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.

Read invalidation voicinage	Rated impulse withstand voltage	U_{imp}	kV	8
Nomines position			V	
Contracts Feet Book Standard stables Audition of poles Jour Book		-		
Number of poles Audiliary centracts Number of poles Number				, la regalieu
Assiliary contacts	Mechanical variables			
Bit chical characteristics	Number of poles			3 pole
Note Note on read uninterrupted current Note on read uninterrupted Note on read uninterrupted (uninterrupted current Note on read uninterrupted (uninterrupted	Auxiliary contacts			
Peter intention Peter inte			N/0	0
Rated operational voltage			N/C	0
Rated uninterrupted current \	Electrical characteristics			
Note on rated uninterrupted current I, is specified for max. cross-section. Short-circuit rating	Rated operational voltage	U _e	V AC	690
Note or nated short-circuit rating Iq	Rated uninterrupted current	Iu	Α	400
Rated conditional short-circuit current Image: Provided in the part of the	Note on rated uninterrupted current !u			Rated uninterrupted current l_u is specified for max. cross-section.
Rated conditional short-circuit current Iq Ab In = 500-30 Breaking current Lob In = 500-30 max. let-through energy Lob In = 500-30 Rated short-time withstand current (1 s current) Icw Am 1200 Note on rated short-time withstand current (1 s current) Icw Am 1200 Note on rated short-time withstand current (1 s current) Peal W 1200 Note on rated short-time withstand current (1 s current) Peal W 1200 Note on rated short-time withstand current (1 s current) Peal W 1200 Note on rated short-time withstand current (1 s current) Peal W 140 Note of State (1 s) the state (1	Short-circuit rating			
Reference	fuse			500/250
Breaking current kA in = 500, 40 (in = 200, 23) max. let-through energy kA** in = 500, 33 (in = 200, 330) Rated short-time withstand current (low current diew withstand current (low that dissipation per pole, current-dependent few year W 100 (in = 200, 380 conds Note on rated short-time withstand current (low current for a time of 0.3 seconds Note on rated short-time withstand current (low) current for a time of 0.3 seconds Note on rated short-time withstand current (low) current for a time of 0.3 seconds Note on rated short-time withstand current (low) current for a time of 0.3 seconds Switching capacity current for a time of 0.3 seconds Switching capacity current for a time of 0.3 seconds Switching capacity current for a time of 0.3 seconds Switching capacity current for sime of 0.3 seconds Substitution to Exh Stilla current for sime of 0.3 seconds Ac 214 do 0.0	Rated conditional short-circuit current	Iq	kA	
Rated short-time withstand current (1 s current)				
max. let-through energy ka*s in = 500. 1700 in = 200.280 Rated short-time withstand current (1 s current) Icw Arms Current for a time of 0.3 seconds Note on rated short-time withstand current (tew Period W 1.4 String capacity V 1.4 A String capacity A 2664 400/415 V A 2694 500 V A 2032 680 V B A 2032 Current heal loss per contact at I _e W 9 Lifespan, mechanical Operations W 9 Lifespan, mechanical Operations W 9 Lifespan, mechanical Lorent switch W 9 AC-21A Rated operational current switch Ie A 400 680 V Ie A 400	Breaking current		kA	
In = 250 380 In = 250 380 Rated short-time withstand current (1 s current)	max. let-through energy		kA ² s	
Note on rated short-time withstand current low Poid W 11.4 Switching capacity Rated breaking capacity cos gr to IEC 80947-3 A 2664 500 V A 2032 680 V A 1120 Safe isolation to EN 61140 W 9 Current heat loss per contact at l _g W 9 Lifespan, mechanical Operations W 9 AC-21A W 9 Rated operational current switch I _g A 400 400 V 415 V I _g A 400 680 V I _g A 400 AC-22A Bated operational current switch I _g A 400 AC-23A I _g A 400 S00 V I _g A 400 400 V 415 V I _g A 400 680 V I _g A 315 AC-23A A 400 400 AC-21A A 400				
Heat dissipation per pole, current-dependent P _{rid} W 11.4 Switching capacity Rated breaking capacity cos q to IEC 60947-3 A 2664 400/415 V A 2032 500 V A 1120 Safe isolation to EN 61140 W 9 Current heat loss per contact at l _e W 9 Lifespan, mechanical Operations 10000 AC AC-21A 10000 Rated operational current switch I _e A 400 500 V I _e A 400 690 V I _e A 400 AC-22A Rated operational current switch I _e A 400 400 V 415 V I _e A 400 690 V I _e A 400 690 V I _e A 315 AC-23A Rated operational current switch I _e A 333 AC-23A Rated operational current switch I _e A 333 Bated operational c	Rated short-time withstand current (1 s current)	I _{cw}	A_{rms}	12000
Switching capacity Rate of breaking capacity cos φ to IEC 60947-3 A 2664 400/415 V A 2032 6990 V A 1120 <	Note on rated short-time withstand current lcw			Current for a time of 0.3 seconds
Rated breaking capacity cos φ to IEC 69947-3 A A 400/415 V A 2664 500 V A 2022 690 V A 120 Current heat loss per contact at I ₀ W 9 Lésapar, mechanical Operations W 9 AC-21A D 1000 1000 Rated operational current switch I ₀ A 400 500 V I ₀ A 400 500 V I ₀ A 400 AC-22A I ₀ A 400 Rated operational current switch I ₀ A 400 400 V 415 V I ₀ A 400 690 V I ₀ A 400 800 V I ₀ A 400 AC-23A 315 15 Rated operational current switch I ₀ A 333 AC-23A 1 400 V 415 V A 333 AC-23A 1 400 V 415 V		P _{vid}	W	11.4
A00/415 V A 2664 500 V A 2032 690 V A 1120 Current heat loss per contact at I ₀ W 9 Lifespan, mechanical				
Sou				
690 V A 120 Safe isolation to EN 61140 W 9 Current heat loss per contact at I _e W 9 Lifespan, mechanical Operations M 10000 AC-21A ————————————————————————————————————				
Safe isolation to EN 61140 W 9 Current heat loss per contact at I₀ Operations 10000 AC AC-21A 10000 Rated operational current switch I₀ A 400 V 415 V I₀ A 400 500 V I₀ A 400 AC-22A I₀ A 400 Rated operational current switch I₀ A 400 500 V I₀ A 400 500 V I₀ A 400 690 V I₀ A 315 AC-23A I₀ A 333 Rated operational current switch I₀ A 333 AC-23A I₀ A 254 690 V I₀ A 254 690 V I₀ A 140 Motor rating AC-23A, 50 - 60 Hz P KW				
Current heat loss per contact at l _e W 9 Lifespan, mechanical Operations I0000 AC AC-21A I0000 Rated operational current switch V V 400 V 415 V I _e A 400 500 V I _e A 400 AC-22A Rated operational current switch I _e A 400 500 V I _e A 400 690 V I _e A 315 AC-23A I _e A 335 Rated operational current switch I _e A 333 AC-23A I _e A 333 500 V I _e A 254 690 V I _e A 254 690 V I _e A 140 Motor rating AC-23A, 50 - 60 Hz P kW			Α	1120
Lifespan, mechanical Operations 10000 AC-21A Fated operational current switch V 400 V 415 V Ie A 400 500 V Ie A 400 690 V Ie A 400 AC-22A Bated operational current switch Ie A 400 500 V Ie A 400 690 V Ie A 315 AC-23A Rated operational current switch Ie A 333 Rated operational current switch Ie A 333 500 V Ie A 254 690 V Ie A 140 Motor rating AC-23A, 50 - 60 Hz P KW				
AC-21A Rated operational current switch 400 V 415 V 1e A 400 500 V 1e A 400 AC-22A Rated operational current switch 400 V 415 V 1e A A 400 AC-22A Rated operational current switch 400 V 415 V 1e A A 400 500 V 1e A A 400 500 V 1e A A 400 500 V 1e A A 400 690 V 1e A A 315 AC-23A Rated operational current switch 400 V 415 V 1e A A 315 AC-23A Rated operational current switch 400 V 415 V 1e A A 254 690 V 1e A 140 Motor rating AC-23A, 50 - 60 Hz			W	
AC-21A Rated operational current switch 400 V 415 V		Operations		10000
Rated operational current switch Ie A 400 500 V Ie A 400 690 V Ie A 400 AC-22A Rated operational current switch Ie A 400 500 V Ie A 400 690 V Ie A 315 AC-23A Rated operational current switch Ie A 333 500 V Ie A 254 690 V Ie A 140 Motor rating AC-23A, 50 - 60 Hz P kW				
400 V 415 V Ie				
Soul V			^	400
Figure 1 Figure 2 Figure 3 Figure 3				
AC-22A Rated operational current switch 400 V 415 V Ie A 400 500 V Ie A 400 690 V Ie A 315 AC-23A Rated operational current switch 400 V 415 V Ie A 335 AC-23A Rated operational current switch Ie A 333 500 V Ie A 254 690 V Ie A 140 Motor rating AC-23A, 50 - 60 Hz P kW			Α	
Rated operational current switch		l _e	Α	400
400 V 415 V Ie A 400 500 V Ie A 400 690 V Ie A 315 AC-23A Rated operational current switch Ie A 333 500 V Ie A 254 690 V Ie A 140 Motor rating AC-23A, 50 - 60 Hz P kW				
500 V				
690 V				
AC-23A Rated operational current switch 400 V 415 V I _e A 333 500 V I _e A 254 690 V I _e A 140 Motor rating AC-23A, 50 - 60 Hz P kW	500 V	l _e	Α	400
Rated operational current switch I _e A 333 500 V I _e A 254 690 V I _e A 140 Motor rating AC-23A, 50 - 60 Hz P kW	690 V	l _e	Α	315
400 V 415 V	AC-23A			
500 V I _e A 254 690 V I _e A 140 Motor rating AC-23A, 50 - 60 Hz P kW				
690 V I _e A 140 Motor rating AC-23A, 50 - 60 Hz P kW	400 V 415 V	I _e	Α	333
Motor rating AC-23A, 50 - 60 Hz P kW	500 V	l _e	Α	254
	690 V	l _e	Α	140
400 V 415 V P kW 180	Motor rating AC-23A, 50 - 60 Hz	P	kW	
	400 V 415 V	P	kW	180
500 V P kW 180	500 V	P	kW	180
690 V P kW 132		P	kW	132
Terminal capacities				
Flat conductor connection with busbars mm ² 240	Flat conductor connection with busbars		mm^2	240
Terminal screw M10 x 20	Terminal screw			M10 x 20
Tightening torque for terminal screw Nm 28	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 1EG/EN 01433			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	400
Heat dissipation per pole, current-dependent	P _{vid}	W	11.4
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.	4.00	°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 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])

	Yes
	Yes
	No
	Yes
	No
	1
V	690
V	690 - 690
Α	400
Α	333
Α	400
	V A A

Rated short-time withstand current low Rated operation power at AC-23,400 V RW 180 Conditioned rated short-circuit current lq RW 180 RW 180 Conditioned rated short-circuit current lq RW 180 RW 180 Conditioned rated short-circuit current lq RW 180 RW 180 Conditioned rated short-circuit current lq RW 180 RW 180 Conditioned rated short-circuit current lq RW 180 RW 180 Conditioned rated short-circuit current lq RW 180 RW 180 RW 180 Conditioned rated short-circuit current lq RW 180 RW 1			
Rated operation power at AC-23, 400 V Switching power at 400 V 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 change-over contact Number of auxiliary contacts as change-over contact Notor drive optional Motor drive integrated Voltage release optional Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for first mounting centre Suitable for intermediate mounting Colour control element Type of centrol element Type of centrol element Type of electrical connection of main circuit Degree of protection (IP), front side	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 0 Number of auxiliary contacts as normally open contact 0 Motor drive optional No Motor drive integrated No Voltage release optional No Device construction Complete device in housing Suitable for ground mounting Yes Suitable for front mounting 4-hole No Suitable for first ibution board installation 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 Electrical connection of main circuit Electrical 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 0 0 Number of auxiliary contacts as normally open contact 0 0 Number of auxiliary contacts as change-over contact 0 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 Other Interlockable No Other Type of electrical connection of main circuit Serew connection Serew connection Degree of protection (IP), front side For example of the properties of the properties of the p	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 Motor drive integrated No No Voltage release optional Device construction Suitable for ground mounting Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting 4-hole Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Type of control element Utype of control element Type of electrical connection of main circuit Degree of protection (IP), front side 3 3 3 4 9 0 0 0 Complete device in housing No No No Suitable for intermediate mounting No Other Other Suitable for intermediate mounting No Screw connection Screw connection P20	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 No Motor drive optional No No Voltage release optional No Complete device in housing Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting centre Suitable for distribution board installation No Suitable for intermediate mounting Colour control element Type of control element Interlockable No Strew connection of main circuit Degree of protection (IP), front side Degree of protection (IP), front side	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 Suitable for firont mounting centre 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	Number of auxiliary contacts as normally closed contact		0
Motor drive optional Motor drive integrated No 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 Colour control element Other Type of control element Other Interlockable No Type of electrical connection of main circuit Degree of protection (IP), front side No Degree of protection (IP), front side	Number of auxiliary contacts as normally open contact		0
Motor drive integrated 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 Suitable for intermediate mounting Colour control element Type of electrical connection of main circuit Degree of protection (IP), front side No No No No Screw connection Poperate device in housing Ves Complete device in housing No Complete device in housing No No Complete device in housing Ves No No Colour control element Other Type of electrical connection of main circuit No Screw connection IP20	Number of auxiliary contacts as change-over contact		0
Voltage release optional Device construction Complete device in housing 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 Complete device in housing Complete device in housing Yes No No No No No No Suitable for intermediate mounting Other Other Other Interlockable No Screw connection 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 No Type of electrical connection of main circuit Degree of protection (IP), front side Complete device in housing Yes No No Other Other Screw connection Figure in housing No Screw connection Figure in housing No Screw connection Interlockable Interlo	Motor drive integrated		No
Suitable for ground mounting Suitable for front mounting 4-hole No Suitable for front mounting centre No Suitable for distribution board installation No Suitable for intermediate mounting Colour control element Type of control element Other Interlockable No Type of electrical connection of main circuit Degree of protection (IP), front side Yes No No No Suitable for intermediate mounting No Other Other Interlockable No 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 No No No Interlockable Degree of protection (IP), front side	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 Rew 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 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 Rocew 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 No 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 IP20	Type of control element		Other
Degree of protection (IP), front side IP20	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

