### DATASHEET - INX40B3-12W-1



Switch-disconnector, 3 pole, 1250A, without protection, IEC, Withdrawable



Part no. Catalog No. INX40B3-12W-1 184058

EL-Nummer (Norway) 4398420

# **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			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	$I_n = I_u$	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	l <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	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	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 a temperature, the degree of protection (IP), the mounting height, the part any external ventilation. Depending on the specific switchgear design, th result in derating, which can then be compensated for by increasing the sectional area. Temperature rise tests in the specific switchgear can pro				
Total opening delay via shunt release     ns     35       Total opening delay via undervoltage release     ns     40       Lifespan, mechanical     S	Operating times			
Initial opening delay via undervoltage release   ms   40     Lifespan   s   60     Lifespan, mechanical   S   500     Lifespan, mechanical with maintenance   S   5000     Lifespan, alectrical   Switching cycles (0V/ OFF)   S   5000     Lifespan, alectrical   Switching cycles (0V/ OFF)   S   5000     Lifespan, alectrical   Switching cycles (0V/ OFF)   S   S0000     Maximum operating frequency   Switching cycles (0V/ OFF)   S   S     Maximum operating frequency   Operationsh cycles (0V/ OFF)   S   S     Maximum operating frequency   Operationsh cycles (0V/ OFF)   S   S     Withdrawable units (switch with cassetle)   Work   S   S     Spole   Rg   S   S   S     Spole   Rg   S   S   S     Spole   Rg   S   S <td>Closing delay via spring release</td> <td></td> <td>ms</td> <td>30</td>	Closing delay via spring release		ms	30
Lifespan, mechanical   Switching Cycles (0W)   Switching Cycles (0W)   Solution     Lifespan, mechanical with maintenance   Switching Cycles (0W)   Solution   Solution     Lifespan, electrical   Switching Cycles (0W)   Image: Cycles (0W)   Image: Cycles (0W)   Image: Cycles (0W)     Lifespan, electrical with maintenance   Switching Cycles (0W)   Image: Cycles (0W)   Image: Cycles (0W)   Image: Cycles (0W)     Maximum operating frequency   Switching Cycles (0W)   Switching Cycles (0W)   Image: Cycles (0W)   Image: Cycles (0W)     Maximum operating frequency   Operations/h   Image: Cycles (0W)   Image	Total opening delay via shunt release		ms	35
Lifespan, mechanical Switching Cycles (0W) Switching Cycles (0W) Source (0W)   Lifespan, mechanical with maintenance Switching Cycles (0W) Switching Cycles (0W) Switching Cycles (0W) Switching Cycles (0W) Switching Cycles (0W) Ioooo   Lifespan, electrical Switching Cycles (0W) Switching Cycles (0W) Ioooo Ioooo   Maximum operating frequency Switching Cycles (0W) Switching Cycles (0W) Switching Cycles (0W) Ioooo   Maximum operating frequency Operationsh Maximum operating frequency Operationsh Maximum operating frequency Operationsh Maximum operating frequency Ioooo   Withdrawable units (switch with cassette) Operationsh Maximum operating frequency Ioooo Iooooo   Withdrawable units (switch with cassette) Iooooooooo Ioooooooooooooooooooooooooooooooooooo				
Lifespan, mechanical   Switching cycles (0V, cycles (0V, c	Total opening delay via undervoltage release		ms	40
initial case of the series	Lifespan		S	
evcles (0V/ OFF)   000     Lifespan, electrical   Switching evcles (0N/ OFF)   000     Lifespan, electrical with maintenance   Switching evcles (0N/ OFF)   2000.     Maximum operating frequency   Operations/ OFF)   0perations/ OFF)   2000.     Maximum operating frequency   Operations/ OFF)   0perations/ OFF)   0perations/ OFF)     Maximum operating frequency   Operations/ OFF)   0perations/ OFF)   0perations/ OFF)     Maximum operating frequency   Operations/ OFF)   0perations/ OFF)   0perations/ OFF)     Withdrawable units (switch with cassette)   Operations/ OFF)   0perations/ OFF)   0perations/ OFF)     Withdrawable units (switch with cassette)   Vecome   1   0perations/ OFF)   0perations/ OFF)     Spole   Spole   Spole   Spole   0perations/ OFF)   0perations/ OFF)   0perations/ OFF)     Territical capacities   Spole   Spo	Lifespan, mechanical	cycles (ON/		12500
cycles (0/v)   cycles (0/v)   cycles (0/v)     Lifespan, electrical with maintenance   Switching cycles (0/v)   Colon.     Maximum operating frequency   Operations/h   60     Maximum operating frequency   Operations/h   60     Withdrawable units (switch with cassette)   W   155     Withdrawable units (switch with cassette)   W   50     Withdrawable units (switch with cassette)   Maximum operating frequency   Maximum operating frequency     Withdrawable   Maximum operating frequency   Maximum operating frequency   Maximum operating frequency     Withdrawable units (switch with cassette)   W   155   15     Sopole   Maximum operating frequency   Maximum operating frequency   Maximum operating frequency     Sopole   Maximum operating frequency   Maximum operating frequency   Maximum operating frequency     Sopole   Maximum operating frequency   Maximum operating frequency   Maximum operating frequency     Sopole   Maximum operating frequency   Maximum operating frequency   Maximum operating frequency     Sopole   Maximum operating frequency   Maximum operating frequency   Maximum operating frequency     Sopole   S	Lifespan, mechanical with maintenance	cycles (ON/		25000.
Kind and operating frequency     Operations/h     Operation set ion alow set ion alow set ion alow set ion	Lifespan, electrical	cycles (ON/		10000
Maximum operating frequency   Operationsh   60     Heat dissipation at rated current In   WW   60     Withdrawable units (switch with cassette)   WW   155     Weight   WW   155     Withdrawable   Maximum operating frequency   60     3-pole   Kg   60     Cassette   60   60     3 pole   kg   60     Cassette   60   60     3 pole   kg   60     Cassette   60   60     Back   Kg   60     Withdrawable units   Kg   60     Soperations   Kg   60     Copperator   Kg   60     Withdrawable units   Kg   60     Withdrawable units   Kg   60     Black   Kg   1x60 x 10     Mutharwable units   Kg   1x60 x 10     Black   These are values used in separate switchgear. The actual values with the partiant area. Temperature around the circuit-breaker, which is influenced by the ast temperature. The degree of protection (IP) the mounting height, the partiant exection around the circuit-breaker, which is influenced by the ast temperature. The degree of	Lifespan, electrical with maintenance	cycles (ON/		20000.
Heat dissipation at rated current I <sub>n</sub> Withdrawable units (switch with cassette)   W     Withdrawable units (switch with cassette)   W   155     Weight   Withdrawable   G   G     S-pole   kg   60   G     Cassette   G   G   G   G     S pole   kg   29   G	Maximum operating frequency		Ops./h	
Withdrawable units (switch with cassette)   W   155     Withdrawable   Image: State St	Maximum operating frequency	Operations/h		60
Weight   Notes and the second secon	Heat dissipation at rated current I <sub>n</sub>			
Withdrawable   kg   e     3-pole   kg   60     Cassette   mm   index   index     3 pole   kg   29     Terminal capacities     Copper bar     Withdrawable units   index   index     Black   mm   1 x 60 x 10     The end of the end	Withdrawable units (switch with cassette)		W	155
3-pole   kg   60     Cassette   60   60     3 pole   kg   29     Terminal capacities     Copper bar     Withdrawable units   Mm     Black   1 x 60 x 10     These are values used in separate switchgear. The actual values will de the temperature around the circuit-breaker, which is influenced by the a temperature, the degree of protection (IP), the mounting height, the partian any external ventilation. Depending on the specific switchgear design, the result in derating, which can then be compensated for by increasing the sectional area. Temperature rise tests in the specific switchgear can protection area. Temperature rise tests in the specific switchgear can protection area.	Weight			
Cassette   Image:	Withdrawable			
3 pole   kg   29     Terminal capacities     Copper bar   Image: Company of the second of the seco	3-pole		kg	60
Terminal capacities     Copper bar   Image: Copper bar withdrawable units     Withdrawable units   Image: Copper bar withdrawable units     Black   Image: Copper bar withdrawable units     Black   Image: Copper bar withdrawable units     Black   Image: Copper bar withdrawable units     Image: Copper bar withdrawable units   Image: Copper bar withdrawable units     Black   Image: Copper bar withdrawable units     Image: Copper bar withdrawable units   Image: Copper bar withdrawable units     Image: Copper bar withdrawable units   Image: Copper bar withdrawable units     Black   Image: Copper bar withdrawable units     Image: Copper bar withdrawable units   Image: Copper bar withdrawable units     Image: Copper bar withdrawable units   Image: Copper bar withdrawable units     Image: Copper bar withdrawable units   Image: Copper bar withdrawable units     Image: Copper bar withdrawable units   Image: Copper bar withdrawable units     Image: Copper bar withdrawable units   Image: Copper bar withdrawable units     Image: Copper bar withdrawable units   Image: Copper bar withdrawable units     Image: Copper bar withdrawable units   Image: Copper bar withdrawable units     Image: Copper bar withdrawable units   Image: Copper bar	Cassette			
Copper bar   Image: Copper bar   Image: Copper bar   Image: Copper bar     Withdrawable units   Mithdrawable units   M	3 pole		kg	29
Withdrawable units   mm   1 x 60 x 10     Black   These are values used in separate switchgear. The actual values will de the temperature around the circuit-breaker, which is influenced by the a temperature, the degree of protection (IP), the mounting height, the part any external ventilation. Depending on the specific switchgear design, th result in derating, which can then be compensated for by increasing the sectional area. Temperature rise tests in the specific switchgear can prove the sectional area. Temperature rise tests in the specific switchgear can prove the sectional area.	Terminal capacities			
Black   mm   1 x 60 x 10     These are values used in separate switchgear. The actual values will de the temperature around the circuit-breaker, which is influenced by the a temperature, the degree of protection (IP), the mounting height, the part any external ventilation. Depending on the specific switchgear design, the result in derating, which can then be compensated for by increasing the sectional area. Temperature rise tests in the specific switchgear can proceed to t	Copper bar			
These are values used in separate switchgear. The actual values will de the temperature around the circuit-breaker, which is influenced by the a temperature, the degree of protection (IP), the mounting height, the part any external ventilation. Depending on the specific switchgear design, th result in derating, which can then be compensated for by increasing the sectional area. Temperature rise tests in the specific switchgear can pro-	Withdrawable units			
the temperature around the circuit-breaker, which is influenced by the a temperature, the degree of protection (IP), the mounting height, the parti any external ventilation. Depending on the specific switchgear design, th result in derating, which can then be compensated for by increasing the sectional area. Temperature rise tests in the specific switchgear can pro	Black		mm	1 x 60 x 10
specific and detailed mornauon.				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		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 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



