DATASHEET - DMV-250N/3



Switch-disconnector, DMV, 250 A, 3 pole, Stop Function optional, Without rotary handle and drive shaft



Part no. DMV-250N/3 Catalog No. DMV-250N/3

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			
•		N/0	0
7		N/C	0
Degree of Protection			IP00 IP20 with terminal cover
Design			surface mounting
Contact sequence			L1 L2 L3 $ \frac{1}{2} \frac{1}{4} \frac{3}{6} $ T1 T2 T3 $ \frac{1}{0} \times \times \times $
Motor rating AC-23A, 50 - 60 Hz			
400 V	P	kW	147
Rated uninterrupted current	l _u	Α	250

Technical data General

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

delleral			
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	9	°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 Up per land insulation voltage V/V per land insulation voltage V/V per land voltage </th <th></th>	
Mounting position	
Contacts Muchanical variables Moderal variables <th< td=""><td></td></th<>	
Machanical variables Number of poles 2 pole Auxiliary contacts N/C 0 Electrical characteristics N/C 0 Rated operational voltage U _e VAD 890 Rated uninterrupted current U _e U _e VAD 890 Note on rated uninterrupted current U _e U _e VAD 890 Rated conditional short-circuit current I _e A 250 Rated conditional short-circuit current I _e	
Auxiliary contacts	
Rated operational voltage Value	
Electrical characteristics	
Electrical characteristics	
Rated operational voltage	
Rated uninterrupted current Note on rated uninterrupted current Short-circuit rating Iq	
Note on rated uninterrupted current I us specified for max. cross-section. Short-circuit rating fuse Rated conditional short-circuit current Breaking current max. let-through energy Rated short-time withstand current I to surrent) I ew Rated short-time withstand current I to surrent) Rated short-time withstand current I to surrent) I ew Rated breaking capacity Rated breaking capacity cos \(\particle{\triangle} \) to EC 60947-3 400/415 V Solv Safe isolation to EN 61140 Current heat loss per contact at I e AC-21A Rated operational current switch 400 V 415 V Rated operational current switch 400 V 415 V Rated operational current switch AC-22A Rated operational current switch Rated operatio	
Short-circuit rating fuse	
fuse Rated conditional short-circuit current Iq	
Rated conditional short-circuit current Iq kA In = 500: 50 (In = 250: 100 Breaking current kA In = 500: 50 (In = 250: 33) max. let-through energy kA²s In = 500: 1700 (In = 250: 33) Rated short-time withstand current (I s current) I _{CW} A _{rms} 1200 (20) Note on rated short-time withstand current lcw V Current for a time of 0.3 seconds Heat dissipation per pole, current-dependent P _{vid} W 4.5 Switching capacity Rated breaking capacity cos φ to IEC 60947-3 A 2000 400/415 V A 1760 690 V A 120 Safe isolation to EN 61140 Current heat loss per contact at I ₀ V 3.75 Lifespan, mechanical Operations W 3.75 AC-21A Rated operational current switch I ₀ A 250 400 V 415 V I ₀ A 250 AC-21A So0 V I ₀ A 250 AC-22A <t< td=""><td></td></t<>	
In = 250: 100 Breaking current	
Breaking current RA²s In = 500: 40 In = 250: 330 max. let-through energy Ra²s In = 500: 40 In = 250: 330 max. let-through energy Iow RA²s In = 500: 40 In = 250: 330 Rated short-time withstand current (1's current) Iow Arms 12000 Note on rated short-time withstand current low Current for a time of 0.3 seconds Heat dissipation per pole, current-dependent P₂vid W 4.5 Switching capacity Was As Switching capacity cos of to IEC 60947-3 A 2000 400/415 V	
In = 250: 33	
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In = 250: 380 Rated short-time withstand current (1 s current)	
Note on rated short-time withstand current low Heat dissipation per pole, current-dependent Poid V 4.5 Switching capacity Rated breaking capacity cos op to IEC 60947-3 A 400/415 V A 2000 500 V A 690 V A 1120 Safe isolation to EN 61140 Current heat loss per contact at I _e W 3.75 Lifespan, mechanical AC-21A Rated operational current switch 400 V 415 V I _e A 250 AC-22A Rated operational current switch	
Heat dissipation per pole, current-dependent P _{vid} W 4.5 Switching capacity Rated breaking capacity cos φ to IEC 60947-3 400/415 V A 2000 500 V A 1760 690 V A 1120 Safe isolation to EN 61140 Current heat loss per contact at I _e W 3.75 Lifespan, mechanical Operations AC AC-21A Rated operational current switch 400 V 415 V I _e A 250 690 V I _e A 250 AC-22A Rated operational current switch	
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 W 3.75 Current heat loss per contact at I _e W 3.75 Lifespan, mechanical Operations 10000 AC AC-21A 250 Rated operational current switch I _e A 250 690 V I _e A 250 AC-22A Rated operational current switch A 250	
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 W 3.75 Lifespan, mechanical Operations I AC AC 10000 AC-21A Ie A Ado V 415 V Ie A 500 V Ie A 690 V Ie A AC-22A Rated operational current switch E Rated operational current switch F A	
A 2000	
500 V A 1760 690 V A 1120 Safe isolation to EN 61140 Current heat loss per contact at I _e W 3.75 Lifespan, mechanical Operations 10000 AC AC-21A Today 10000 Rated operational current switch I _e A 250 500 V I _e A 250 690 V I _e A 250 AC-22A AC-22A AC-22A AC-22A Rated operational current switch AC-22A AC-22A AC-22A	
690 V A 1120 Safe isolation to EN 61140 W 3.75 Lifespan, mechanical Operations 10000 AC AC-21A To the standard operational current switch 400 V 415 V Ie A 250 500 V Ie A 250 690 V Ie A 250 AC-22A Rated operational current switch A 250	
Safe isolation to EN 61140 Current heat loss per contact at I _e Lifespan, mechanical AC-21A Rated operational current switch 400 V 415 V 1e A0 V 415 V A0	
Current heat loss per contact at I _e Lifespan, mechanical AC-21A Rated operational current switch 400 V 415 V 500 V 1e A 250 690 V Ie A 250 AC-22A Rated operational current switch	
Lifespan, mechanical Operations AC AC-21A Rated operational current switch 400 V 415 V	
AC - 21A	
AC-21A Rated operational current switch 400 V 415 V Ie A 250 500 V Ie A 250 690 V Ie A 250 AC-22A Rated operational current switch	
Rated operational current switch I _e A 250 500 V I _e A 250 690 V I _e A 250 AC-22A Rated operational current switch A 250	
400 V 415 V	
500 V I _e A 250 690 V I _e A 250 AC-22A Rated operational current switch	
690 V I _e A 250 AC-22A Rated operational current switch	
AC-22A Rated operational current switch	
Rated operational current switch	
400 V 415 V I _e A 250	
500 V I _e A 250	
690 V I _e A 250	
AC-23A	
Rated operational current switch	
400 V 415 V I _e A 250	
500 V I _e A 220	
690 V I _e A 140	
Motor rating AC-23A, 50 - 60 Hz	
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 ² 120	
Terminal screw M8 x 20	
Tightening torque for terminal screw Nm 14	

Notes	B10 _d values as per EN ISO 13849-1, table C1
110100	2 regi values de por 2 region (7 desie 5)

Design verification as per IEC/EN 61439

Design vernication as per ico/cit 01433			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	1000
Heat dissipation per pole, current-dependent	P_{vid}	W	4.5
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
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 switch gear must be observed. $\label{eq:specification}$
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	250
Rated permanent current at AC-23, 400 V	Α	250
Rated permanent current at AC-21, 400 V	Α	250

Rated operation power at AC-3, 400 V MW 12 Rated short-time withstand current low 4M2 12 Rated poperation power at AC-25, 400 V 4M2 14 Switching power at 40-27, 400 V 4M2 14 Conditioned rated short-circuit current lq 4M2 14 Number of poles 4M2 3 Number of auxiliary contacts as normally closed contact 4M2 4 Number of auxiliary contacts as change-over contact 4M2 5 Motor drive optional 4M2 7 Motor drive integrated 4M2 7 Voltage release optional 4M2 7 Suitable for ground mounting 4M2 7 Suitable for from mounting 4-hole 4M2 7 Suitable for intermediate mounting 4M2 7 Control element 4M2 7 Control element 4M2			
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 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 Motor drive optional Motor drive integrated Notor drive integrated device in housing Notor drive in	Rated operation power at AC-3, 400 V	kW	0
Switching power at 400 V kW 140 Conditioned rated short-circuit current Iq kA 100 Number of poles 3 3 Number of auxiliary contacts as normally closed contact 6 6 Number of auxiliary contacts as normally copen contact 6 6 Number of auxiliary contacts as change-over contact 6 7 9 Motor drive optional 6 7 No 9 Motor drive integrated 7 No 9 9 Voltage release optional 8 9 No 9 10 9 10 <th< td=""><td>Rated short-time withstand current lcw</td><td>kA</td><td>12</td></th<>	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 Mumber of auxiliary contacts as change-over contact 0 0 Motor drive optional No No Motor drive integrated No No Voltage release optional No No Device construction 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 Other Other Type of control element No Other Interlockable No Other Type of electrical connection of main circuit Sorew connection Sorew connection Type of electrical connection o	Rated operation power at AC-23, 400 V	kW	140
Number of poles 3 Number of auxiliary contacts as normally open contact 0 Number of auxiliary contacts as change-over contact 0 Number of auxiliary contacts as change-over contact No Motor drive optional No Motor drive integrated No Voltage release optional 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 P20	Switching power at 400 V	kW	140
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 Notor drive integrated No Notor drive integrated No No Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting entre Suitable for distribution board installation 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	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 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 front mounting centre Suitable for fortn 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	Number of auxiliary contacts as normally closed contact		0
Motor drive optional Motor drive integrated Motor drive integrated No Voltage release optional No 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 No Screw connection Screw connection Degree of protection (IP), front side	Number of auxiliary contacts as normally open contact		0
Motor drive integratedNoVoltage release optionalNoDevice constructionComplete device in housingSuitable for ground mountingYesSuitable for front mounting 4-holeNoSuitable for front mounting centreNoSuitable for distribution board installationNoSuitable for intermediate mountingNoColour control elementOtherType of control elementOtherInterlockableNoType of electrical connection of main circuitScrew connectionDegree of protection (IP), front sideIP20	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 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 Complete device in housing Yes No No No Other No Other Screw connection IP20	Motor drive integrated		No
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 Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side Yes No No No 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 No No No No Suitable for intermediate mounting No Other Other Suitable for intermediate mounting No Suitable for distribution board installation No Interlockable 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 No Suitable for intermediate mounting No Colour control element Type of control element Other Interlockable No Type of electrical connection of main circuit Degree of protection (IP), front side No Interlockable IP20	Suitable for front mounting 4-hole		No
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 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 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 Screw connection 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

