184049
INX40N3-10F-1

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 [$I_n = I_u$]
1000 A

Rated short-circuit making capacity up to 440V/690V 42/42 [I_{cm}]
187 kA

Rated short-time withstand current t =1 s [I_{cw}]
85 kA

Rated short-time withstand current t =3 s [I_{cw}]
66 kA

TECHNICAL DATA

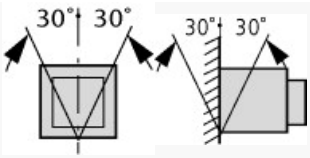
General

Standards
IEC/EN 60947

Ambient temperature
Storage [ϑ]
-40 - +70 °C

Ambient temperature
Ambient temperature
-25 - +70 °C

Mounting position



Utilization category
B

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 [$I_n = I_u$]
1000 A

Rated uninterrupted current at 50 °C [I_u]
1000 A

Rated uninterrupted current at 60 °C [I_u]
1000 A

Rated uninterrupted current at 70 °C [I_u]
1000 A

Rated impulse withstand voltage [U_{imp}]
12000 V AC

Rated operational voltage [U_e]
690 V AC

Overvoltage category/pollution degree
III/3

Rated insulation voltage [U_i]
1000 V

Switching capacity

Rated short-circuit making capacity [I_{cm}]

up to 440 V 50/60 Hz [I_{cm}]
187 kA

Rated short-circuit making capacity [I_{cm}]
up to 690 V 50/60 Hz [I_{cm}]
166 kA

Operating times
Closing delay via spring release
30 ms

Operating times
Total opening delay via shunt release
35 ms

Operating times
Total opening delay via undervoltage release
40 ms

Lifespan
Lifespan, mechanical [Switching cycles (ON/OFF)]
12500

Lifespan
Lifespan, mechanical with maintenance [Switching cycles (ON/OFF)]
25000.

Lifespan
Lifespan, electrical [Switching cycles (ON/OFF)]
10000

Lifespan
Lifespan, electrical with maintenance [Switching cycles (ON/OFF)]
20000.

Maximum operating frequency
Maximum operating frequency [Operations/h]
60

Heat dissipation at rated current I_n
Fixed mounting
40 W

Weight

Fixed mounting
3-pole
43 kg

Terminal capacities

Copper bar
Fixed mounting
Black
1 x 60 x 10 mm

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.

DESIGN VERIFICATION AS PER IEC/EN 61439

Technical data for design verification

Rated operational current for specified heat dissipation [I_n]
1000 A

Equipment heat dissipation, current-dependent [P_{vid}]
40 W

Operating ambient temperature min.
-25 °C

Operating ambient temperature max.
+70 °C

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 Strength of materials and parts
10.2.3.1 Verification of thermal stability of enclosures
Meets the product standard's requirements.

10.2 Strength of materials and parts
10.2.3.2 Verification of resistance of insulating materials to normal heat
Meets the product standard's requirements.

10.2 Strength of materials and parts
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 Strength of materials and parts
10.2.4 Resistance to ultra-violet (UV) radiation
Meets the product standard's requirements.

10.2 Strength of materials and parts
10.2.5 Lifting
Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts
10.2.6 Mechanical impact
Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts
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 Insulation properties
10.9.3 Impulse withstand voltage
Is the panel builder's responsibility.

10.9 Insulation properties
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 main switch
Yes

Version as maintenance-/service switch
No

Version as safety switch
No

Version as emergency stop installation
No

Version as reversing switch
No

Number of switches

Max. rated operation voltage Ue AC
690 V

Rated operating voltage
690 - 690 V

Rated permanent current Iu
1000 A

Rated permanent current at AC-23, 400 V
A

Rated permanent current at AC-21, 400 V
0 A

Rated operation power at AC-3, 400 V
0 kW

Rated short-time withstand current Icw
85 kA

Rated operation power at AC-23, 400 V
0 kW

Switching power at 400 V
0 kW

Conditioned rated short-circuit current Iq
187 kA

Number of poles
3

Number of auxiliary contacts as normally closed contact
0

Number of auxiliary contacts as normally open contact
0

Number of auxiliary contacts as change-over contact
2

Motor drive optional
Yes

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 distribution board installation
Yes

Suitable for intermediate mounting
No

Colour control element
Green

Type of control element
Push button

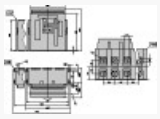
Interlockable
Yes

Type of electrical connection of main circuit
Rail connection

Degree of protection (IP), front side
IP31

Degree of protection (NEMA)

DIMENSIONS



- Door
- Contact surface flange terminal

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