

1.3 施耐德 PIX 12-24kV 中置式金属封闭开关设备 Schneider PIX 12-24kV Middle-mounted Metal Enclosed Switchgear



一、产品概述 General

PIX适用于三相交流50Hz、额定电压至24kV、母线和馈线电流至4000A,短时耐受电流40KA的单母线和单母线分段系统作为接受和分配电能的户内铠装移开式交流金属封闭开关柜设备。

为了满足特殊需求,我们还开发扩展了FC回路,适用于系统额定电压3.6、7.2和12kV,其中3.6kV和7.2kV称为PIX-M,柜宽为400mm,短时耐受电流可达到40kA作为中压马达控制中心。它可控制最大电动机至2.7MW,变压器容量至3.1MVA。并且,PIX-M的特殊设计可以与PIX直接形成排列,不需专门转接柜。

PIX系列产品结合了80年来全球所有开关柜制造厂的集体的经验,具有完善的一次方案,为中压电力系统提供了最佳的选择方案。

它运用了经久考验的成熟技术和创新的元器件,用它的设计理念和运行经验为您提供短期和长期的收益。

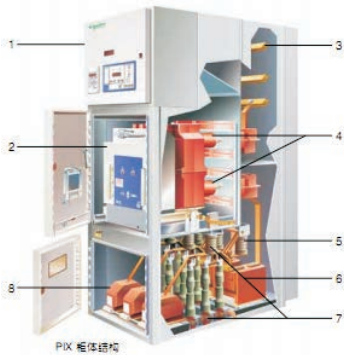
PIX is indoor armoured movable AC metal enclosed switchgear with 50Hz three-phase AC, up to 24KV rated voltage, up to 4000A current for bus and feeder, 40KA short-time withstand current for single bus and single bus segmented system to receive and distribute power.

In order to satisfy special needs, we extend FC loop to be applicable to 3.6, 7.2 and 12KV rated voltage, 3.6KV and 7.2KV are called PIX-M, the cabinet width is 400mm, short-time withstand current is up to 40KA. It can be used as medium-voltage motor control center which can control up to 2.7MW motor and 3.1MVA transformer. Besides, the special design of PIX-M can be assembled with PIX directly without any transfer cabinet.

PIX series combine with experiences from global switchgear manufacturers in recent 80 years. The perfect primary scheme affords the optimal option for medium-voltage electric system.

Creative parts and components with experienced technology are used, you can benefit from its design concept and operational experience.

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|-----------------|---|
| ●通用可靠不断完善的设计方案 | ●General and reliable design scheme |
| ●成熟可靠的真空开断技术 | ●Mature and reliable vacuum breaking technology |
| ●更高的运行性能和可靠性 | ●Better operational performance and reliability |
| ●安全、智能化、友好的操作界面 | ●Safe, intelligent and friendly interface |
| ●紧凑的结构 | ●Compact structure |
| ●卓越的抗内部电弧能力 | ●Super inner arc resistance |
| ●低廉的安装和维护费用 | ●Low installation and maintenance fees |



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|---------|-----------------------------|
| 1 低压箱 | 1. Low-voltage pressure box |
| 2 断路器 | 2. Circuit breaker |
| 3 主母线 | 3. Main bus |
| 4 帘门 | 4. Curtain door |
| 5 接地开关 | 5. Grounding Switch |
| 6 电流互感器 | 6. Current transformer |
| 7 电缆连接 | 7. Cable connection |
| 8 电压互感器 | 8. Potential transformer |

二、开关柜基本参数及主要性能指标 Basic Parameters and Main Performance Indicators

| 项目 Items | 单位 Unit | 参数 Parameters | | |
|---|--|------------------|-------|-----|
| 产品类别 Product type | — | PIX12 | PIX24 | |
| 额定电压 Rated voltage | kV | 12 | 24 | |
| 额定频率 Rated frequency | Hz | 50/60 | 50/60 | |
| 额定工频耐受电压1min Rated power frequency withstand voltage 1min | 相对相、相对地 Phase-to-phase, phase-to-ground | kV | 42 | 65 |
| | 隔离断口 Isolation breaks | | 48 | 79 |
| 额定雷电冲击耐受电压 (1.2/50 μ s) Rated lightning impulse withstand voltage (1.2/50 μ s) | 相对相、相对地 Phase-to-phase, phase-to-ground | kV | 75 | 125 |
| | 隔离断口 Isolation breaks | | 85 | 145 |
| 主母线最大额定电流 Main bus maximum rated current | A | 3150/4000* | 3150* | |
| 馈线额定电流 Feeder rated current | A | 630 | 630 | |
| | | 1250 | 1250 | |
| | | 1600 | 1600 | |
| | | 2000 | 2000 | |
| | | 2500 | 2500 | |
| | | 3150 | 3150* | |
| 4000* | — | | | |
| 额定短时耐受电流 (4s) Rated short-time withstand current (4s) | kA | 25 | 16 | |
| | | 31.5 | 25 | |
| | | 40 | 31.5 | |
| 额定峰值耐受电流 Rated peak withstand current | kA | 100 | 80 | |
| 内部电弧故障电流 (1s) Inner arc-fault current (1s) | kA | 40 | 31.5 | |
| 外壳防护等级 Enclosure protection grade | 外壳 Enclosure | IP4X | IP4X | |
| | 隔离室 Isolation compartment | IP2X | IP2X | |

注：* 需要带强制风冷
Note: * Forced air cooling

三、开关柜外形尺寸 (mm) Switchgear Outline Dimensions (mm)

| 产品类别 Product Type | | PIX12 | | |
|---|---------------------|---------|-----------------|-----------------|
| 额定馈线电流Ir(A) Rated feeder current Ir(A) | | Ir≤1250 | 1250<= Ir<=2000 | 2000<= Ir<=4000 |
| 宽度 (mm) Width (mm) | | 650/800 | 800 | 1000 |
| 深度 (mm) Depth (mm) | 前接线 Front wiring | 1405 | | |
| | 后接线 Back wiring | 1650* | | |
| 高度 (mm) Height (mm) | | 2280** | | |

注: * 后背架空方案柜体深度增加为1810mm。
** 4000A时增加风扇箱, 柜体高度增加为2730mm。

Note: * The depth of backpack overhead distribution cabinet is added to 1810mm.
** Add fan case at 4000A current, the height of cabinet is added to 2730mm.

| 产品类别 Product Type | | PIX24 | |
|---|--------------------|---------|-----------------|
| 额定馈线电流Ir(A) Rated feeder current Ir(A) | | Ir≤1250 | 1250<= Ir<=3150 |
| 宽度 (mm) Width (mm) | | 800 | 1000 |
| 深度 (mm) Depth (mm) | 前接线 Fore wiring | - | |
| | 后接线 Back wiring | 1910* | |
| 高度 (mm) Height (mm) | | 2480** | |

注: * 后背架空方案柜体深度增加为2110mm。
** 4000A时增加风扇箱, 柜体高度增加为2930mm。

Note: * The depth of backpack overhead distribution cabinet is added to 2110mm.
** Add fan case at 4000A current, the height of cabinet is added to 2930mm.