DATASHEET - DMV-400N/3



Switch-disconnector, DMV, 400 A, 3 pole, Stop Function optional, Without rotary handle and drive shaft



Part no. DMV-400N/3 Catalog No. 1814411

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			3 pole
Auxiliary contacts			
1		N/0	0
7		N/C	0
Degree of Protection			IP00 IP20 with terminal cover
Design			surface mounting
Contact sequence			L1 L2 L3 $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
Motor rating AC-23A, 50 - 60 Hz			
400 V	P	kW	180
Rated uninterrupted current	I _u	Α	400

Technical data

Note on rated uninterrupted current $!_{\mathsf{u}}$

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 uninterrupted current $\mathbf{I}_{\mathbf{u}}$ is specified for max. cross-section.

Rated insulation voltage Mounting position Contacts Mechanical variables Number of poles Auxiliary contacts Electrical characteristics		V	8 1000 As required 3 pole
Mounting position Contacts Mechanical variables Number of poles Auxiliary contacts Electrical characteristics			As required
Contacts Mechanical variables Number of poles Auxiliary contacts Electrical characteristics			
Mechanical variables Number of poles Auxiliary contacts Electrical characteristics			3 pole
Auxiliary contacts Electrical characteristics			3 pole
Electrical characteristics		N/0	
		N/0	
			0
		N/C	0
Dated anarctional voltage			
Rated operational voltage $U_{\rm e}$	e	V AC	690
Rated uninterrupted current		Α	400
Note on rated uninterrupted current !u			Rated uninterrupted current $\mathbf{I}_{\mathbf{u}}$ is specified for max. cross-section.
Short-circuit rating			
fuse			500/250
Rated conditional short-circuit current Iq		kA	In = 500: 50
			In = 250: 100
Breaking current		kA	In = 500: 40 In = 250: 33
max. let-through energy		kA²s	In = 500: 1700
			In = 250: 380
Rated short-time withstand current (1 s current)	w	A _{rms}	12000
Note on rated short-time withstand current lcw			Current for a time of 0.3 seconds
Heat dissipation per pole, current-dependent $$P_{\nu}$$	vid	W	9
Switching capacity			
Rated breaking capacity cos φ to IEC 60947-3		Α	
400/415 V			2664
500 V			2032
690 V		Α	1120
Safe isolation to EN 61140			
Current heat loss per contact at I _e			9
	perations		10000
AC			
AC-21A			
Rated operational current switch		^	400
400 V 415 V			400
500 V			400
690 V		A	400
AC-22A			
Rated operational current switch			
400 V 415 V			400
500 V		Α	400
690 V		Α	315
AC-23A			
Rated operational current switch			
400 V 415 V I _e		Α	333
500 V I _e		А	254
690 V I _e		Α	140
Motor rating AC-23A, 50 - 60 Hz		kW	
400 V 415 V P		kW	180
500 V P		kW	180
690 V P		kW	132
Terminal capacities			
Flat conductor connection with busbars		mm ²	240
Terminal screw			M10 x 20
Tightening torque for terminal screw		Nm	28

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

Design verification as per IEC/EN 61439

Design vernication as per iec/en 01453			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	400
Heat dissipation per pole, current-dependent	P _{vid}	W	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.		°C	-25
Operating ambient temperature max.		°C	55
EC/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 switch gear must be observed.
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switch gear 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

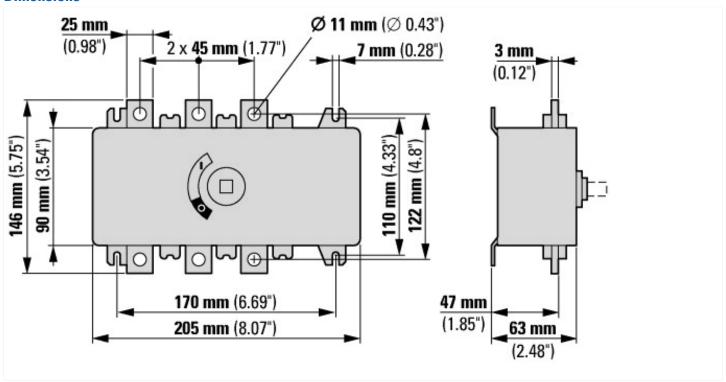
Low-voltage industrial components (EG000017) / Switch disconnector (EC000216)

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])

p 6665 .61/		
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 Ue AC	V	690
Rated operating voltage	V	690 - 690
Rated permanent current lu	Α	400
Rated permanent current at AC-23, 400 V	Α	333
Rated permanent current at AC-21, 400 V	Α	400

Rated short-time withstand current lcw Rated operation power at AC-23, 400 V RW R80 Switching power at 400 V Conditioned rated short-circuit current lq RW			
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 normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Motor drive optional 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 contre Suitable for front mounting installation 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 RW 180 100 100 100 100 100 100 10	Rated operation power at AC-3, 400 V	kW	0
Switching power at 400 V kW 180 Conditioned rated short-circuit current Iq kA 100 Number of poles 3 3 Number of auxiliary contacts as normally closed contact 6 0 Number of auxiliary contacts as normally open contact 6 0 Motor drive optional No 0 Motor drive integrated No No Voltage release optional No Complete device in housing Suitable for ground mounting Yes No Suitable for front mounting 4-hole No No Suitable for front mounting centre No No Suitable for intermediate mounting No No Suitable for intermediate mounting No No Colour control element No No Type of control element Other Interlockable No Other Type of electrical connection of main circuit No Screw connection Degree of protection (IP), front side Electrical connection of main circuit Screw connection	Rated short-time withstand current lcw	kA	12
Conditioned rated short-circuit current Iq KA 100 Number of poles 3 3 Number of auxiliary contacts as normally closed contact 6 0 Number of auxiliary contacts as change-over contact 6 0 Motor drive optional No 0 Motor drive integrated No 0 Voltage release optional No 0 Device construction 7 Complete device in housing Suitable for ground mounting Yes No Suitable for front mounting 4-hole No No Suitable for distribution board installation No No Suitable for intermediate mounting No No Colour control element No No Type of control element Other Other Interlockable No Other Type of electrical connection of main circuit Screw connection Screw connection Degree of protection (IP), front side Fizzo Screw connection	Rated operation power at AC-23, 400 V	kW	180
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 No Motor drive optional No No No Voltage release optional No Voltage release optional No Suitable for ground mounting Suitable for ground mounting Suitable for front mounting 4-hole 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 electrical connection of main circuit Degree of protection (IP), front side	Switching power at 400 V	kW	180
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 change-over contact Number of auxiliary contacts as change-over contact No Motor drive optional No Voltage release optional No Voltage release optional No Complete device in housing Ves Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting centre Suitable for distribution board installation Suitable for distribution board installation 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 O O O O O O O O O O O O O	Conditioned rated short-circuit current Iq	kA	100
Number of auxiliary contacts as normally open 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 int	Number of poles		3
Number of auxiliary contacts as change-over contact Motor drive optional Motor drive integrated No No Voltage release optional Device construction 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 Type of electrical connection of main circuit Degree of protection (IP), front side No No No Ro Ro No Other Other Other Screw connection Degree of protection (IP), front side	Number of auxiliary contacts as normally closed contact		0
Motor drive optional Motor drive integrated No No Voltage release optional No Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting centre Suitable for firont mounting centre No Suitable for intermediate mounting Suitable for intermediate mounting Colour control element Type of electrical connection of main circuit Degree of protection (IP), front side	Number of auxiliary contacts as normally open contact		0
Motor drive integrated No Noitage release optional No Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting centre Suitable for intermediate mounting Suitable for intermediate mounting Colour control element Type of control element Interlockable Degree of protection (IP), front side No No No No No Screw connection No Screw connection Interlockable Interlockable Degree of protection (IP), front side	Number of auxiliary contacts as change-over contact		0
Voltage release optional No Device construction Complete device in housing Suitable for ground 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	Motor drive optional		No
Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting centre Suitable for front mounting centre No Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Interlockable Degree of protection (IP), front side Complete device in housing Yes No Other No No Suitable for intermediate mounting No Other Other Screw connection IP20	Motor drive integrated		No
Suitable for ground mounting 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 Colour control element Type of control element Unterlockable Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side Yes No No Other Other Other Screw connection IP20	Voltage release optional		No
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	Device construction		Complete device in housing
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 No Screw connection IP20	Suitable for ground mounting		Yes
Suitable for distribution board installation 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 No No IP20	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 No IP20	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 Other No Screw connection IP20	Suitable for distribution board installation		No
Type of control element Interlockable No Type of electrical connection of main circuit Degree of protection (IP), front side Other No Screw connection IP20	Suitable for intermediate mounting		No
Interlockable No Type of electrical connection of main circuit Screw connection Degree of protection (IP), front side IP20	Colour control element		Other
Type of electrical connection of main circuit Degree of protection (IP), front side Screw connection IP20	Type of control element		Other
Degree of protection (IP), front side	Interlockable		No
	Type of electrical connection of main circuit		Screw connection
Degree of protection (NEMA) Other	Degree of protection (IP), front side		IP20
	Degree of protection (NEMA)		Other

Dimensions



Additional product information (links)

IL008008Z Switch-disconnectors

IL008008Z Switch-disconnectors https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL008008ZU2018_05.pdf