



## Switch-disconnector, 3p, 1600 A, AF

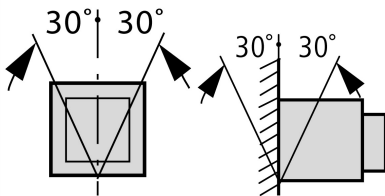
Part no. **INX40B3-16W**  
Article no. **150072**  
Catalog No. **RES6163WSW0NMNN2MNDX**

### Delivery programme

Product range			Air circuit-breakers/switch-disconnectors
Product range			Open switch-disconnectors
Current Range			Up to 4000 A
Installation type			Withdrawable
Construction size			INX40
Release system			without releases
Standard/Approval			IEC
Number of poles			3 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	$I_n = I_u$	A	1600
Making capacity $I_{cm}$ to 440 V 50/60 Hz	$I_{cm}$	kA	145
$t = 1$ s	$I_{cw}$	kA	66
$t = 3$ s	$I_{cw}$	kA	66

### Technical data

#### General

Standards			IEC/EN 60947
Ambient temperature			
Storage	$\theta$	°C	-40 - +70
Ambient temperature		°C	-25 - +70
Mounting position			
Utilization category			B
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	$I_n = I_u$	A	1600
Rated uninterrupted current at 50 °C	$I_u$	A	1600
Rated uninterrupted current at 60 °C	$I_u$	A	1600
Rated uninterrupted current at 70 °C	$I_u$	A	1600
Rated impulse withstand voltage	$U_{imp}$	V AC	12000
Rated operational voltage	$U_e$	V AC	690
Overvoltage category/pollution degree			III/3
Rated insulation voltage	$U_i$	V	1000

#### Switching capacity

Rated short-circuit making capacity	$I_{cm}$		
up to 440 V 50/60 Hz	$I_{cm}$	kA	145
up to 690 V 50/60 Hz	$I_{cm}$	kA	145
Rated short-time withstand current 50/60 Hz			
Rated short-time withstand current ( $t=1$ s)	$I_{cw}$	kA	85
$t = 3$ s	$I_{cw}$	kA	66
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 $I_n$		
Withdrawable units (switch with cassette)	W	255

## Weight

Withdrawable		
3-pole	kg	70
4-pole	kg	86
Cassette		
3 pole	kg	27
4 pole	kg	35

## Terminal capacities

Copper bar		
Withdrawable units		
Black	mm	1 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.

## Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	$I_n$	A	1600
Equipment heat dissipation, current-dependent	$P_{vid}$	W	255
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

Low-voltage industrial components (EG000017) / Switch disconnecter (EC000216)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnecter (ecI@ss8.1-27-37-14-03 [AKF060010])			
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
Max. rated operation voltage Ue AC		V	690
Rated operating voltage		V	690 - 690
Rated permanent current Iu		A	1600
Rated permanent current at AC-21, 400 V		A	0
Rated operation power at AC-3, 400 V		kW	0
Rated short-time withstand current Icw		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 center			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			IP20