

Switch-disconnector, 4p, 1000 A, fixed

Part no. Article no. Catalog No. INX40N4-10F 150102 RES8104BSW0NMNN2MN1X



## **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			4 pole
Degree of Protection			IP20, IP55 with protective cover, IP41 door sealing frame
			optionally fittable by user with comprehensive accessories
Rated current = rated uninterrupted current	$I_n = I_u$	А	1000
Bemessungskurzschlusseinschaltvermögen bis 440V/690V 42/42	I <sub>cm</sub>	kA	187
Bemessungskurzzeitstromfestigkeit t = 1 s	I <sub>cw</sub>	kA	85
Bemessungskurzzeitstromfestigkeit t = 3 s	I <sub>cw</sub>	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° 30°
Utilization category			В
Degree of Protection			IP20, IP55 with protective cover, IP41 door sealing frame
Direction of incoming supply			as required
Main conducting paths			
Rated current = rated uninterrupted current	$I_n = I_u$	Α	1000
Rated uninterrupted current at 50 °C	lu	Α	1000
Rated uninterrupted current at 60 °C	lu	Α	1000
Rated uninterrupted current at 70 °C	lu	Α	1000
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			III/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	l <sub>cm</sub>	kA	187
up to 690 V 50/60 Hz	I <sub>cm</sub>	kA	166
Rated short-time withstand current 50/60 Hz			
Rated short-time withstand current (t=1s)	I <sub>cw</sub>	kA	66
t = 3 s	I <sub>cw</sub>	kA	53
Operating times			
Closing delay via spring release		ms	35

Total opening delay via shunt release		ms	22
Total opening delay via undervoltage release		ms	37
Maximum operating frequency		Ops./h	
Maximum operating frequency	Operations/h		60
Heat dissipation at rated current I <sub>n</sub>			
Fixed mounting		W	40
Weight			
Fixed mounting			
3-pole		kg	43
4-pole		kg	56
Terminal capacities			
Copper bar			
Fixed mounting			
Black		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.

## Design verification as per IEC/EN 61439

Design vernication as per ILG/LIV 01455			
Technical data for design verification			
Rated operational current for specified heat dissipation	I <sub>n</sub>	А	1000
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	40
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 6.0**

Electric angineering, automation, process control engineering / Low voltage subtool (// Control electric control switch / Switch disconnector lectRiss 8.1-27.37.1428)       Version as maintenance / service switch     Image: Service control engineering voltage subtool       Version as subing switch     Image: Service control engineering voltage subtool       Version as subing switch     Image: Service control engineering voltage subtool       Version as eversing voltage UP & AC     Image: Service control engineering voltage UP & AC       Nated permanent current to     Image: Service control engineering voltage UP & AC       Rated permanent current to     Image: Service control engineering voltage UP & AC       Rated permanent current to     Image: Service control engineering voltage UP & AC       Rated permanent current to     Image: Service control engineering voltage UP & AC       Rated permanent current to     Image: Service control engineering voltage UP & AC       Rated permanent current to     Image: Service control engineering voltage UP & AC       Rated permanent current to     Image: Service control engineering voltage UP & AC       Rated permanent current to     Image: Service Control engineering voltage UP & AC       Rated permanent current to     Image: Service Control engineering voltage UP & AC       Rated permanent current to     Image: Service Control engineering voltage UP & AC	Low-voltage industrial components (EG000017) / Switch disconnector (EC000216)			
Actoop)     Second sec				
Varian as maintannen-/service switch     Maintannen-/service switch     Maintannen-/service switch       Version as safety switch     So     Na       Version as senergency stop installation     So     Na       Version as senergency stop installation     So     So       Nac, rated operation voltage UeAC     So     So       Rated operation power at AC3, 400 V     So     So       Rated operation power at AC3, 400 V     So     So       Number of sucking contexts as normally closed context     WW     Go       Number of sucking contexts as normally closed context     MM     So       Number of sucking contexts as normally closed context     MM     So       Number of sucking contexts as normally closed context     MM     So       Number of sucking contexts as hange-over context     MM     So       Number of sucking contexts as hange-over context     MM     So       Sutab	Electric engineering, automation, process control engineering / Low-voltage switch t [AKF060010])	echnology / Off-lo	ad switch, circuit breaker, control switch / Switch disconnector (ecl@ss8.1-27-37-14-03	
Version as aftery switch     Image: sever sing switch     No       Version as reversing switch     Image: sever sing switch     No       Nax. rated operation voltage Us AC     Image: sever sing switch     Image: sever sing switch       Rated operation voltage Us AC     Image: sever sing switch     Image: sever sing switch       Rated operation voltage Us AC     Image: sever sing switch     Image: sever sing switch       Rated operation voltage Us AC     Image: sever sing switch     Image: sever sing switch       Rated operation voltage Us AC     Image: sever sing switch     Image: sever sing switch       Rated operation voltage Us AC     Image: sever sing switch     Image: sever sing switch       Rated operation power at AC:21, 400 V     Image: sever sing switch     Image: sever sing switch       Rated operation power at AC:23, 400 V     Image: sever sing switch     Image: sever sing switch       Switching power at AC:24, 400 V     Image: sever sing switch     Image: sever sing switch       Number of suikiary contacts are normally closed contact     Image: sever sing switch     Image: sever sing switch       Number of suikiary contacts as change-over contact     Image: sever sing switch     Image: sever sing switch       Number of suikiary contacts as change-over contact <td>Version as main switch</td> <td></td> <td>Yes</td>	Version as main switch		Yes	
Version as reversing witch     No       Version as reversing witch     No       Max. redu operation voltage UB AC     V     600       Rated operation voltage UB AC     V     0       Rated operation voltage UB AC     V     0       Rated operation voltage UB AC     V     0       Solid operation voltage UB AC     V     0       Solid operation voltage UB AC     V     0       Number of pauxiliary contexts as normally open contact     V     0       Number of auxiliary contexts as normally open contact     V     0       Number of auxiliary contexts as normally open contact     V     No       Number of auxiliary contexts as normally open contact     V     No	Version as maintenance-/service switch		No	
Normal Series	Version as safety switch		No	
Aract ado operation voltage Ue AC     V     600       Rated operation voltage Ue AC     600     600       Rated operation voltage Ue AC     000     000       Rated permanent current lu     0     0     0       Rated operation voor at AC-21,400 V     M     0     0       Rated operation power at AC-23,400 V     M     0     0       Rated operation power at AC-23,400 V     M     0     0       Solitching power at AC-23,400 V     M     0     0       Number of auxiliary contacts as normally copac contact     M     0     0       Number of auxiliary contacts as normally	Version as emergency stop installation		No	
Rated permanent ourtent lu     V     690 - 690       Rated permanent current lu     IO     IO       Rated permanent current lu     IO     IO       Rated operation power at AC-3, 400 V     IO     IO       Rated operation power at AC-3, 400 V     IO     IO       Rated operation power at AC-23, 400 V     IO     IO       Rated operation power at AC-23, 400 V     IO     IO       Conditioner atted abort-tircuit current lg     IO     IO       Switching yourt at 400 V     IO     IO       Conditioner atted abort-tircuit current lg     IO     IO       Number of poles     IO     IO     IO       Number of auxiliary contacts as normally colos do cntact     IO     IO     IO       Number of auxiliary contacts as normally colos do cntact     IO	Version as reversing switch		No	
Aread permanent current lu     Image: Provide status in the stat	Max. rated operation voltage Ue AC	V	690	
Are depermenent current at AC:21, 400 V     A     A       Rated operation power at AC:3, 400 V     KW     0       Rated operation power at AC:3, 400 V     KW     0       Switching power at AC:3, 400 V     KW     0       Conditioned rated short-circuit current Iq     KW     0       Number of auxiliary contacts as normally closed contact     KM     0       Number of auxiliary contacts as normally concentat     KM     0       Number of auxiliary contacts as normally concentat     KM     0       Number of auxiliary contacts as normally consectorate     KM     0       Number of auxiliary contacts as normally consectorate     KM     0       Number of auxiliary contacts as normally consectorate     KM     0       Number of auxiliary contacts as normally consectorate     KM     0       Number of auxiliary contacts as normally consectorate     KM     No       State of for mounting contact     KM     No       Suitable	Rated operating voltage	V	690 - 690	
Reference     KM     Reference       Reference     KM     8       Reference     KM     9       Reference     KM     9       Switching power at AOV     KM     9       Conditioned rated short-circuit current lq     KM     8       Number of poles     KM     8       Number of auxiliary contacts as normally closed contact     KM     9       Number of auxiliary contacts as normally closed contact     KM     9       Number of auxiliary contacts as normally closed contact     KM     9       Number of auxiliary contacts as normally closed contact     KM     9       Number of auxiliary contacts as normally closed contact     KM     9       Number of auxiliary contacts as normally closed contact     KM     9       Number of auxiliary contacts as normally closed contact     KM     9       Number of auxiliary contacts as normally closed contact     KM     9       Number of auxiliary contacts as normally closed contact     KM     9       Notact contact as change-over contact     KM     9       Suitable for fort mounting conter     KM     9 <td>Rated permanent current lu</td> <td>А</td> <td>1000</td>	Rated permanent current lu	А	1000	
Rated short-time withstand current low     Ka     S       Rated operation power at AC-23, 400 V     KW     0       Switching power at 400 V     KW     0       Conditioned rated short-circuit current lq     KW     187       Number of poles     KA     4       Number of auxiliary contacts as normally closed contact     KA     0       Number of auxiliary contacts as normally closed contact     KA     0       Number of auxiliary contacts as normally closed contact     KA     0       Number of auxiliary contacts as normally closed contact     KA     0       Number of auxiliary contacts as normally closed contact     KA     0       Number of auxiliary contacts as normally closed contact     KA     0       Number of auxiliary contacts as change-ower contact     KA     Yes       Notor drive optional     KA     Yes       Notact contraction     KA     Yes       Suitable for front mounting 4-hole     KA     Yes       Suitable for intermediate mounting     KA     Yes     Yes       Suitable for intermediate mounting     KA     Yes     Yes <t< td=""><td>Rated permanent current at AC-21, 400 V</td><td>А</td><td>0</td></t<>	Rated permanent current at AC-21, 400 V	А	0	
Reted operation power at AC-23, 400 V   V/V   0     Switching power at 400 V   0   0     Conditioned rated short-circuit current Iq   K/V   8     Number of poles   4   0     Number of auxiliary contacts as normally closed contact   M   0     Number of auxiliary contacts as normally closed contact   M   0     Number of auxiliary contacts as change-over contact   M   0     Number of auxiliary contacts as change-over contact   M   M     Number of auxiliary contacts as change-over contact   M   M     Number of auxiliary contacts as change-over contact   M   M     Number of auxiliary contacts as change-over contact   M   M     Number of auxiliary contacts as change-over contact   M   M     Number of auxiliary contacts as change-over contact   M   M     Number of auxiliary contacts as change-over contact   M   M     Number of auxiliary contacts as change-over contact   M   M     Number of auxiliary contacts as change-over contact   M   M     Suitable for front mounting enter   No   N     Suitable for intermediate mounting   M <td< td=""><td>Rated operation power at AC-3, 400 V</td><td>kW</td><td>0</td></td<>	Rated operation power at AC-3, 400 V	kW	0	
Writing power at 400 V     Image: Market at a source of the sour	Rated short-time withstand current lcw	kA	85	
And     Balance       Number of poles     6	Rated operation power at AC-23, 400 V	kW	0	
Number of poles4Number of auxiliary contacts as normally closed contact0Number of auxiliary contacts as normally open contact0Number of auxiliary contact as normally open	Switching power at 400 V	kW	0	
Aumber of auxiliary contacts as normally closed contact     Product of auxiliary contacts as normally closed contact     Product of auxiliary contacts as normally open contact     Product of auxiliary contact as normal solution     Product of	Conditioned rated short-circuit current Iq	kA	187	
Number of auxiliary contacts as normally open contactImage of auxiliary contacts as change-over contactsImage of auxiliary contactsImage of	Number of poles		4	
Number of auxiliary contacts as change-over contact     Image: Controp of auxiliary contacts as change-over contact     Image: Controp of auxiliary contacts as change-over contacts as chandee over contacts as change-over contacts as change-over contac	Number of auxiliary contacts as normally closed contact		0	
And to reprive optional     Yes       Motor drive optional     Voltage release optional     Voltage release optional     Yes       Device construction     Suitable for ground mounting     Yes     Built-in device fixed built-in technique       Suitable for ground mounting 4-hole     Yes     No     No       Suitable for front mounting center     Yes     No     No       Suitable for intermediate mounting     Yes     No     No       Colour control element     Green     No     No       Type of control element     Yes     Yes     Yes     Yes       Type of elettrical connection of main circuit     Yes     Yes     Yes     Yes	Number of auxiliary contacts as normally open contact		0	
Motor drive integrated     Model     No       Voltage release optional     Fes     Built-in device fixed built-in technique       Device construction     Fes     Built-in device fixed built-in technique       Suitable for ground mounting 4-hole     Fes     Built-in device fixed built-in technique       Suitable for front mounting center     Fes     Built-in device fixed built-in technique       Suitable for front mounting center     Fes     Built-in device fixed built-in technique       Suitable for intermediate mounting     Fes     Built-in device fixed built-in technique       Suitable for intermediate mounting     Fes     Built-in device fixed built-in technique       Suitable for intermediate mounting     Fes     Built-in device fixed built-in technique       Suitable for intermediate mounting     Fes     Built-in device fixed built-in technique       Suitable for intermediate mounting     Fes     Built-in device fixed built-in technique       Suitable for intermediate mounting     Fes     Built-in device fixed built-in technique       Suitable for intermediate mounting     Fes     Built-in device fixed built-in technique       Suitable for intermediate mounting     Fes     Built-in device fixed built-in technique	Number of auxiliary contacts as change-over contact		2	
Voltage release optional     Kes       Device construction     Built-in device fixed built-in technique       Suitable for ground mounting     Kes       Suitable for front mounting 4-hole     Kes       Suitable for front mounting center     No       Suitable for distribution board installation     Kes       Suitable for intermediate mounting     Kes  <	Motor drive optional		Yes	
Device construction   Built-in device fixed built-in technique     Suitable for ground mounting   Yes     Suitable for front mounting center   No     Suitable for distribution board installation   Yes     Suitable for intermediate mounting   Yes     Colour control element   Yes     Type of control element   Yes     Interlockable   Yes	Motor drive integrated		No	
Suitable for ground mounting   Yes     Suitable for front mounting 4-hole   No     Suitable for front mounting center   Yes     Suitable for distribution board installation   Yes     Suitable for intermediate mounting   Yes     Colour control element   Yes     Type of control element   Yes     Interlockable   Yes     Type of element   Yes     Suitable for intermediate mounting   Y	Voltage release optional		Yes	
Suitable for front mounting 4-hole   No     Suitable for front mounting center   No     Suitable for distribution board installation   No     Suitable for intermediate mounting   Mo     Colour control element   No     Type of control element   Mo     Interlockable   Mo     Type of electrical connection of main circuit   Mo	Device construction		Built-in device fixed built-in technique	
Suitable for front mounting center   Image: Specific stribution board installation   Mo     Suitable for intermediate mounting   Mo   Yes     Colour control element   Mo   Mo     Type of control element   Genen   Push button     Interlockable   Yes   Mo     Type of electrical connection of main circuit   Genen   Mo	Suitable for ground mounting		Yes	
Suitable for distribution board installation   Mail   Yes     Suitable for intermediate mounting   No   Colour control element     Colour control element   See   Green     Interlockable   Yes   Push button     Type of electrical connection of main circuit   See   For all connection of main circuit	Suitable for front mounting 4-hole		No	
Suitable for intermediate mounting Image: Sector	Suitable for front mounting center		No	
Colour control element Mark Green   Type of control element Mark Push button   Interlockable Mark Yes   Type of electrical connection of main circuit Mark Rail connection	Suitable for distribution board installation		Yes	
Type of control element Push button   Interlockable Yes   Type of electrical connection of main circuit Image: State Sta	Suitable for intermediate mounting		No	
Interlockable Yes   Type of electrical connection of main circuit Mail Connection	Colour control element		Green	
Type of electrical connection of main circuit Rail connection	Type of control element		Push button	
	Interlockable		Yes	
Degree of protection (IP), front side IP20	Type of electrical connection of main circuit		Rail connection	
	Degree of protection (IP), front side		IP20	