MODBUS) communication is provided as standard, and Type C / Type D trip curves are optional.
ASCB2LE-125J	可实时监测电压、电流、功率、电能、温度和漏电等参量；具有过压、欠压、过载、短路、过流、超温和漏电等多种保护功能；具有本地手动推杆、本地电动控制、本地锁定、远程遥控、定时控制等多种控制功能；导轨式安装，可选极数2P/4P；标配RS-485（MODBUS）通讯；可选脱扣曲线C型/D型。 It can monitor real-time parameters including voltage, current, power, electric energy, temperature and residual current. It integrates multiple protection functions: overvoltage, undervoltage, overload, short-circuit, overcurrent, overtemperature and earth leakage protection. It supports diverse control modes: local manual toggle operation, local electric control, local locking, remote control and timing control. Designed for DIN rail mounting, it is available in 2P and 4P pole versions. RS-485 (MODBUS) communication is standard, and Type C / Type D trip curves are optional.

2. 技术参数

Technical Parameters

表2 智能微型断路器技术参数表
Table2 Technical Parameter Table of Smart MCB

产品型号 Type of products	ASCB2-125J	ASCB2LE-125J
极数 Poles	1P/2P/3P/4P	2P/4P
壳架等级 Frame Size	125A	
额定电压 Rated Voltage	230V（1P/2P）、400V(3P/4P)	
额定电流 Rated Current	6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A, 80A, 100A, 125A	

瞬时脱扣类型 Instantaneous Trip Characteristic		C/D	
额定短路分断能力 Rated Short-circuit Breaking Capacity		10kA	
保护功能 Protection Functions	短路保护 Short-circuit protection	C型: 5-10倍额定电流0.04秒断路保护 Type C: Trips within 0.04s at 5~10 times rated current D型: 10-14倍额定电流0.04秒断路保护 Type D: Trips within 0.04s at 10~14 times rated current	
	过流保护 Overcurrent protection	默认80%额定电流预警, 110%额定电流跳闸, 阈值可调 Early warning triggers at 80% rated current by default, and tripping occurs at 110% rated current; the threshold is adjustable.	
	过压保护 Overvoltage protection	默认245V电压预警, 260V电压跳闸, 阈值可调 Overvoltage warning at 245V and tripping at 260V by default; thresholds are adjustable.	
	欠压保护 Undervoltage protection	默认190V电压预警, 175V电压跳闸, 阈值可调 Undervoltage warning at 190V and tripping at 175V by default; thresholds are adjustable.	
	过温保护 Overtemperature protection	默认80℃预警, 95℃跳闸, 阈值可调 Overtemperature warning at 80℃ and tripping at 95℃ by default; thresholds are adjustable.	
	漏电保护 Residual current protection	无 None	默认15mA预警, 30mA跳闸, 阈值可调 Residual current warning at 15mA and tripping at 30mA by default; thresholds are adjustable.
	大负载保护 Heavy load protection	默认1kW功率报警, 阈值可调, 保护开关默认关闭 Power alarm triggers at 1kW by default, threshold adjustable; this protection switch is disabled by default.	
漏电自检 Residual current self-test		无 None	本地按键/远程自检 Local button / remote self-test
机械寿命 Mechanical endurance		20000	
电气寿命 Electrical endurance		10000	
防护等级 IP Rating		IP20	
接线能力 Terminal capacity		ABCN接线: 1-35mm ² ABCN wiring: 1-35mm ² RS485接线: 1.5mm ² RS485 wiring: 1.5mm ²	
海拔要求 Operating altitude		≤2000m	
环境温度 Ambient Temperature		-10℃~55℃, 24h平均温度不高于40℃ -10℃~55℃, 24h average temperature ≤40℃	
环境要求 Environmental conditions		无爆炸危险、无导电粉尘、周围空气不含腐蚀金属和破坏绝缘的介质、无显著振动 No explosive hazard atmosphere, no conductive dust. The surrounding air shall contain no media that corrode metals or	

	damage insulation, and no significant vibration exists.
相对湿度 Relative Humidity	+40℃时，空气的相对湿度50%，在较低温度下可以有较高的相对湿度 RH 50% at 40℃, higher RH allowable at lower temperatures
储存温度 Storage temperature	-20℃-70℃
污染等级 Pollution degree	II
安装类型 Mounting type	III
安装方式 Mounting method	标准35mm导轨安装 Standard 35mm rail mounting

3. 安装与接线

Install and wiring

4.1 外形及安装尺寸（单位：mm）

Outline & installation dimensions

- 智能微型断路器

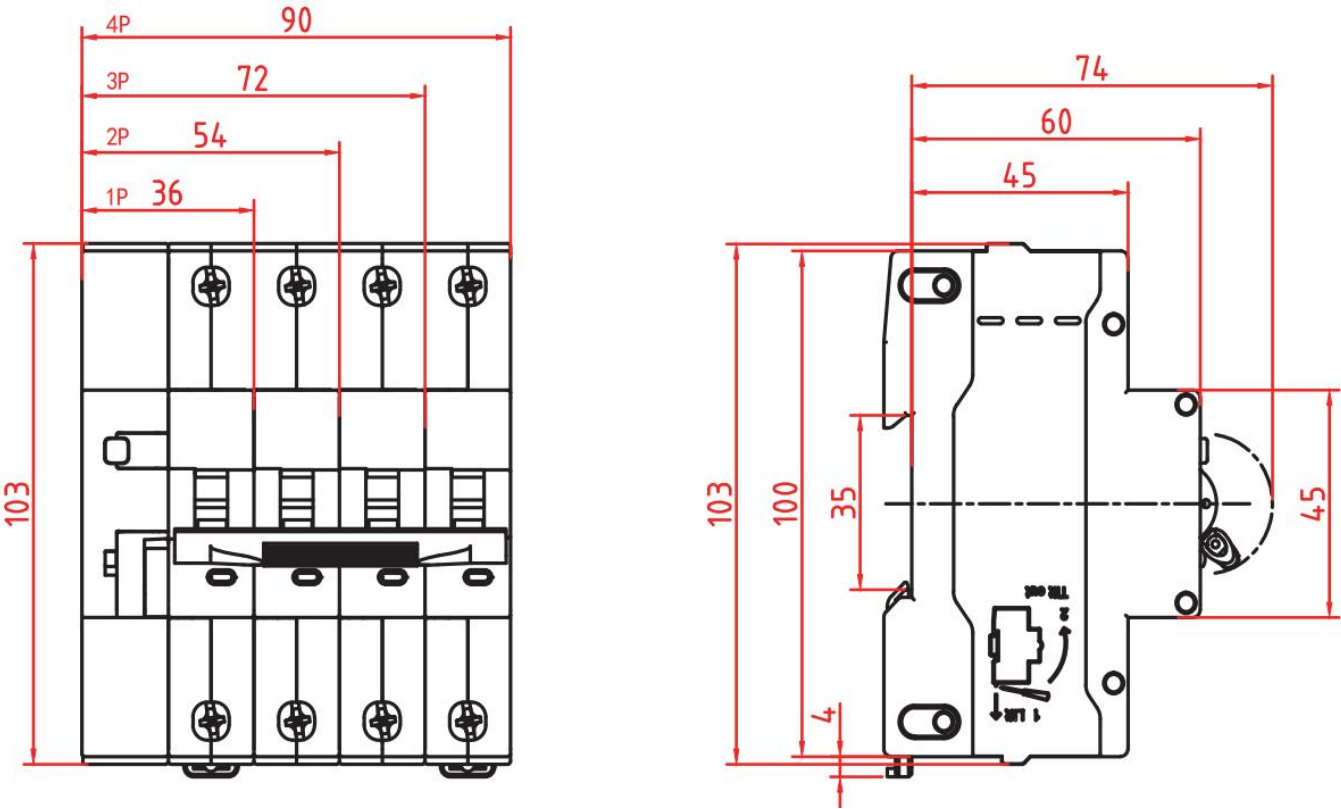
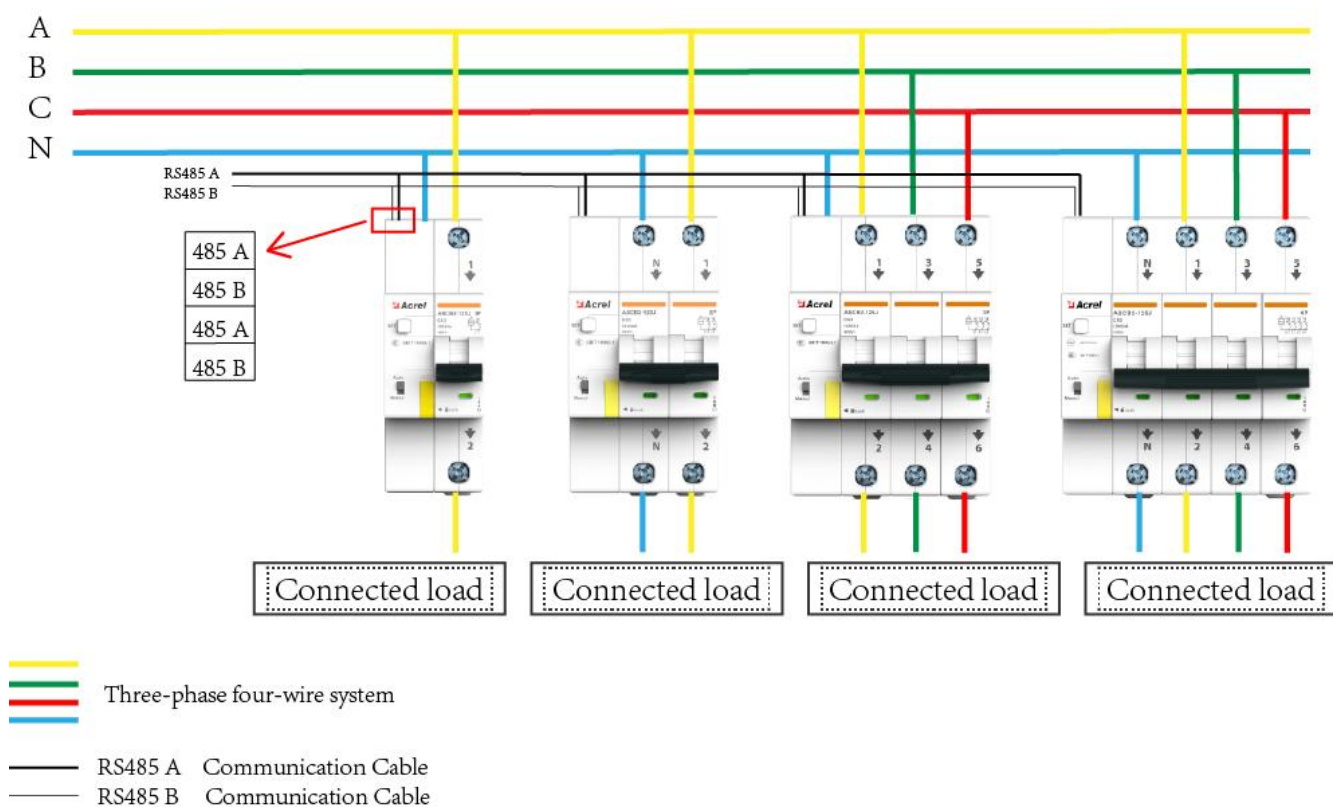


图1 智能微型断路器外形尺寸图
Figure 1 Smart MCB Outline dimension drawing

4.2 接线端子说明

Terminal description



5. 使用操作指南

Operating Instructions

5.1 装置面板图及指示灯说明

5.1 Panel & LED Description

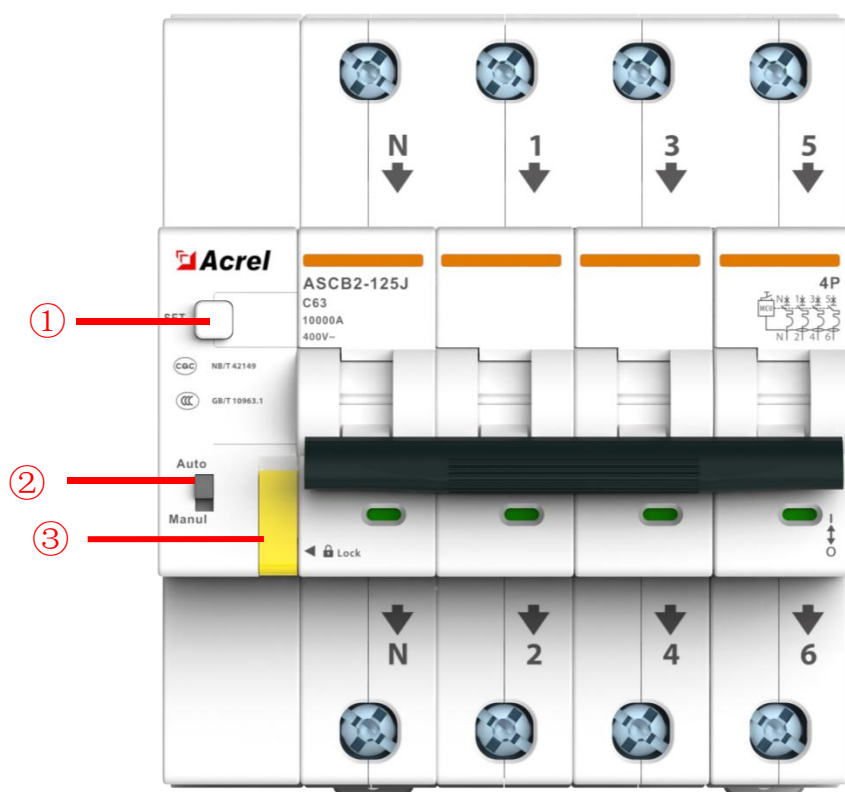


图2 装置面板指示灯说明图
Figure 2 Smart MCB Panel LED Indicator Drawing

类别 Type	序号 No.	说明 Description
指示灯 Indicator	①	显示空开工作状态： Displays the operating status of the smart MCB 红色常亮：设备合闸状态 Red led steady on: Device closed state 绿色常亮：设备分闸状态 Green led steady on: Device open state 红色慢闪：设备进入预警状态 Red led flashes slowly : Device early warning state 红色快闪：设备进入报警状态 Red led flashes fast: Device alarm state 绿色快闪：分闸锁定使能，并且分闸触发 Green led flashes fast: Opening lock enabled and opening triggered 黄灯常亮：设备处于故障状态 Yellow led steady on: Device fault state 蓝色常亮：挂锁③拉起，进入检修状态 Blue led steady on: Lock ③ pulled up, maintenance mode activated
按键 Button	①	按键②处于Auto自动状态时，点按控制本地分合闸； When Button ② is in Auto mode, short press to control local opening and closing. 按键②处于Manul手动状态时，点按进入菜单模式 When Button ② is in Manual mode, short press to enter menu mode.
	②	上下拨动切换远程/本地权限控制 Toggle up and down to switch remote/local permission control
	③	拉锁检修开关 Lockable maintenance switch

5.2 菜单模式

Menu Mode

将断路器通过按键②切换至本地手动状态后，点按按键①即可进入菜单模式，菜单模式共计四个功能页面，通过点按按键①可进行不同功能页面的切换，无操作1min回到菜单首页。

Switch the Smart MCB to local Manual mode with Button ②, then short press Button ①

to enter Menu Mode. Menu Mode contains four function pages. Short press Button ① to switch pages. The system returns to the main menu after 1 minute of inactivity.

表3 菜单模式指示灯状态说明
Table3 Indicator Status Description for Menu Mode

菜单页面 Menu Page	指示灯状态 Indicator Status	功能说明 Function Description
功能界面1 Function Interface 1	蓝灯短闪烁1次 Blue LED flashes briefly once 绿灯短闪烁N次 Green LED flashes briefly N times	绿灯闪烁次数表示不同的设备状态： N=1，正常，接收到正确数据快闪2下 The flashing times of the green LED represent different device statuses: N=1: Normal, two quick flashes upon receiving valid data
功能界面2 Function Interface 2	蓝灯短闪烁2次 Blue LED flashes briefly twice 红灯短闪烁N次 Red LED flashes briefly N times	红灯闪烁次数表示预报警类型： N=1正常，N=2过压 N=3欠压，N=4过流 N=5超温，N=6过功率 N=7漏电 The flashing times of the red LED indicates the pre-alarm type: N=1: Normal N=2: Overvoltage N=3: Undervoltage N=4: Overcurrent N=5: Overtemperature N=6: Overpower N=7: Electric leakage
功能界面3 Function Interface 3	蓝灯短闪烁3次 Blue LED flashes briefly three times 红灯短闪烁N次 Red LED flashes briefly N times	红灯闪烁次数表示故障类型： N=1正常 N=2断路器故障 N=3温度故障 N=4漏电故障 The flashing times of the red LED indicates the fault type: N=1: Normal N=2: Smart MCB fault N=3: Temperature fault N=4: Earth leakage fault
功能界面4 Function Interface 4	蓝灯短闪烁4次 Blue LED flashes briefly four times 绿灯短闪烁X次， Green LED flashes	红绿灯闪烁次数表示设备485地址： x=地址十位数 y=地址个位数

	briefly X times 红灯短闪烁Y次 Red LED flashes briefly Y times	The flashing times of red and green LEDs represent the RS485 address of the device: X = Tens digit of the address Y = Units digit of the address
	地址设置：进入功能页面4后，长按按键①（超过8s）进入地址设置界面，蓝灯进入长闪烁状态，点按按键①地址加1，长按2s地址减1，长按按键超过8s退出设置界面并保存。 Address Setting: After entering Function Page 4, press and hold Button ① for more than 8 seconds to enter the address setting interface. The blue LED will keep flashing slowly. Tap Button ① to increment the address by 1; press and hold it for 2 seconds to decrement the address by 1. Press and hold the button for more than 8 seconds again to exit the setting interface and save the configuration.	

4. 注意事项

4. Precautions

- 使用产品前请检查外观是否完好，若有损坏及时找销售商更换。
- Check the appearance for intactness before use. Contact the seller for replacement immediately if any damage is found.
- 按照使用说明书正确接线，接线完成后认真核查，确保接线正确。

Wire the device strictly in accordance with the user manual, and carefully double-check all wiring after completion to ensure correct connections.

更改记录

Change Record

修订版次 Revision Version	修订时间 Revision Date	修订条款 Revised Clauses
V1.0	2026.6.23	新版本下发。 New version released

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