DATASHEET - INX40N3-12F-1



Switch-disconnector, 3 pole, 1250A, without protection, IEC, Fixed



(Norway)

INX40N3-12F-1 184050

EL-Nummer 4398412



Delivery program

| Product range | | | Air circuit-breakers/switch-disconnectors |
|---|-----------------|----|--|
| Product range | | | Open switch-disconnectors |
| Current Range | | | Up to 4000 A |
| Protective function | | | without protection |
| Installation type | | | Fixed |
| Construction size | | | INX40 |
| Release system | | | without releases |
| Standard/Approval | | | IEC |
| Number of poles | | | 3 pole |
| Degree of Protection | | | IP31 with door seals, IP55 with protective cover |
| | | | optionally fittable by user with comprehensive accessories |
| Rated current = rated uninterrupted current | $I_n = I_u$ | А | 1250 |
| Rated short-circuit making capacity up to 440V/690V 42/42 | I _{cm} | kA | 187 |
| Rated short-time withstand current t =1 s | I _{cw} | kA | 85 |
| Rated short-time withstand current t =3 s | I _{cw} | kA | 66 |
| | | | |

Technical data

| General | | | | |
|---|------------------|------|--|--|
| Standards | | | IEC/EN 60947 | |
| Ambient temperature | | | | |
| Storage | 9 | °C | -40 - +70 | |
| Ambient temperature | | °C | -25 - +70 | |
| Mounting position | | | 30° 30° 30° 30° | |
| Utilization category | | | В | |
| Degree of Protection | | | IP31 with door seals, IP55 with protective cover | |
| Direction of incoming supply | | | as required | |
| Main conducting paths | | | | |
| Rated current = rated uninterrupted current | $I_n = I_u$ | А | 1250 | |
| Rated uninterrupted current at 50 °C | l _u | А | 1250 | |
| Rated uninterrupted current at 60 °C | lu | Α | 1250 | |
| Rated uninterrupted current at 70 °C | I _u | А | 1250 | |
| Rated impulse withstand voltage | U _{imp} | V AC | 12000 | |
| Rated operational voltage | U _e | V AC | 690 | |
| Overvoltage category/pollution degree | | | 111/3 | |
| Rated insulation voltage | Ui | V | 1000 | |
| Switching capacity | | | | |
| Rated short-circuit making capacity | I _{cm} | | | |
| up to 440 V 50/60 Hz | I _{cm} | kA | 187 | |
| up to 690 V 50/60 Hz | I _{cm} | kA | 166 | |
| Operating times | | | | |
| Closing delay via spring release | | ms | 30 | |

| | ms | 35 |
|----------------------------------|---|--|
| | | |
| | ms | 40 |
| | S | |
| Switching cycles (ON/ OFF) | | 12500 |
| Switching cycles (ON/ OFF) | | 25000. |
| Switching cycles (ON/ OFF) | | 10000 |
| Switching cycles (ON/ OFF) | | 20000. |
| | Ops./h | |
| Operations/h | | 60 |
| | | |
| | W | 60 |
| | | |
| | | |
| | kg | 43 |
| | | |
| | | |
| | | |
| | mm | 1 x 60 x 10 |
| | | These are values used in separate switchgear. The actual values will depend on the temperature around the circuit-breaker, which is influenced by the ambient temperature, the degree of protection (IP), the mounting height, the partitions, and any external ventilation. Depending on the specific switchgear design, this may result in derating, which can then be compensated for by increasing the cross- sectional area. Temperature rise tests in the specific switchgear can provide specific and detailed information. |
| | cycles (ON/ OFF) Switching cycles (ON/ OFF) Switching cycles (ON/ OFF) Switching cycles (ON/ OFF) | ms Switching cycles (ON/ OFF) Switching cycles (ON/ Switching Cycles (ON/ Switching Cycles (ON/ Switching Cycles (ON/ Switching S |

Design verification as per IEC/EN 61439

| Design vernication as per ilo/liv 01455 | | | |
|--|------------------|----|--|
| Technical data for design verification | | | |
| Rated operational current for specified heat dissipation | I _n | А | 1250 |
| Equipment heat dissipation, current-dependent | P _{vid} | W | 60 |
| Operating ambient temperature min. | | °C | -25 |
| Operating ambient temperature max. | | °C | 70 |
| IEC/EN 61439 design verification | | | |
| 10.2 Strength of materials and parts | | | |
| 10.2.2 Corrosion resistance | | | Meets the product standard's requirements. |
| 10.2.3.1 Verification of thermal stability of enclosures | | | Meets the product standard's requirements. |
| 10.2.3.2 Verification of resistance of insulating materials to normal heat | | | Meets the product standard's requirements. |
| 10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects | | | Meets the product standard's requirements. |
| 10.2.4 Resistance to ultra-violet (UV) radiation | | | Meets the product standard's requirements. |
| 10.2.5 Lifting | | | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.2.6 Mechanical impact | | | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.2.7 Inscriptions | | | Meets the product standard's requirements. |
| 10.3 Degree of protection of ASSEMBLIES | | | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.4 Clearances and creepage distances | | | Meets the product standard's requirements. |
| 10.5 Protection against electric shock | | | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.6 Incorporation of switching devices and components | | | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.7 Internal electrical circuits and connections | | | Is the panel builder's responsibility. |
| 10.8 Connections for external conductors | | | Is the panel builder's responsibility. |
| 10.9 Insulation properties | | | |
| 10.9.2 Power-frequency electric strength | | | Is the panel builder's responsibility. |
| 10.9.3 Impulse withstand voltage | | | Is the panel builder's responsibility. |
| 10.9.4 Testing of enclosures made of insulating material | | | Is the panel builder's responsibility. |
| | | | |

| 10.10 Temperature rise | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
|-------------------------------------|--|
| 10.11 Short-circuit rating | Is the panel builder's responsibility. The specifications for the switchgear must be observed. |
| 10.12 Electromagnetic compatibility | Is the panel builder's responsibility. The specifications for the switchgear must be observed. |
| 10.13 Mechanical function | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed. |

Technical data ETIM 7.0

Low-voltage industrial components (EG000017) / Switch disconnector (EC000216)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnector (ecl@ss10.0.1-27-37-14-03 [AKF060013])

| Version as eain work of a similation of a simi | [AKF000013]) | | |
|--|---|----|--|
| Version as serversing avitch No Version as serversing avitch No Number of switchs No Rade operation voltage Ue AC No Nother of switchs woltage Operation voltage Ue AC No Nother of switchs woltage Operation voltage Ue AC No Nother of switchs anormally closed center No Nomber of switchs a sormally closed center No Nomber of switchs a sormally closed center No Nother of switchs a sormally closed center No Nother of switch woltage Ue AC No Notage Center No <td>Version as main switch</td> <td></td> <td>Yes</td> | Version as main switch | | Yes |
| Number of working working workingImage of working working workingImage of working< | Version as maintenance-/service switch | | No |
| Varion as reversing worth Image: Im | Version as safety switch | | No |
| Number of witching Image: space of witching Image: space of witching Image: space of witching Max rand operation voltage UP AC V 60 Rated operation voltage UP AC V 60 Rated operation voltage UP AC V 60 Rated operation corrent La V 60 Rated operation corrent La C22, 00V A 0 Rated operation corrent La C23, 40V G 0 Rated operation power at AC23, 400V KA 0 0 Rated operation ower at AC23, 400V KA 0 0 Soluting ower at AC23, 400V KA 0 0 Number of auxiliary contact corrent lg KA 0 0 Number of auxiliary contacts anomaly open contact KA 0 0 Number of auxiliary contacts anomaly open contact KA 0 0 0 | Version as emergency stop installation | | No |
| Nax. radio geneins of large largeV90Rated persing voltageV80-80Rated persing current luIIRated persing current at AC-23, 400 VIARated opersion power at AC-3, 400 VIIRated opersion power at AC-3, 400 VIIRated opersion power at AC-3, 400 VIIRated opersion power at AC-3, 400 VIINumber of power at AC-3, 400 VIIRated opersion power at AC-3, 400 VIINumber of power at AC-3, 400 V <td>Version as reversing switch</td> <td></td> <td>No</td> | Version as reversing switch | | No |
| Rated parament current lu M V 80-80 Rated parament current lu SA 550 Rated parament current at AC-23, 400 V G A Rated operation power at AC-3, 400 V M 0 Rated operation power at AC-3, 400 V M 0 Rated operation power at AC-3, 400 V M 0 Rated operation power at AC-3, 400 V M 0 Switching power at AC-3, 400 V M 0 Number of auxiliary contacts as normally closed contact M 0 Number of auxiliary contacts as normally closed contact M N Switch of normaling A-Dol M N <td>Number of switches</td> <td></td> <td></td> | Number of switches | | |
| Rated permanent current la A 120 Rated permanent current at AC-23, 400 V A 0 Rated permanent current at AC-23, 400 V A 0 Rated permanent current at AC-23, 400 V KM 0 Rated operation power at AC-23, 400 V KM 0 Rated operation power at AC-23, 400 V KM 0 Switching power at AC-23, 400 V KM 0 Switching power at AC-23, 400 V KM 0 Conditioned rated short-circuit current Iq KM 0 Number of poles KM 0 Number of auxiliary contacts as normally closed contact KM 0 Number of auxiliary contacts as normally closed contact KM 0 Number of auxiliary contacts as normally closed contact KM 0 Number of auxiliary contacts as normally closed contact KM 0 Number of auxiliary contacts as normally closed contact KM 0 Number of auxiliary contacts as normally closed contact KM 0 Number of auxiliary contacts as normally closed contact KM 0 Number of auxiliary contacts as normally closed contact KM 0 Number of auxiliary contacts as normally closed contact KM 0 Number of auxiliary contacts as normally closed contact <td>Max. rated operation voltage Ue AC</td> <td>V</td> <td>690</td> | Max. rated operation voltage Ue AC | V | 690 |
| Are dependent current at AC-23, 400 V A A Rated permanent current at AC-21, 400 V M 0 Rated operation power at AC-3, 400 V KM 0 Rated short-time withstand current low KM 5 Rated short-time withstand current low KM 0 Switching power at AC-23, 400 V KM 0 Switching power at AC-24, 400 V KM 0 Number of auxiliary contacts as normally cost act act at the site of auxiliary contacts as normally cost act at at the sit at | Rated operating voltage | V | 690 - 690 |
| Rate operation power at AC-21, 400 V Feat operation power at AC-23, 400 V Feat operation power at A | Rated permanent current lu | А | 1250 |
| Ret operation power at AC-3, 400 V KM 9 Reted short-time withstand current low KM 9 Reted operation power at AC-23, 400 V KM 0 Switching power at 400 V KM 9 Conditioned rated short-circuit current lq KM 17 Number of poles 7 3 Number of auxiliary contacts as normally coper contact F 0 Number of auxiliary contacts as change-over contact F 0 Number of auxiliary contacts as change-over contact F 0 Number of auxiliary contacts as change-over contact F 0 Number of auxiliary contacts as change-over contact F 0 Number of auxiliary contacts as change-over contact F 0 Number of auxiliary contacts as change-over contact F 0 Number of auxiliary contacts as change-over contact F 0 Number of auxiliary contacts as change-over contact F No Number of auxiliary contacts as change-over contact F No Number of auxiliary contacts as change-over contact F No Number of auxiliary contacts as change-over contact F | Rated permanent current at AC-23, 400 V | А | |
| Reted short-time withstand current low Ket short-tim withstand current low Ket short-time withstand | Rated permanent current at AC-21, 400 V | А | 0 |
| Ret deperation power at AC-23, 400 V Image: Note of power at 400 V Image: Note of power 400 V Image: Note of power at 400 V </td <td>Rated operation power at AC-3, 400 V</td> <td>kW</td> <td>0</td> | Rated operation power at AC-3, 400 V | kW | 0 |
| NucleiNuNuSubticing or add short-circuit current lqIAISNumber of polesIAISNumber of auxiliary contacts as normally closed contactIAISNumber of auxiliary contacts as normally closed contactIAISNumber of auxiliary contacts as normally closed contactIAISNumber of auxiliary contacts as change-over contactISISNumber of auxili | Rated short-time withstand current Icw | kA | 85 |
| Indition and short-circuit current lq Image: A part of a par | Rated operation power at AC-23, 400 V | kW | 0 |
| Number of paisImage: Section of Sectina of Sectina o | Switching power at 400 V | kW | 0 |
| Number of auxiliary contacts as normally closed contactImage: Contact of auxiliary contact of auxiliary contact as normally closed contactImage: Contact of auxiliary contact as normally closed contactImage: Contact of auxiliary contact as normally closed contactImage: Contact as normally closed contactImage: Contact as normally | Conditioned rated short-circuit current Iq | kA | 187 |
| Number of auxiliary contacts as normally open contactImage: Contact as a change-over contactImage: Contact as a change-over contactNumber of auxiliary contacts as change-over contactImage: Contact as a change-over contactImage: Contact as a change-over contactNotor drive optionalYesNoNotar drive integratedYesSolid-In device fixed built-in techniqueNotage release optionalYesNoNotage release optionalYesNoSuitable for ground mountingYesNoSuitable for ground mounting 4-holeYesNoSuitable for front mounting 0-entreYesNoSuitable for front mounting 0-entreYesNoSuitable for intermediate mountingYesNoSuitable for intermediate mountingYesNoSuitable for intermediate mountingYesNoSuitable for intermediate mountingYesNoSuitable for intermediate mountingYesYesSuitable for intermediate mountingYes | Number of poles | | 3 |
| Number of auxiliary contacts as change-over contact Image: space spa | Number of auxiliary contacts as normally closed contact | | 0 |
| Motor drive optional Motor drive integrated Sea | Number of auxiliary contacts as normally open contact | | 0 |
| Motor drive integrated No Voltage release optional Yes Device construction Built-in device fixed built-in technique Suitable for ground mounting Yes Suitable for front mounting 4-hole No Suitable for front mounting centre No Suitable for finitermediate mounting Yes Suitable for intermediate mounting Yes Solitable for intermediate mounting Yes Suitable for intermediate mounting Yes Suita | Number of auxiliary contacts as change-over contact | | 2 |
| Votage release optional Yes Device construction Built-in device fixed built-in technique Suitable for ground mounting Yes Suitable for front mounting 4-hole No Suitable for front mounting centre No Suitable for distribution board installation Yes Suitable for intermediate mounting Yes Colour control element Yes Type of control element Yes Type of electrical connection of main circuit Yes Device of function (IP), front side Yes Device of protection (IP), front side Yes | Motor drive optional | | Yes |
| Device construction Built-in device fixed built-in technique Suitable for ground mounting Yes Suitable for front mounting 4-hole No Suitable for front mounting centre Yes Suitable for front mounting centre No Suitable for distribution board installation Yes Suitable for intermediate mounting Yes Solutable for intermediate mounting Yes Suitable for intermediate mounting Yes< | Motor drive integrated | | No |
| Suitable for ground mounting Yes Suitable for front mounting 4-hole No Suitable for front mounting centre No Suitable for distribution board installation Yes Suitable for intermediate mounting No Suitable for intermediate mounting Yes Suitable for intermediate mounting No Suitable for intermediate mounting Yes Suitable for intermediate mounting Suitable for intermediate mounting Suitable for intermediate mounting Yes Suitable for intermediate mounting Fore n Suitable for intermediate mounting Yes Suitable for intermediate mounting | Voltage release optional | | Yes |
| Suitable for front mounting 4-hole No Suitable for front mounting centre No Suitable for distribution board installation Yes Suitable for intermediate mounting No Colour control element No Type of control element Yes Interlockable Yes Type of electrical connection of main circuit Yes Degree of protection (IP), front side Image: Section of the side of the sid | Device construction | | Built-in device fixed built-in technique |
| Suitable for front mounting centreImage: Section of the | Suitable for ground mounting | | Yes |
| Suitable for distribution board installation Image: space of protection (IP), front side Yes Suitable for intermediate mounting No Green Suitable for intermediate mounting Freen Freen Suitable for intermediate mounting Push button Freen Type of control element Freen Freen Suitable for intermediate mounting Freen Freen <td>Suitable for front mounting 4-hole</td> <td></td> <td>No</td> | Suitable for front mounting 4-hole | | No |
| Suitable for intermediate mounting Mo Colour control element Green Type of control element Mo Interlockable Push button Type of electrical connection of main circuit Mo Degree of protection (IP), front side Mo | Suitable for front mounting centre | | No |
| Colour control element File Green Type of control element Push button Interlockable Yes Type of electrical connection of main circuit File Degree of protection (IP), front side File | Suitable for distribution board installation | | Yes |
| Type of control element Push button Interlockable Yes Type of electrical connection of main circuit Yes Degree of protection (IP), front side Yes | Suitable for intermediate mounting | | No |
| Interlockable Mathematical Connection of main circuit Mathematical Connection of main circuit Mathematical Connection of main circuit Mathematical Connection Degree of protection (IP), front side Image: Imag | Colour control element | | Green |
| Type of electrical connection of main circuit Main connection Degree of protection (IP), front side Main connection | Type of control element | | Push button |
| Degree of protection (IP), front side | Interlockable | | Yes |
| | Type of electrical connection of main circuit | | Rail connection |
| Degree of protection (NEMA) | Degree of protection (IP), front side | | IP31 |
| | Degree of protection (NEMA) | | |



