### DATASHEET - INX40N3-32F-1



Switch-disconnector, 3 pole, 3200A, without protection, IEC, Fixed



(Norway)

INX40N3-32F-1 184054

EL-Nummer 4398416



#### **Delivery program**

		Air circuit-breakers/switch-disconnectors
		Open switch-disconnectors
		Up to 4000 A
		without protection
		Fixed
		INX40
		without releases
		IEC
		3 pole
		IP31 with door seals, IP55 with protective cover
		optionally fittable by user with comprehensive accessories
$I_n = I_u$	Α	3200
I <sub>cm</sub>	kA	187
I <sub>cw</sub>	kA	85
I <sub>cw</sub>	kA	66
	I <sub>cm</sub> I <sub>cw</sub>	I <sub>cm</sub> kA

# **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	3200
Rated uninterrupted current at 50 °C	lu	А	3200
Rated uninterrupted current at 60 °C	lu	Α	3200
Rated uninterrupted current at 70 °C	lu	А	3200
Rated impulse withstand voltage	U <sub>imp</sub>	V AC	12000
Rated operational voltage	U <sub>e</sub>	V AC	690
Overvoltage category/pollution degree			111/3
Rated insulation voltage	Ui	V	1000
Switching capacity			
Rated short-circuit making capacity	I <sub>cm</sub>		
up to 440 V 50/60 Hz	I <sub>cm</sub>	kA	187
up to 690 V 50/60 Hz	I <sub>cm</sub>	kA	166
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 In			
Fixed mounting		W	385
Weight			
Fixed mounting			
3-pole		kg	43
Terminal capacities			
Copper bar			
Fixed mounting			
Black		mm	3 x 80 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.
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## Design verification as per IEC/EN 61439

Design vernication as per icc/civ 01455			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	А	3200
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	385
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.
10.9.4 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])

Varial namination whether whether with a standard set whether	[AKI 000015])		
Varian as aftery subtif     Image of subtification     Image of subtification       Varian as arregency stop installation     Image of subtification     Image of subtification       Varian as reversing switch     Image of subtification     Image of subtification       Number of subtification     Image of subtification     Image of subtification       Number of subtification     Image of subtification     Image of subtification       Rated permenent current at AC-21, 400 V     Image of subtification     Image of subtification       Rated permenent current at AC-21, 400 V     Image of subtification     Image of subtification       Rated permenent current at AC-21, 400 V     Image of subtification     Image of subtification       Rated permenent current at AC-21, 400 V     Image of subtification     Image of subtification       Rated permenent current at AC-21, 400 V     Image of subtification     Image of subtification       Subtification current at AC-23, 400 V     Image of subtification     Image of subtification       Subtification current at AC-23, 400 V     Image of subtification current at AC-23, 400 V     Image of subtification current at AC-23, 400 V       Subtification current at AC-23, 400 V     Image of subtification current at AC-23, 400 V     Image of subtification current at AC-23, 400 V	Version as main switch		Yes
Varion as energency signification     Image: Proceedings of the section of the sectin of the sectin of the section of the section of the section of th	Version as maintenance-/service switch		No
Version as eversing switchImage: seversing switchImage: seve	Version as safety switch		No
Number of witching     Image: space of the spac	Version as emergency stop installation		No
Nax. rate operation voltage UPAC     V     90       Rated operation voltage     V     800 689       Rated operation voltage     V     800 689       Rated operation voltage     V     800 689       Rated operation voltage UPAC     V     800 689       Rated operation voltage UPAC     V     800 689       Rated operation power at AC3, 400 V     V     800 680       Rated operation power at AC3, 400 V     V     800 680       Switch opewer at AC3, 400 V     V     800 680       Number of power at AC3, 400 V     V     800 680       Switch opewer at AC3, 400 V     V     800 680       Switch opewer at AC3, 400 V     V     800 680       Switch opewer at AC3, 400 V     V     800 680       Switch opewer at AC3, 400 V     V     800 680       Switch opewer at AC3, 400 V     V     800 680       Switch opewer at AC3, 400 V     V     800 680       Switch opewer at AC3, 400 V     V     800 680       Switch opewer at AC3, 400 V     V     800 680       Switch opewer at AC3, 400 V     V     800 680	Version as reversing switch		No
Rete operament current lo   60 - 60     Rete operament current lo   200     Rete operament current at AC-23,400 V   6     Rete operation power at AC-3,400 V   6     Seted short-ine withshand current low   6     Seted short-ine withshand current low   6     Seted short-incut current lq   6     Number of audiary contacts as normally closed contact   6     Number of audiary contacts as normally closed contact   6     Number of audiary contacts as normally closed contact   6     Number of audiary contacts as normally closed contact   6     Number of audiary contacts as normally closed contact   6     Number of audiary contacts as normally closed contact   6     Number of audiary contacts as normally closed contact   6     Number of audiary contacts as normally closed contact   6     Number of audiary contacts as normally closed contact   6     Number of audiary contacts as normally closed contact   6     Number of audiary contacts as normally closed contact   6 <t< td=""><td>Number of switches</td><td></td><td></td></t<>	Number of switches		
Retd parament current lu Image: A geometric at AC-23, 400 V Image: A geometric at AC-23, 400 V   Retd parament current at AC-23, 400 V Image: A geometric at AC-23, 400 V   Retd parament current at AC-23, 400 V Image: A geometric at AC-23, 400 V   Retd operation power at AC-23, 400 V Image: A geometric at AC-23, 400 V   Retd operation power at AC-23, 400 V Image: A geometric at AC-23, 400 V   Statist operation power at AC-23, 400 V Image: A geometric at AC-23, 400 V   Statist operation power at AC-23, 400 V Image: A geometric at AC-23, 400 V   Statist operation power at AC-23, 400 V Image: A geometric at AC-23, 400 V   Statist operation power at AC-23, 400 V Image: A geometric at AC-23, 400 V   Statist operation power at AC-23, 400 V Image: A geometric at AC-23, 400 V   Statist operation power at AC-23, 400 V Image: A geometric at AC-23, 400 V   Statist operation power at AC-23, 400 V Image: A geometric at AC-23, 400 V   Number of auxiliary contacts as anomaly oper contact Image: A geometric at AC-23, 400 V   Number of auxiliary contacts as anomaly oper contact Image: A geometric at AC-23, 400 V   Number of auxiliary contacts as anomaly oper contact Image: A geometric at AC-23, 400 V   Number of auxiliary contacts as anomaly oper contact Image: A geometric at AC-23, 400 V   Number of auxiliary contacts as anomaly oper contact Image: A geometric at AC-23, 400	Max. rated operation voltage Ue AC	V	690
Red permanent current at A2-21, 400 V   A     Rated permanent current at A2-31, 400 V   A     Rated operation power at AC-3, 400 V   KW     Rated short-time withstand current low   KM     Rated short-time withstand current low   KW     Rated permanent at 400 V   KW     Switching power at 400 V   KW     Conditioned rated short-circuit current lq   KW     Number of polis   F     Number of polis   F     Number of auxiliary contacts as normally closed contact   F     Motor of polis   F     Number of auxiliary contacts as normally closed contact   F     Motor of auxiliary contacts as normally closed contact   F     Number of auxiliary contacts as normally closed contact   F     Number of auxiliary contacts as normally closed contact   F     Number of auxiliary contacts as normally closed contact   F     Number of auxiliary contacts as normally closed contact   F     Number of auxiliary contacts as normally closed contact   F     Notary contacts   F   F     Subte for ground mounting   F   F     Subte for fort mounting chntre   F   F	Rated operating voltage	V	690 - 690
Add     A     0       Rated operation power at AC-31, 400 V     W     0       Rated operation power at AC-32, 400 V     KA     8       Switch ing power at AC-32, 400 V     C     W     0       Switch ing power at AC-32, 400 V     C     W     0       Switch ing power at AC-32, 400 V     C     W     0       Switch ing power at AC-32, 400 V     C     W     0       Switch ing power at AC-32, 400 V     C     W     0       Switch ing power at AC-32, 400 V     C     W     0       Switch ing power at AC-32, 400 V     C     W     0       Switch ing power at AC-32, 400 V     C     W     0       Switch ing power at AC-32, 400 V     C     W     0       Switch ing power at AC-32, 400 V     C     0     0       Switch ing power at AC-32, 400 V     C     0     0       Number of auxiliary contacts as normally cosed contact     V     0     0     0       Number of auxiliary contacts as normally cosed contact     V     V     S     S     S	Rated permanent current lu	А	3200
Are operation power at AC-3, 400 V     Image: Provide At AC-3, 400 V     <	Rated permanent current at AC-23, 400 V	А	
Rete short-time withstand current low     K     8       Reted operation power at AC-23, 400 V     W     0       Switching power at 400 V     W     0       Conditioned rated short-circuit current lq     K     87       Number of poles     K     87       Number of auxiliary contacts as normally coled contact     F     9       Number of auxiliary contacts as normally coled contact     F     9       Number of auxiliary contacts as normally coled contact     F     9       Number of auxiliary contacts as normally coled contact     F     9       Number of auxiliary contacts as normally coled contact     F     9       Number of auxiliary contacts as normally coled contact     F     9       Number of auxiliary contacts as normally coled contact     F     9       Number of auxiliary contacts as normally coled contact     F     9       Number of auxiliary contacts as normally coled contact     F     9       Number of auxiliary contacts as normally coled contact     F     9       Number of auxiliary contacts as normally coled contact     F     9       Number of auxiliary contacts as contage     F	Rated permanent current at AC-21, 400 V	А	0
Ret depration power at AC-23, 400 V     Image: March of the second of the seco	Rated operation power at AC-3, 400 V	kW	0
Nithing power at 400 VNNConditioned rated short-circuit current IqIAIBNumber of polesIAISNumber of auxiliary contacts as normally closed contactIAIDNumber of auxiliary contacts as normally open contactIAIDNumber of auxiliary contacts as change-over contactIAIDNumber of auxiliary contacts as change-over contactIDIDNotr drive integratedIDIDIDNotr drive integratedIDIDIDNotr drive integratedIDIDIDNotable for ground mountingIDIDIDSuitable for front mounting centreIDIDIDSuitable for intermediate mountingIDIDIDSuitable for intermediate mountingIDID <td< td=""><td>Rated short-time withstand current lcw</td><td>kA</td><td>85</td></td<>	Rated short-time withstand current lcw	kA	85
Condition rated short-circuit current IqIMIAIANumber of polesIIINumber of auxiliary contacts as normally closed contactIIINumber of auxiliary contacts as normally open contactIIINumber of auxiliary contacts as change-over contactIIINumber of auxiliary contacts as change-over contactIIINot drive integratedIIIINotage release optionalIIIINotation for mounting 4-holeIIIISuitable for rior mounting centreIIIISuitable for instraitationIIIISuitable for instraitationII	Rated operation power at AC-23, 400 V	kW	0
Number of paise   3     Number of auxiliary contacts as normally closed contact   0     Number of auxiliary contacts as normally open contact   0     Number of auxiliary contacts as normally open contact   0     Number of auxiliary contacts as normally open contact   0     Number of auxiliary contacts as change-over contact   1     Number of auxiliary contacts as change-over contact   1     Notor drive integrated   1     Notor drive integrated   1     Notar drive integrated   1     Notar drive integrated   1     Suitale for ground mounting   1     Suitable for first mounting centre   1     Suitable for instribution board installation   1	Switching power at 400 V	kW	0
Number of auxiliary contacts as normally closed contact     Imper of auxiliary contacts as normally open contact	Conditioned rated short-circuit current Iq	kA	187
Number of auxiliary contacts as normally open contact   0     Number of auxiliary contacts as change-over contact   6     Motor drive optional   Yes     Motor drive integrated   No     Voltage release optional   Yes     Device construction   Yes     Suitable for ground mounting   Yes     Suitable for fort mounting 4-hole   Yes     Suitable for fort mounting centre   Yes     Suitable for intermediate mounting   Yes     Suitable for interm	Number of poles		3
Number of auxiliary contacts as change-over contact   Image: Section 1   2     Motor drive optional   Yes     Motor drive integrated   Yes     Voltage release optional   Yes     Device construction   Yes     Suitable for ground mounting   Yes     Suitable for front mounting 4-hole   Yes     Suitable for front mounting centre   Yes     Suitable for intermediate mounting   Yes     Type of element   Yes     Type of element   Yes     Suitable for intermediate connection of main circuit   Yes     Type of electrical co	Number of auxiliary contacts as normally closed contact		0
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     Yes       Suitable for front mounting centre     No       Suitable for intermediate mounting     Yes       Suitable for interme	Number of auxiliary contacts as normally open contact		0
Motor dive integratedNoMotor dive integratedNoVoltage release optionalYesDevice constructionSuit-in device fixed built-in techniqueSuitable for ground mountingYesSuitable for front mounting 4-holeNoSuitable for front mounting centreNoSuitable for distribution board installationYesSuitable for intermediate mountingNoSuitable for intermediate mountingYesSuitable for intermediate mountingYesSuitable for intermediate mountingYesSuitable for intermediate mountingYesType of control elementYesType of electrical connection of main circuitYesType of electrical connection of main circuitYesDegree of protection (IP), front sideYesType of entrol (IP), front Si	Number of auxiliary contacts as change-over contact		2
Voltage release optionalYesDevice constructionFesSuitable for ground mountingYesSuitable for front mounting 4-holeNoSuitable for front mounting centreNoSuitable for distribution board installationYesSuitable for intermediate mountingNoColour control elementNoType of control elementYesType of electrical connection of main circuitYesDegree of protection (IP), front sideYesSuitable for intermediateNoSuitable for intermediateNoSuitable for intermediate mountingNoSuitable for intermediate mountingNoSuitable for intermediate mountingNoSuitable for intermediate mountingSecondSuitable for intermediate mountingNoSuitable for intermediate mountingNoSuitable for intermediate mountingNoSuitable for intermediate mountingSecondSuitable for intermediateSecondSuitable for intermediateSecondSuitable for intermediateSecondSuitable for intermediateSecondSuitable for intermediateSecon	Motor drive optional		Yes
Device constructionBeildBuilt-in device fixed built-in techniqueSuitable for ground mountingYesSuitable for front mounting 4-holeNoSuitable for front mounting centreNoSuitable for front mounting centreYesSuitable for distribution board installationYesSuitable for intermediate mountingNoSuitable for intermediate mountingNoSuitable for intermediate mountingNoSuitable for intermediate mountingYesSuitable for intermediate mountingNoSuitable for intermediate mountingSuitableSuitable for intermediate mounting<	Motor drive integrated		No
Suitable for ground mountingYesSuitable for front mounting 4-holeNoSuitable for front mounting centreNoSuitable for distribution board installationYesSuitable for intermediate mountingNoSuitable for intermediate mountingNoColour control elementSereenType of control elementYesInterlockableYesType of electrical connection of main circuitYesDegree of protection (IP), front sideImage: Section (IP), front side	Voltage release optional		Yes
Suitable for front mounting 4-holeNoSuitable for front mounting centreNoSuitable for distribution board installationYesSuitable for intermediate mountingNoColour control elementGreenType of control elementYesInterlockableYesType of electrical connection of main circuitGreenType of electrical connection of main circuitSole of the soleDegree of protection (IP), front sideSole of the sole	Device construction		Built-in device fixed built-in technique
Suitable for front mounting centreNoSuitable for distribution board installationYesSuitable for intermediate mountingNoColour control elementGreenType of control elementYesInterlockableYesType of electrical connection of main circuitSol of SolPagree of protection (IP), front sideSol of Sol	Suitable for ground mounting		Yes
Suitable for distribution board installationYesSuitable for intermediate mountingNoColour control elementGreenType of control elementPush buttonInterlockableYesType of electrical connection of main circuitGreenDegree of protection (IP), front sideGreen	Suitable for front mounting 4-hole		No
Suitable for intermediate mountingNoColour control elementGreenType of control elementPush buttonInterlockableYesType of electrical connection of main circuitRail connectionDegree of protection (IP), front sideSail connection	Suitable for front mounting centre		No
Colour control elementGreenType of control elementPush buttonInterlockableYesType of electrical connection of main circuitGreenDegree of protection (IP), front sideGreen	Suitable for distribution board installation		Yes
Type of control element Push button   Interlockable Yes   Type of electrical connection of main circuit Mail connection   Degree of protection (IP), front side Mail connection	Suitable for intermediate mounting		No
Interlockable Yes   Type of electrical connection of main circuit Mail connection   Degree of protection (IP), front side Image: Additional content in the section of th	Colour control element		Green
Type of electrical connection of main circuit Rail connection   Degree of protection (IP), front side 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)		



