

**Switch-disconnector, DMV, 250 A, 3P + N (solid), Stop Function optional,  
Without rotary handle and drive shaft**



**Part no.** DMV-250N/1  
**Catalog No.** 1814409

**Delivery program**

Product range			Switch-disconnector Main switch maintenance switch
Part group reference			DMV
Stop Function			optional
			Without rotary handle and drive shaft
<b>Notes</b>			visible contacts
Information about equipment supplied			auxiliary contact fitted by user. including connection materials
Number of poles			3P + N (solid)
<b>Auxiliary contacts</b>			
		N/O	0
		N/C	0
Degree of Protection			IP00 IP20 with terminal cover
Design			surface mounting
<b>Motor rating AC-23A, 50 - 60 Hz</b>			
400 V	P	kW	147
Rated uninterrupted current	$I_u$	A	250
Note on rated uninterrupted current $I_u$			Rated uninterrupted current $I_u$ is specified for max. cross-section.

**Technical data**

<b>General</b>			
Standards			IEC/EN 60947, VDE 0660, IEC/EN 60204 Switch-disconnector according to IEC/EN 60947-3
Certifications			CE, RoHs, KEMA, EAC, Lloyds
Ambient temperature			
Operation	$\theta$	°C	-25 - +55
Storage	$\theta$	°C	-30 - +80
Overvoltage category/pollution degree			III/3
Rated impulse withstand voltage	$U_{imp}$	kV	8
Rated insulation voltage	$U_i$	V	1000
Mounting position			As required

**Contacts**

<b>Mechanical variables</b>			
Number of poles			3P + N (solid)
Auxiliary contacts			
		N/O	0
		N/C	0
<b>Electrical characteristics</b>			
Rated operational voltage	$U_e$	V AC	690
Rated uninterrupted current	$I_u$	A	250
Note on rated uninterrupted current $I_u$			Rated uninterrupted current $I_u$ is specified for max. cross-section.
<b>Short-circuit rating</b>			
fuse			500/250

Rated conditional short-circuit current	I <sub>q</sub>	kA	In = 500: 50 In = 250: 100
Breaking current		kA	In = 500: 40 In = 250: 33
max. let-through energy		kA <sup>2</sup> s	In = 500: 1700 In = 250: 380
Rated short-time withstand current (1 s current)	I <sub>cw</sub>	A <sub>rms</sub>	12000
Note on rated short-time withstand current I <sub>cw</sub>			Current for a time of 0.3 seconds
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	4.2

### Switching capacity

Rated breaking capacity cos φ to IEC 60947-3		A	
400/415 V		A	2000
500 V		A	1760
690 V		A	1120
Safe isolation to EN 61140			
Current heat loss per contact at I <sub>e</sub>		W	3.75
Lifespan, mechanical	Operations		10000
AC			
AC-21A			
Rated operational current switch			
400 V 415 V	I <sub>e</sub>	A	250
500 V	I <sub>e</sub>	A	250
690 V	I <sub>e</sub>	A	250
AC-22A			
Rated operational current switch			
400 V 415 V	I <sub>e</sub>	A	250
500 V	I <sub>e</sub>	A	250
690 V	I <sub>e</sub>	A	250
AC-23A			
Rated operational current switch			
400 V 415 V	I <sub>e</sub>	A	250
500 V	I <sub>e</sub>	A	220
690 V	I <sub>e</sub>	A	140
Motor rating AC-23A, 50 - 60 Hz	P	kW	
400 V 415 V	P	kW	147
500 V	P	kW	160
690 V	P	kW	132

### Terminal capacities

Flat conductor connection with busbars		mm <sup>2</sup>	120
Terminal screw			M8 x 20
Tightening torque for terminal screw		Nm	14

### Technical safety parameters:

Notes			B10 <sub>d</sub> values as per EN ISO 13849-1, table C1
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## Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I <sub>n</sub>	A	250
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	4.2
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	0
Static heat dissipation, non-current-dependent	P <sub>vs</sub>	W	0
Heat dissipation capacity	P <sub>diss</sub>	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	55
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 8.0

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 (ecl@ss10.0.1-27-37-14-03 [AKF060013])

Version as main switch		No
Version as maintenance-/service switch		No
Version as safety switch		No
Version as emergency stop installation		Yes
Version as reversing switch		No
Number of switches		1
Max. rated operation voltage U <sub>e</sub> AC	V	690
Rated operating voltage	V	690 - 690
Rated permanent current I <sub>u</sub>	A	250
Rated permanent current at AC-23, 400 V	A	250
Rated permanent current at AC-21, 400 V	A	250
Rated operation power at AC-3, 400 V	kW	0
Rated short-time withstand current I <sub>cw</sub>	kA	12
Rated operation power at AC-23, 400 V	kW	140
Switching power at 400 V	kW	140
Conditioned rated short-circuit current I <sub>q</sub>	kA	100
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		0
Motor drive optional		No
Motor drive integrated		No
Voltage release optional		No
Device construction		Complete device in housing
Suitable for floor mounting		Yes
Suitable for front mounting 4-hole		No
Suitable for front mounting centre		No

Suitable for distribution board installation			No
Suitable for intermediate mounting			No
Colour control element			Other
Type of control element			Other
Interlockable			No
Type of electrical connection of main circuit			Screw connection
Degree of protection (IP), front side			IP20
Degree of protection (NEMA)			Other