DATASHEET - INX40B3-40F-1



Switch-disconnector, 3 pole, 4000A, without protection, IEC, Fixed

Powering Business Worldwide*

Part no. INX40B3-40F-1 Catalog No. 184047

EL-Nummer (Norway) 4398409

Delivery program

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	$\boldsymbol{I}_n = \boldsymbol{I}_u$	Α	4000
Rated short-circuit making capacity up to 440V/690V 42/42	I _{cm}	kA	145
Rated short-time withstand current t =1 s	I _{cw}	kA	66
Rated short-time withstand current t =3 s	I _{cw}	kA	53

Technical data				
General				
Standards			IEC/EN 60947	
Ambient temperature				
Storage	9	°C	-40 - +70	
Ambient temperature		°C	-25 - +70	
Mounting position			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	$I_n = I_u$	Α	4000	
Rated uninterrupted current at 50 °C	I _u	Α	4000	
Rated uninterrupted current at 60 °C	I _u	Α	3650	
Rated uninterrupted current at 70 °C	I _u	Α	3500	
Rated impulse withstand voltage	U_{imp}	V AC	12000	
Rated operational voltage	U _e	V AC	690	
Overvoltage category/pollution degree			III/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	145	
up to 690 V 50/60 Hz	I _{cm}	kA	145	
Operating times				
Closing delay via spring release		ms	30	

Total opening delay via shunt release		ms	35
Total opening delay via undervoltage release		ms	40
Lifespan		S	
Lifespan, mechanical	Switching cycles (ON/ OFF)		10000
Lifespan, mechanical with maintenance	Switching cycles (ON/ OFF)		20000.
Lifespan, electrical	Switching cycles (ON/ OFF)		5000
Lifespan, electrical with maintenance	Switching cycles (ON/ OFF)		10000.
Maximum operating frequency		Ops./h	
Maximum operating frequency	Operations/h		60
Heat dissipation at rated current I _n			
Fixed mounting		W	600
Weight			
Fixed mounting			
3-pole		kg	43
Terminal capacities			
Copper bar			
Fixed mounting			
Black		mm	4 x 100 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, an 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

Design verification as per IEC/EN 61439			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	4000
Equipment heat dissipation, current-dependent	P _{vid}	W	600
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

Version as main awinch (version as main internance-/service switch) () No Version as semergency stap installation () No Version as semergency stap installation () No Version as semergency stap installation () No Number of switched () Westion as semergency stap installation Mex. rated operation voltage Use AC () Westion as semergency stap installation Mex. rated operation voltage Use AC () 80 Rated operation voltage Use AC () 80 Rated operation power and AC-23,400 V () A Rated operation power at AC-23,400 V () G Rated operation power at AC-23,400 V () G Rated operation power at AC-23,400 V () G Rated operation power at AC-23,400 V () G Number of audiliary contacts as nomally closed contact () G Conditioned rated short-circuit cornel to a contact with a contact as nomally closed contact () G Number of audiliary contacts as nomally closed contact () G Motor circuit crive option	[AKF060013])	37.		
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Version as emergency stop installation Image: Provided Serviction Serv	Version as maintenance-/service switch			No
Version as reversing switch Moment of switches Vol. 890-890-890-890-890-890-890-890-890-890-	Version as safety switch			No
Number of switches V 890 Max. rated operation voltage Ue AC V 890-690 Rated operation voltage V 890-690 Rated operation voltage V 890-690 Rated operation power at AC-23, 400 V A 0 Rated operation power at AC-23, 400 V A 0 Rated operation power at AC-23, 400 V W 0 Rated short-time withstand current lea W 0 Rated operation power at AC-23, 400 V W 0 Switching power at 400 V W 0 Conditioned rated short-circuit current la W 1 Number of poles W 2 3 Number of swilling contacts as normally closed contact W 2 2 Number of swilling contacts as change-over contact W 2 2 Number of swilling contacts as change-over contact W 2 2 Voltage reliase optional W 2 2 Motor drive eintegrated W 2 2 Voltage reliase optional W	Version as emergency stop installation			No
Max. ratid operation voltage Uo AC V 899 Rated operating voltage V 890-890 Rated permanent current un Comment un Current at AC-21,400 V A VO Rated permanent current at AC-21,400 V AM 0 Rated operation power at AC-3,400 V KW 0 Rated short-time withstand current low KW 6 Rated short-time withstand current low KW 0 Number of auxiliary contacts as normally closed contact KW 0 Number of auxiliary contacts as change-over contact KW 0 Number of auxiliary contacts as change-over contact KW 0 Noted of diviniting tated KW 0 Noted of from timpating carrent low	Version as reversing switch			No
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Rated permanent current at AC-21, 400 V A 0 Rated permanent current at AC-21, 400 V A 0 Rated operation power at AC-3, 400 V W 0 Rated short-time withstand current lew A 66 Rated short-time withstand current lew B W 0 Rated permanent current at AC-23, 400 V W 0 0 Switching power at 400 V W 0 0 Conditioned rated short-circuit current lq M 14 4 Number of poles B 3 3 Number of auxiliary contacts as normally closed contact C 0 0 Number of auxiliary contacts as normally open contact C 2 0 Motor drive optional C 9 8 Motor drive optional C 9 9 Voltage release optional C 9 9 Suitable for ground mounting C 9 9 9 Suitable for front mounting centre C 9 9 9 Suitable fo	Rated operating voltage		V	690 - 690
Rated permanent current at AC-21,400 V A 0 Rated operation power at AC-3,400 V WW 0 Rated short-time withstand current low AA 66 Rated operation power at AC-23,400 V WW 0 Switching power at 400 V WW 0 Conditioned rated short-circuit current Iq AA 144 Number of poles AB 144 Number of auxiliary contacts as normally closed contact AB 2 Number of auxiliary contacts as normally open contact AB 2 Motor drive optional AB Yes Motor drive optional AB Yes Motor drive integrated Yes Yes Voltage release optional Yes Yes Suitable for ground mounting Yes Yes Suitable for front mounting 4-hole Yes Yes Suitable for front mounting entre Yes No Suitable for intermediate mounting Yes Yes Suitable for intermediate mounting Yes No Suitable for intermediate mounting	Rated permanent current lu		Α	4000
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Switching power at 400 V Conditioned rated short-circuit current Iq Number of poles Number of poles Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as normally open contact Number of auxiliary co	Rated short-time withstand current lcw		kA	66
Conditioned rated short-circuit current Iq KA 144 Number of poles 3 3 Number of auxiliary contacts as normally closed contact 6 6 Number of auxiliary contacts as normally open contact 6 6 Number of auxiliary contacts as change-over contact 6 7 Motor drive optional 7 7 8 Motor drive integrated 7 8 9 9 Voltage release optional 7 9 9 9 8 Device construction 8 6 9 8 9 9 8 Suitable for ground mounting 8 6 8 9 9 8 9	Rated operation power at AC-23, 400 V		kW	0
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Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact No No No Ves No Voltage release optional No Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting centre Suitable for front mounting centre Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side	Conditioned rated short-circuit current Iq		kA	144
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Number of auxiliary contacts as change-over contact Motor drive optional Motor drive integrated No Voltage release optional Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting centre Suitable for front mounting centre Suitable for front mounting centre Suitable for fortn mounting centre Suitable for fortn mounting centre Suitable for font mounting centre Suitable for intermediate mounting Colour control element Type of control element Type of control element Type of electrical connection of main circuit Degree of protection (IP), front side	Number of auxiliary contacts as normally closed contact			0
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Motor drive integratedNoVoltage release optionalYesDevice constructionBuilt-in device fixed built-in techniqueSuitable for ground mountingYesSuitable for front mounting 4-holeNoSuitable for front mounting centreNoSuitable for distribution board installationYesSuitable for intermediate mountingNoColour control elementGreenType of control elementPush buttonInterlockableYesType of electrical connection of main circuitRail connectionDegree of protection (IP), front sideIP31	Number of auxiliary contacts as change-over contact			2
Voltage release optional Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting centre Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Type of electrical connection of main circuit Degree of protection (IP), front side Yes Suitable for distribution board installation Yes No Rail connection Pash Pash Pash Rail connection Pash Pa	Motor drive optional			Yes
Device construction Built-in device fixed built-in technique Yes Suitable for ground mounting 4-hole No Suitable for front mounting centre Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side Built-in device fixed built-in technique Yes No Ro Ro Ro Ro Built-in device fixed built-in technique No Ro Ro Ro Ro Ro Ro Ro Ro Ro	Motor drive integrated			No
Suitable for ground mounting Suitable for front mounting 4-hole No Suitable for front mounting centre No Suitable for distribution board installation Suitable for intermediate mounting No Colour control element Green Type of control element Push button Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side Yes Yes Interlockable Push button Rail connection IP31	Voltage release optional			Yes
Suitable for front mounting 4-hole Suitable for front mounting centre No Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side No No Green Push button Rail connection IP31	Device construction			Built-in device fixed built-in technique
Suitable for front mounting centre Suitable for distribution board installation Yes Suitable for intermediate mounting No Colour control element Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side No No Green Push button Yes Rail connection IP31	Suitable for ground mounting			Yes
Suitable for distribution board installation Yes Suitable for intermediate mounting No Colour control element Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side Yes Yes IP31	Suitable for front mounting 4-hole			No
Suitable for intermediate mounting Colour control element Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side No Green Push button Yes Rail connection IP31	Suitable for front mounting centre			No
Colour control element Type of control element Push button Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side Green Push button Yes Italian Ita	Suitable for distribution board installation			Yes
Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side Push button Yes Rail connection IP31	Suitable for intermediate mounting			No
Interlockable Yes Type of electrical connection of main circuit Rail connection Degree of protection (IP), front side IP31	Colour control element			Green
Type of electrical connection of main circuit Degree of protection (IP), front side Rail connection IP31	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)			

Dimensions

