



Safety relay, 24 V DC, 14DI, 4DO relays, display, easyNet

Part no. ES4P-221-DRXD1
 Catalog No. 111019

EL-Nummer (Norway) 0004521514

Delivery program

| | | | |
|--|----------------|--------------------------------------|--|
| Product range | | | Control relays for safety applications |
| Basic function | | | easy800 with safety function blocks |
| Features | | | |
| Safety functions | | | Stopping in the event of an emergency Protective door OSSD input ESPE with muting function Two-hand control Highest speed monitoring Zero speed monitoring Safety timing relay Mode selection Enabling switch Feedback circuit |
| Display & keypad | | | ✓ |
| Mounting width | | mm | 107.5 |
| Technical safety parameters: | | | |
| Values according to EN ISO 13849-1 | | | |
| Performance level | | according to EN ISO 13849-1 | PL e |
| Category | | according to EN ISO 13849-1 | Kat. 4 |
| Safety integrity level claim limit | | in accordance with 62061 | SILCL 3 |
| Probability of failure per hour | | PFH _d x 10 ⁻¹⁰ | 4.26 |
| Safety integrity level | | In accordance with IEC 61508 | SIL 3 |
| Display | | | Display Keypad |
| Real time clock | | | # |
| Supply voltage | U _s | | 24 V DC |
| Networking | | | easyNet/easyLink |
| Safety/standard circuit diagram | | | ✓/✓ |
| Instructions | | | |
| Expandable: standard inputs/outputs and standard bus systems | | | |
| individual laser inscription with ES4-COMBINATION possible →#2011790 | | | |
| Inputs (safety) | | | 14 |
| Outputs (safety) | | | |
| 6 A relay | | | 4 |
| Test signal | | | 4 |

Technical data

| | | | |
|----------------|--|--|--|
| General | | | |
| Standards | | | EN ISO 13849-1 EN 50156-1, EN 50156-2 EN 50178 EN 50581_x EN 61000-6-2 EN 61000-6-3 IEC 61508 IEC 62061 |
| Approvals | | | |
| Approvals | | | EAC |

| | | |
|------------------------|----|--|
| Dimensions (W x H x D) | mm | 107.5 (6 TE) x 90 x 72 |
| Weight | kg | 0.38 |
| Mounting | | Top-hat rail IEC/EN 60715, 35 mm or screw fixing using fixing brackets ZB4-101-GF1 (accessories) |

Times

| | | |
|--------------------------------------|----|-----|
| Inputs | | |
| Max. duration of external test pulse | ms | 1 |
| Semi-conductor output | | |
| Off test pulse | ms | < 1 |
| Off-delay | ms | < 1 |

Terminal capacities

| | | |
|------------------------|-----------------|-----------------------|
| Solid | mm ² | 0.2/4 (AWG 22 - 12) |
| Flexible with ferrule | mm ² | 0.2/2.5 (AWG 22 - 12) |
| Standard screwdriver | mm | 0.8 x 3.5 |
| Max. tightening torque | Nm | 0.6 |

Climatic environmental conditions

| | | |
|-------------------------------|-----|--|
| Operating ambient temperature | °C | -25 to + 55 cold as per IEC 60068-2-1 heat as per IEC 60068-2-2 Damp heat – constant to IEC 60068-2-78 – cyclical to IEC 60068-2-30 |
| Condensation | | Take appropriate measures to prevent condensation |
| LCD display (clearly legible) | °C | 0 - 55 |
| Ambient temperature | | |
| Storage | θ | °C -40 - +55 |
| relative humidity | % | 5 - 95 in accordance with IEC 60068-2-30, IEC 60068-2-78 Non-condensing |
| Air pressure (operation) | hPa | 795 - 1080 |

Ambient conditions, mechanical

| | | | |
|-----------------------------|--------------|----|---|
| Degree of protection | | | IP20 (IEC/EN 60529, EN50178, VBG 4) |
| Constant amplitude 0.15 mm | | Hz | |
| constant amplitude | | Hz | 10 - 57 (0.15 mm) |
| constant acceleration | | Hz | 57 - 150 (2g) |
| Vibrations | 3,5 mm / 1 g | Hz | In accordance with IEC 60068-2-6 |
| Mechanical shock resistance | | g | 18 shocks Sinusoidal 15 g/11 ms according to IEC 60068-2-27 |
| Drop to | Drop height | mm | 50 (IEC/EN 60068-2-31) |
| Free fall, packaged | | m | 0,3 (IEC/EN 61131-2) |

Electromagnetic compatibility (EMC)

| | | | |
|---|--|-----|---|
| Electromagnetic compatibility | | | As per ICE 62061, increased EMC requirements for safety-relevant functions |
| Overvoltage category/pollution degree | | | III/2 |
| Electrostatic discharge (ESD) | | | |
| applied standard | | | according to IEC EN 61000-4-2 |
| Air discharge | | kV | 15 |
| Contact discharge | | kV | 8 |
| Electromagnetic fields (RFI) | | V/m | 30 to IEC EN 61000-4-3 |
| Radio interference suppression | | | EN 55011 Class B, EN 55022 Class B |
| Burst | | kV | according to IEC/EN 61000-4-4 Supply cables: 4 Signal cables: 4 |
| power pulses (Surge) | | | 2 kV (supply cables, symmetrical) 4 kV (semi-conductor outputs, symmetrical) In accordance with IEC 62061 |
| Immunity to line-conducted interference | | V | 20, in accordance with IEC/EN 61000-4-6 |

Insulation resistance

| | | | |
|---|--|--|---|
| Clearance in air and creepage distances | | | EN 50178, UL 508, CSA C22.2, No. 142, EN 60664-1:2003 |
| Insulation resistance | | | EN 50178 |