## DATASHEET - INX40B4-12W-1



Switch-disconnector, 4 pole, 1250A, without protection, IEC, Withdrawable



Part no. Catalog No. INX40B4-12W-1 184090

EL-Nummer (Norway) 4398452

#### **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			Withdrawable
			Cassette must be separately ordered.
Construction size			INX40
Release system			without releases
Standard/Approval			IEC
Number of poles			4 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 <sub>cm</sub>	kA	145
Rated short-time withstand current t =1 s	I <sub>cw</sub>	kA	66
Rated short-time withstand current t =3 s	I <sub>cw</sub>	kA	53

### **Technical data**

## General

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	lu	А	1250
Rated uninterrupted current at 60 °C	l <sub>u</sub>	А	1250
Rated uninterrupted current at 70 °C	l <sub>u</sub>	А	1250
Rated impulse withstand voltage	U <sub>imp</sub>	V AC	12000
Rated operational voltage	Ue	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	145
up to 690 V 50/60 Hz	I <sub>cm</sub>	kA	145

the temperature around the circuit-breaker, which is influenced by the am temperature, the degree of protection (IP), the mounting height, the partiti any external ventilation. Depending on the specific switchgear design, this result in derating, which can then be compensated for by increasing the c sectional area. Temperature rise tests in the specific switchgear can prov				
Total opening delay via shunt relesse   ms   3     Total opening delay via underoltage release   ms   40     Lifespan, mechanical   switching cycles (0N) of FF   1250     Lifespan, mechanical with maintenance   switching cycles (0N) of FF   12000.     Lifespan, electrical   switching cycles (0N) of FF   10000     Lifespan, electrical with maintenance   switching cycles (0N) of FF   10000     Maximum operating frequency   operations f   0000.     Maximum operating frequency   operations f   0000.     Withdrawable units (switch with eassette)   W   155     Withdrawable units (switch with cassette)   kg   35     Veriger Units (Switch with cassette)   kg   35     Withdrawable units (switch with cassette)   mm   155     Veriger Units (Switch with cassette)   kg   35     Veriger Units (Switch with cassette)   mm   155     Veriger Units (Switch with cassette)   mm   155     Veriger Units (Switch with cassette)   mm   150     Veriger Units (Switch with cassette)   mm   150     Veriger Units (Switch with cassette)   mm   150	Operating times			
Instance   Instance <thinstance< th="">   Instearce   <th< td=""><td>Closing delay via spring release</td><td></td><td>ms</td><td>30</td></th<></thinstance<>	Closing delay via spring release		ms	30
Lifespan, mechanical   S   Image: second se	Total opening delay via shunt release		ms	35
Lifespan, mechanical   S   Image: second se				
Lifespan, mechanical Switching cycles (0N) Constraints Switching cycles (0N) Constraints   Lifespan, mechanical with maintenance Switching cycles (0N) Constraints Switching cycles (0N) Constraints   Lifespan, electrical Switching cycles (0N) Switching cycles (0N) Constraints Switching cycles (0N)   Lifespan, electrical with maintenance Switching cycles (0N) Constraints Switching cycles (0N) Constraints   Maximum operating frequency Operations/h Constraints Switching cycles (0N) Constraints   Weight Operations/h Operations/h Constraints Switching cycles (0N)   Weight Terminal capacities Switching cycles (0N) Switching cycles (0N) Switching cycles (0N)   Yeight Terminal capacities Switching cycles (0N) Switching cycles (0N) Switching cycles (0N)   Yeight Terminal capacities Switching cycles (0N) Switching cycles (0N) Switching cycles (0N)   Yeight Terminal capacities Switching cycles (0N) Switching cycles (0N) Switching cycles (0N)   Yeight Terminal capacities Switching cycles (0N) Switching cycles (0N) Switching cycles (0N)   Yeight Switching cycles (0N) Switching cycles (0N) Switching cycles (0N) Switc	Total opening delay via undervoltage release		ms	40
If espan, mechanical with maintenance     CVIes (0N/ OFF)     Sourching cycles (0N/ OFF)     Sourching cycles (0N/ OFF)     Sourching cycles (0N/ OFF)     Intermediate Sourching cycles (0N/ OFF)     Intermediate Sourching cycles (0N/ Cycles (0N/ OFF)     Intermediate Sourching cycles (0N/ Cycles (0N	Lifespan		S	
If espan, electrical   OFF)   Image: Constraint of the span span span span span span span span	Lifespan, mechanical	cycles (ON/		12500
If espan, electrical with maintenance   gevels (0/v) GFV   with gevels (0/v) OFF   with gevels (0/v) OFF   with gevels (0/v) OFF   general gener general general general general general general gener	Lifespan, mechanical with maintenance	cycles (ON/		25000.
view     view <th< td=""><td>Lifespan, electrical</td><td>cycles (ON/</td><td></td><td>10000</td></th<>	Lifespan, electrical	cycles (ON/		10000
Maximum operating frequency   Operations/h   60     Heat dissipation at rated current In       Withdrawable units (switch with cassette)   W   155     Weight       Withdrawable       4-pole   kg   76     Cassette       4 pole   kg   35     Terminal capacities       Copper bar       Withdrawable units       Black        Maximum operating frequency    1 x 60 x 10	Lifespan, electrical with maintenance	cycles (ON/		20000.
Heat dissipation at rated current In   Image: Constraint of the section of the sec	Maximum operating frequency		Ops./h	
Withdrawable units (switch with cassette)   W   155     Withdrawable   V   155     Withdrawable   Image: State Sta	Maximum operating frequency	Operations/h		60
Weight   Methods	Heat dissipation at rated current In			
Withdrawable   Kg   76     4-pole   Kg   76     Cassette   Kg   35     4 pole   Kg   35     Terminal capacities     Copper bar   Mithdrawable units     Black   Mm   1 × 60 × 10     These are values used in separate switchgear. The actual values will depart the temperature around the circuit-breaker, which is influenced by the am temperature around the circuit-breaker, which is influenced by the am temperature around the circuit-breaker, which is influenced by the am temperature around the circuit-breaker, which is influenced by the am temperature around the circuit-breaker, which is influenced by the am temperature around the circuit-breaker, which is influenced by the am temperature around the circuit-breaker, which is influenced by the am temperature around the circuit-breaker, which is influenced by the am temperature around the circuit-breaker, which is influenced by the am temperature around the circuit-breaker, which is influenced by the am temperature around the circuit-breaker, which is influenced by the am temperature around the circuit-breaker, which is influenced by the am temperature around the circuit-breaker, which is influenced by the am temperature around the circuit-breaker, which is influenced by the am temperature around the circuit-breaker, which is influenced by the am temperature around the circuit-breaker, which is influenced by the am temperature around the circuit-breaker, which is influenced by the am temperature around the circuit-breaker, which is influenced by the am temperature around the circuit-breaker, which is influenced by the am temperature around the circuit-brea	Withdrawable units (switch with cassette)		W	155
4-pole kg 76   Cassette 6 6 6   4 pole kg 35   Terminal capacities   Topper bar   Withdrawable units 6 6   Black 1 x 60 x 10   These are values used in separate switchgear. The actual values will deput the temperature around the circuit-breaker, which is influenced by the am temperature, the degree of protection (IP), the mounting height, the partitit aroung vertinal ventilation. Depending on the specific switchgear can provide area. Temperature rise tests in the specific switchgear can provide area. Temperature rise tests in the specific switchgear can provide area. Temperature rise tests in the specific switchgear can provide area. Temperature rise tests in the specific switchgear can provide area. Temperature rise tests in the specific switchgear can provide area. Temperature rise tests in the specific switchgear can provide area. Temperature rise tests in the specific switchgear can provide area. Temperature rise tests in the specific switchgear can provide area. Temperature rise tests in the specific switchgear can provide area. Temperature rise tests in the specific switchgear can provide area. Temperature rise tests in the specific switchgear can provide area. Temperature rise tests in the specific switchgear can provide area. Temperature rise tests in the specific switchgear can provide area. Temperature rise tests in the specific switchgear can provide area. Temperature rise tests in the specific switchgear can provide area.	Weight			
Cassette   Image:	Withdrawable			
4 pole   kg   35     Terminal capacities     Copper bar   Image: Company of the second of the seco	4-pole		kg	76
Terminal capacities     Copper bar   Image: Comparity of the second	Cassette			
Copper bar   Image: Copper bar   Image: Copper bar   Image: Copper bar     Withdrawable units   Mithdrawable units   M	4 pole		kg	35
Withdrawable units   Black   mm   1 x 60 x 10     Black   These are values used in separate switchgear. The actual values will depute the temperature around the circuit-breaker, which is influenced by the am temperature, the degree of protection (IP), the mounting height, the partition any external ventilation. Depending on the specific switchgear design, this result in derating, which can then be compensated for by increasing the compensational area. Temperature rise tests in the specific switchgear can prov	Terminal capacities			
Black   mm   1 x 60 x 10     These are values used in separate switchgear. The actual values will depend the temperature around the circuit-breaker, which is influenced by the americation of the temperature of protection (IP), the mounting height, the partition any external ventilation. Depending on the specific switchgear design, this result in derating, which can then be compensated for by increasing the case time area. Temperature rise tests in the specific switchgear can provide the specific switchgear can pro	Copper bar			
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the temperature around the circuit-breaker, which is influenced by the am temperature, the degree of protection (IP), the mounting height, the partiti any external ventilation. Depending on the specific switchgear design, this result in derating, which can then be compensated for by increasing the c sectional area. Temperature rise tests in the specific switchgear can prov	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

Technical data for design verification			
Rated operational current for specified heat dissipation	In	А	1250
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	155
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 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	V	690
Rated operating voltage	V	690 - 690
Rated permanent current lu	А	1250
Rated permanent current at AC-23, 400 V	А	
Rated permanent current at AC-21, 400 V	А	0
Rated operation power at AC-3, 400 V	kW	0
Rated short-time withstand current lcw	kA	66
Rated operation power at AC-23, 400 V	kW	0
Switching power at 400 V	kW	0
Conditioned rated short-circuit current Iq	kA	144
Number of poles		4
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 slide-in technique (withdrawable)
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



