

NPFSR-K322D

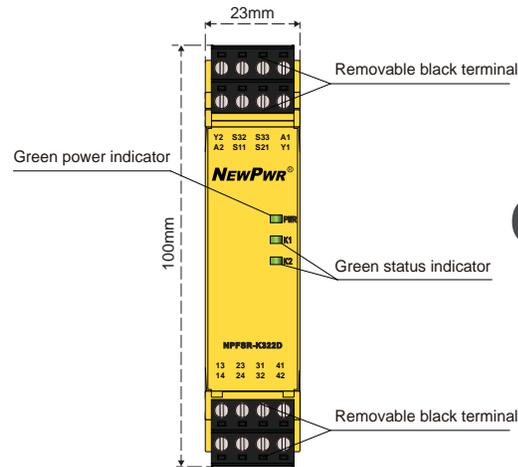
Input: Two-hand modules
Output: 2NO+2NC

K series two-hand control safety relays are used to ensure that the operator's hands are kept away from the dangerous area and avoid injury during the hazardous movement. Used in mechanical presses or safety circuits with safety requirements.

- Support two-hand module (according to EN 574, Type III C)
- With detection across contacts
- Synchronous detection function less than 0.5s
- The safety function remains effective in the case of a component failure
- The correct opening and closing of the safety function relays is tested automatically in each on-off cycle

Parameters

| | |
|---------------------------|--|
| Voltage range | 24V AC/DC |
| Voltage tolerance | 0.85 ~ 1.1 |
| AC frequency | 50Hz ~ 60Hz |
| Power dissipation | ≤ 2.2W/24V DC, ≤ 4.8VA/24V AC |
| Current consumption | ≤ 50mA/24V DC |
| Cable resistance | ≤ 15Ω |
| Input devices | Two-hand module (according to EN574, Type IIIC) |
| Signal type | 2NO+2NC |
| Contact type | Forced guided |
| Contact material | AgSnO ₂ +0.2μmAu |
| Contact loading | AC-15: 5A/230V, DC-13: 5A/24V |
| Contact fuse protection | 10A gL/gG(NO), 6A gL/gG(NC) |
| Switch-on | ≤ 30ms |
| Release | ≤ 15ms |
| Recovery time | ≤ 250ms |
| Simultaneity | ≤ 500ms |
| Supply short interruption | 20ms |
| EMC | According to IEC/EN 60947, IEC 61326-3-1, IEC/EN 61000-6-2, IEC/EN 61000-6-4 |
| Rated insulation voltage | 250V AC |
| Rated impulse voltage | 6000V(1.2/50us) |
| Dielectric strength | 1500V AC, 1 min |
| Clearance and creepage | According to IEC 60947-1 |
| Vibration | 10Hz ~ 55Hz, 0.35mm |
| Overvoltage category | III |
| Pollution degree | 2 |
| Protection type | IP20 |
| Ambient temperature | -20°C ~ +60°C |
| Storage temperature | -40°C ~ +80°C |
| Operating altitude | ≤2000m |
| Mechanical life | 10×10 ⁶ cycles |



SIL3
IEC 61508

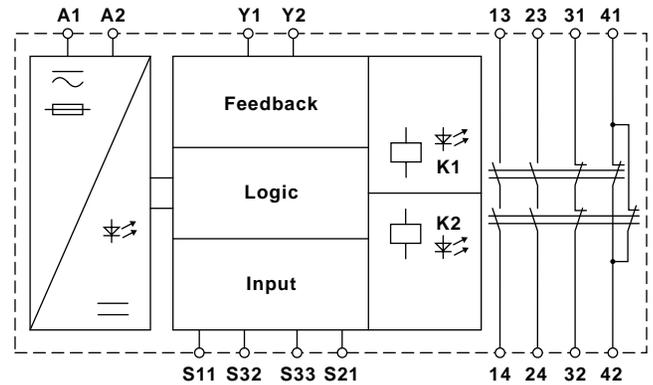
PLe
ISO 13849

Cat.4
ISO 13849



Two-hand modules

Functional Block Diagram



Safety Values

| | |
|------------------------------------|--|
| Performance level | PLe, according to ISO 13849 |
| Category | Cat.4, according to ISO 13849 |
| PTI (T _m) | 20 years, according to ISO 13849 |
| DC _{avg} | 99%, according to ISO 13849 |
| MTTF _D | 164 years, according to ISO 13849 |
| CCF | 68, according to ISO 13849 |
| SIL | SIL3, according to IEC 61508 |
| SIL CL | SIL CL3, according to IEC 62061 |
| HFT | 1, according to IEC 62061 |
| SFF | ≥ 99%, according to IEC 62061 |
| PFD _{avg} /PTI = 20 years | 1.35×10 ⁻⁵ , according to IEC 62061 |
| PFH | 1.57×10 ⁻¹⁰ 1/h, according to IEC 62061 |
| Stop Category | 0, according to IEC 60204 |