

Switch-disconnector, DMV, 160 A, 3P + N (solid), Stop Function optional,
Without rotary handle and drive shaft, Screw terminal, drilling dimension
6,5 mm

Part no. **DMV-160N/1**
Catalog No. **1814177**

Delivery program

Product range			Switch-disconnector Main switch maintenance switch
Part group reference			DMV
Stop Function			optional
			Without rotary handle and drive shaft
Notes			visible contacts
Information about equipment supplied			auxiliary contact fitted by user. including connection materials
Number of poles			3P + N (solid)
Auxiliary contacts			
		N/O	0
		N/C	0
Degree of Protection			IP00 IP20 with terminal cover
Design			surface mounting
Motor rating AC-23A, 50 - 60 Hz			
400 V	P	kW	90
Rated uninterrupted current	I_u	A	160
Note on rated uninterrupted current I_u			Rated uninterrupted current I_u is specified for max. cross-section.
Connection technique			Screw terminal, drilling dimension 6,5 mm

Technical data

General

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	θ	°C	-25 - +55
Storage	θ	°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

Mechanical variables			
Number of poles			3P + N (solid)
Auxiliary contacts			
		N/O	0
		N/C	0
Electrical characteristics			
Rated operational voltage	U_e	V AC	690
Rated uninterrupted current	I_u	A	160
Note on rated uninterrupted current I_u			Rated uninterrupted current I_u is specified for max. cross-section.

Short-circuit rating			
fuse			160/100
Rated conditional short-circuit current	I_{cq}	kA	$I_n = 160: 50$ $I_n = 100: 100$
Breaking current		kA	$I_n = 160: 50$ $I_n = 100: 14.5$
max. let-through energy		kA^2s	$I_n = 160: 600$ $I_n = 100: 67$
Rated short-time withstand current (1 s current)	I_{cw}	A_{rms}	8000
Note on rated short-time withstand current I_{cw}			Current for a time of 0.2 seconds
Heat dissipation per pole, current-dependent	P_{vid}	W	3.9

Switching capacity

Rated breaking capacity $\cos \varphi$ to IEC 60947-3			
400/415 V		A	1232
500 V		A	848
Safe isolation to EN 61140			
Current heat loss per contact at I_e		W	3.9
Lifespan, mechanical	Operations		10000
AC			
AC-21A			
Rated operational current switch			
400 V 415 V	I_e	A	160
500 V	I_e	A	160
690 V	I_e	A	125
AC-22A			
Rated operational current switch			
400 V 415 V	I_e	A	160
500 V	I_e	A	160
690 V	I_e	A	125
AC-23A			
Rated operational current switch			
400 V 415 V	I_e	A	154
500 V	I_e	A	106
Motor rating AC-23A, 50 - 60 Hz			
400 V 415 V	P	kW	90
500 V	P	kW	75

Terminal capacities

Flat conductor connection with busbars		mm^2	75
Terminal screw			M6 x 16

Technical safety parameters:

Notes			$B10_d$ values as per EN ISO 13849-1, table C1
-------	--	--	--

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	160
Heat dissipation per pole, current-dependent	P_{vid}	W	3.9
Equipment heat dissipation, current-dependent	P_{vid}	W	0
Static heat dissipation, non-current-dependent	P_{vs}	W	0
Heat dissipation capacity	P_{diss}	W	0
Operating ambient temperature min.		$^{\circ}C$	-25
Operating ambient temperature max.		$^{\circ}C$	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		Yes
Version as maintenance-/service switch		Yes
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 _e AC	V	690
Rated operating voltage	V	690 - 690
Rated permanent current I _u	A	160
Rated permanent current at AC-23, 400 V	A	154
Rated permanent current at AC-21, 400 V	A	160
Rated operation power at AC-3, 400 V	kW	0
Rated short-time withstand current I _{cw}	kA	8
Rated operation power at AC-23, 400 V	kW	90
Switching power at 400 V	kW	90
Conditioned rated short-circuit current I _q	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		Yes
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