## **DATASHEET - INX16B3-06W-1**



## Switch-disconnector, 3 pole, 630A, without protection, IEC, Withdrawable



Part no. INX16B3-06W-1 183639 Catalog No.

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	,	Piu	gram

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			INX16
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	$I_n = I_u$	Α	630
Rated short-circuit making capacity up to 440V/690V 42/42	I <sub>cm</sub>	kA	88
Rated short-time withstand current t =1 s	I <sub>cw</sub>	kA	42

Technical data General			
Standards			IEC/EN 60947
Ambient temperature			
Storage	θ	°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	630
Rated uninterrupted current at 50 °C	Iu	Α	630
Rated uninterrupted current at 60 °C	Iu	Α	630
Rated uninterrupted current at 70 °C	Iu	Α	630
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	I <sub>cm</sub>	kA	88
up to 690 V 50/60 Hz	I <sub>cm</sub>	kA	88
Operating times			
Closing delay via spring release		ms	25

Total opening delay via shunt release		ms	25
Total opening delay via undervoltage release		ms	50
Lifespan		S	
Lifespan, mechanical	Switching cycles (ON/ OFF)		12500
Lifespan, mechanical with maintenance	Switching cycles (ON/ OFF)		25000.
Lifespan, electrical	Switching cycles (ON/ OFF)		10000
Lifespan, electrical with maintenance	Switching cycles (ON/ OFF)		20000.
Maximum operating frequency		Ops./h	
Maximum operating frequency	Operations/h		60
Heat dissipation at rated current I <sub>n</sub>			
Withdrawable units (switch with cassette)		W	50
Weight			
Withdrawable			
3-pole		kg	26
Cassette			
3 pole		kg	18
Terminal capacities			
Copper bar			
Withdrawable units			
Black		mm	2 x 5 x 50
			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.
			Permissible continuous current for circuit-breakers operating in switchboards at various internal ambient temperatures. The switchboard's internal ambient temperature should be estimated using the calculation methods of IEC regulation.

# Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	630
Equipment heat dissipation, current-dependent	$P_{\text{vid}}$	W	50
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 maintenance /service switch Version as salety switch Version as salety switch Version as sealety switch Version as sealety switch Version as remargency stop installation Version as sealery switch Number of switches Version as remargency stop installation Version as remargency stop installation Version as remark operation voltage Ue AC Related operation power at AC-23,400 V AC Related operation power at AC-3,400 V AC Related operation power			
Version as afterty switch Version as reversing switch Water atted operation voltage Ue AC VV 680 Rated operating voltage VV 680 Rated operation owner at AC-23, 400 V AR 0 Rated operation power at AC-3, 400 V AR 0 Rated operat	Version as main switch		Yes
Version as enversing switch         No           Number of switches         V         89           Nate of switches         V         89           Nated operation voltage Ue AC         V         890 - 690           Rated operation voltage Ue AC         V         890 - 690           Rated operation voltage Ue AC         V         890 - 690           Rated operation voltage Ue AC         V         890 - 690           Rated operation voltage Ue AC         V         890 - 690           Rated operation voltage Ue AC         A         690 - 690           Rated operation voltage Ue AC         A         690 - 690           Rated operation voltage Ue AC         A         690 - 690           Rated operation op vower at AC-23, 400 V         A         4         2           Rated operation power at AC-23, 400 V         KW         0         690 - 690           Rated operation power at AC-23, 400 V         KW         0         690 - 690           Number of poles         KW         0         690 - 690           Number of poles         KW         9         690 - 690           Number of auxiliary contacts as normally closed contact         KW         690 - 690           Motor divive optional         KW         790 - 690	Version as maintenance-/service switch		No
Version as revarsing switch         No           Number of switches         V         69           Max. rated operation voltage Ue AC         V         690 -690           Rated operating voltage         V         690 -690           Rated operating voltage         V         690 -690           Rated operating voltage         A         500 -690           Rated permanent current at AC-23, 400 V         A         0           Rated operation power at AC-23, 400 V         RA         0           Rated operation power at AC-23, 400 V         RA         0           Rated operation power at AC-23, 400 V         RA         0           Rated operation power at AC-23, 400 V         RA         0           Rated operation power at AC-23, 400 V         RA         0           Rated operation power at AC-23, 400 V         RA         0           Rated operation power at AC-23, 400 V         RA         0           Rated operation power at AC-23, 400 V         RA         0           Rated operation power at AC-23, 400 V         RA         0           Rated operation power at AC-23, 400 V         RA         0           Number of availage operation power at AC-23, 400 V         RA         0           Number of availage operation power at AC-23,	Version as safety switch		No
Number of switches         V         800 Case (a)	Version as emergency stop installation		No
Max. rated operating voltage         V         690           Rated operating voltage         V         690 - 690           Rated operating voltage         A         630           Rated permanent current at AC-2, 400 V         A         0           Rated operation power at AC-3, 400 V         kW         0           Rated operation power at AC-2, 400 V         kW         2           Rated short-time withstand current lcw         kW         4           Rated short-time withstand current lcw         kW         0           Rated operation power at AC-2, 400 V         kW         0           Rated operation power at AC-2, 400 V         kW         0           Round prover at 400 V         kW         0           Round prover at 400 V         kA         88           Number of power at 400 V         kA         88           Number of alexisting contacts as normally closed contact         kA         88           Number of auxiliary contacts as change-over contact         Ves         0           Number of auxiliary contacts as change-over contact         Ves         No           Notation of diverimetageted         Ves         No           Voltage release optional         Wes         Wes           Device province for forth mou	Version as reversing switch		No
No	Number of switches		
Rated permanent current at AC-23, 400 V         A         630           Rated permanent current at AC-23, 400 V         A         0           Rated operation power at AC-3, 400 V         kW         0           Rated operation power at AC-3, 400 V         kW         0           Rated operation power at AC-23, 400 V         kW         0           Switching power at 400 V         kW         0           Conditioned rated short-circuit current Iq         kA         88           Number of poles         3         3           Number of poles         0         0           Number of poles         2         2           Motor drive optional         Yes         8           Motor drive optional         Yes         8           Motor drive optional         Yes         8           Suitable for ground mounting         Yes         8           Suitable for ground mounting de	Max. rated operation voltage Ue AC	V	690
Rated permanent current at AC-23, 400 V Rated permanent current at AC-21, 400 V Rated operation power at AC-3, 400 V Rated operation power at AC-3, 400 V Rated operation power at AC-23, 400 V Rated operation power at AC-23	Rated operating voltage	V	690 - 690
Rated permanent current at AC-21, 400 V Rated operation power at AC-3, 400 V Rated operation power at AC-3, 400 V Rated short-time withstand current lcw Rated short-time withstand current lcw Rated short-time withstand current lcw Rated permanent power at AC-23, 400 V RW 0 Conditioned rated short-circuit current lq RW Number of poles Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Number of puxiliary contacts as normally open contac	Rated permanent current lu	А	630
Rated operation power at AC-3, 400 V Rated short-time withstand current lcw Rated operation power at AC-23, 400 V RW Rounding power at 400 V Conditioned rated short-circuit current Iq RAM Number of poles Number of pusiliary 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 change-over contact Number of inviting power at 400 V 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 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	Rated permanent current at AC-23, 400 V	Α	
Rated short-time withstand current low kM part of the protection power at AC-23, 400 V kW part of the power at AC-23, 400 V kW part of the power at AC-23, 400 V kW part of the power at AC-23, 400 V kW part of power at 400 V kW	Rated permanent current at AC-21, 400 V	Α	0
Rated operation power at AC-23, 400 V  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  Wotor drive optional  Motor drive integrated  Motor drive integrated  Motor drive integrated  Motor ground mounting  Device construction  Suitable for ground mounting  Suitable for front mounting 4-hole  Suitable for front mounting 4-hole  Suitable for front mounting 4-hole  Suitable for intermediate mounting  Suitable for intermediate mounting  Colour control element  Type of control element  Type of control element  Type of control element  Type of electrical connection of main circuit  Degree of protection (IP), front side  Motor drive integrated  Motor drive integrated  No  General  Rail connection  Rail connection  Rail connection  Rail connection	Rated operation power at AC-3, 400 V	kW	0
Switching power at 400 V         kW         0           Conditioned rated short-circuit current Iq         kA         88           Number of poles         3         3           Number of auxiliary contacts as normally closed contact         0         0           Number of auxiliary contacts as normally open contact         2         2           Motor drive optional         Yes         Yes           Motor drive integrated         No         Yes           Voltage release optional         Yes         Built-in device slide-in technique (withdrawable)           Suitable for ground mounting         Yes         No           Suitable for front mounting 4-hole         No         No           Suitable for front mounting centre         No         No           Suitable for distribution board installation         Yes         Suitable for intermediate mounting           Suitable for intermediate mounting         No         See           Colour control element         Yes         Green           Type of control element         Yes         Auxiliary contacts as change-over contact         Yes           Type of electrical connection of main circuit         Auxiliary contacts as change-over contact         Yes	Rated short-time withstand current lcw	kA	42
Conditioned rated short-circuit current Iq  Number of poles  Number of auxiliary contacts as normally closed contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  Motor drive optional  Motor drive integrated  Motor drive integrated  Voltage release optional  Device construction  Suitable for ground mounting  Suitable for front mounting 4-hole  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  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  MA  88  3  3  3  4  9  4  9  4  9  8  8  8  9  9  9  9  9  9  9  9  9	Rated operation power at AC-23, 400 V	kW	0
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 contacts as normally contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally contact Number of auxiliary contacts as normally open contacts Number of auxiliary contacts as normally open contacts as normall	Switching power at 400 V	kW	0
Number of auxiliary contacts as normally closed contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  Yes  Motor drive optional  No  Voltage release optional  No  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 control element  Type of control element  Type of electrical connection of main circuit  Degree of protection (IP), front side  Degree of protection (IP), front side	Conditioned rated short-circuit current Iq	kA	88
Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  Number of auxiliary contacts as change-over contact  Number of auxiliary contacts as change-over contact  Notor drive optional  Notor drive integrated  Notor drive internating 4-hole  Suitable for ground mounting  Suitable for front mounting 4-hole  Suitable for front mounting entre  Notor drive intermediate mounting  Suitable for distribution board installation  Yes  Suitable for intermediate mounting  Colour control element  Type of control element  Type of control element  Type of electrical connection of main circuit  Rail connection  Push button  Hall connection  Push intermockable  Yes  Type of electrical connection (IP), front side	Number of poles		3
Number of auxiliary contacts as change-over contact  Motor drive optional  Motor drive integrated  No  Voltage release optional  Eves  Device construction  Suitable for ground mounting  Suitable for front mounting 4-hole  Suitable for front mounting entre  Suitable for firont mounting centre  Suitable for distribution board installation  Suitable for intermediate mounting  Colour control element  Type of control element  Type of control element  Type of centrol element  Type of electrical connection of main circuit  Degree of protection (IP), front side	Number of auxiliary contacts as normally closed contact		0
Motor drive optional Motor drive integrated Motor drive slide-in technique (withdrawable) Motor drive integrated Motor drive slide-in technique (withdrawable) Motor drive integrated Motor drive slide-in technique (withdrawable) M	Number of auxiliary contacts as normally open contact		0
Notor drive integrated  No Voltage release optional  Ves  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 Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side  No  No  No  Rail connection Rail connection Pysa  Rail connection Piss  Rail co	Number of auxiliary contacts as change-over contact		2
Voltage release optional Device construction Built-in device slide-in technique (withdrawable)  Yes 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 Colour control element Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side  Yes  Built-in device slide-in technique (withdrawable)  No  No  Res  Rail connection Internockable IP31	Motor drive optional		Yes
Device construction  Suitable for ground mounting  Suitable for front mounting 4-hole  Suitable for front mounting centre  Suitable for font 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 slide-in technique (withdrawable)  Yes  No  No  Green  Fush button  Rail connection  IP31	Motor drive integrated		No
Suitable for ground mounting 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 protection (IP), front side  Yes  Yes  Yes  In A  No  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  Yes  Rail connection  IP31	Device construction		Built-in device slide-in technique (withdrawable)
Suitable for front mounting centre  Suitable for distribution board installation  Suitable for intermediate mounting  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  Res  No  Res  Figure 1  No  No  Res  Resil connection  IP31	Suitable for ground mounting		Yes
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  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 Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side  Green Push button Yes Rail connection IP31	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
5-59.50 o. p. 6-6-6-6.5. (1-1-1-1)	Degree of protection (NEMA)		

## **Dimensions**

