DATASHEET - DMV-400/4/M4/P-R



Switch-disconnector, 4 pole, 400 A, With red rotary handle and yellow locking ring, rear mounting, with 400 mm metal shaft



DMV-400/4/M4/P-R Part no. 6094971 Catalog No.

EL-Nummer (Norway)

1417208

Delivery program			
Product range			Switch-disconnector Main switch maintenance switch
Part group reference			DMV
Stop Function			Emergency switching off function
			With red rotary handle and yellow locking ring
Information about equipment supplied			auxiliary contact fitted by user.
Notes			With metal shaft for a control panel depth of 400 mm
Number of poles			4 pole
Auxiliary contacts			
1		N/0	0
7		N/C	0
Notes			1 padlock, # 5 mm
Locking facility			Lockable in the 0 (Off) position
Degree of Protection			Front IP65
Design			rear mounting
Contact sequence			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Switching angle		0	90
Function			OFF O
Motor rating AC-23A, 50 - 60 Hz			
400 V	P	kW	180
Rated uninterrupted current	I _u	Α	400
Note on rated uninterrupted current !u			Rated uninterrupted current $\mathbf{I}_{\mathbf{u}}$ is specified for max. cross-section.
Connection technique			11 mm connection bore

Technical data General

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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			111/3
Rated impulse withstand voltage	U _{imp}	kV	8
Rated insulation voltage	U _i	V	1000
Mounting position	01	-	As required
Contacts			As required
Mechanical variables			
Number of poles			4 pole
Auxiliary contacts			
		N/0	0
		N/C	0
Electrical characteristics			
Rated operational voltage	U _e	V AC	690
Rated uninterrupted current	l _u	Α	400
Note on rated uninterrupted current !u	·u		Rated uninterrupted current I _u is specified for max. cross-section.
			nated difficent upted current in its specified for max. cross-section.
Short-circuit rating			500/050
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		kA ² s	In = 500: 1700 In = 250: 380
Rated short-time withstand current (1 s current)	I _{cw}	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 _{vid}	W	9
Switching capacity			
Rated breaking capacity cos φ to IEC 60947-3		Α	
400/415 V		Α	2664
500 V		Α	2032
690 V		Α	1120
Safe isolation to EN 61140			
Current heat loss per contact at I _e		W	9
Lifespan, mechanical	Operations		10000
AC			
AC-21A			
Rated operational current switch			
400 V 415 V	I _e	Α	400
500 V	I _e	Α	400
690 V	I _e	A	400
AC-22A	·e		
Rated operational current switch			
400 V 415 V	I _e	A	400
500 V	I _e	A	400
690 V	l _e	Α	315
AC-23A			
Rated operational current switch			
400 V 415 V	l _e	Α	333
500 V	I _e	Α	254
690 V	le	Α	140
Motor rating AC-23A, 50 - 60 Hz	P	kW	
400 V 415 V	P	kW	180
500 V	P	kW	180

Terminal capacities

Flat conductor connection with busbars	mm^2	240
Terminal screw		M10 x 20
Tightening torque for terminal screw	Nm	28
Technical safety parameters:		
Notes		B10 _d values as per EN ISO 13849-1, table C1

Design verification as per IEC/EN 61439

Design verincation as per ille/liv 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	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
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

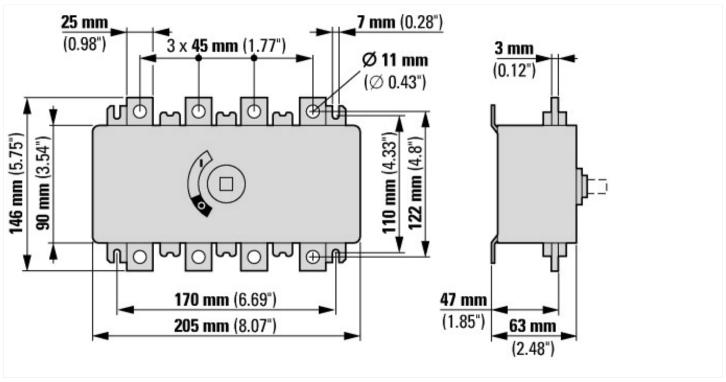
Low-voltage industrial components (EG000017) / Switch disconnector (EC000216)

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])

[AKF060013])		
Version as main switch		Yes
Version as maintenance-/service switch		Yes
Version as safety switch		Yes
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 690-890 Rated permanent current at AC-23,400 V A 40 Rated permanent current at AC-21,400 V A 40 Rated permanent current at AC-21,400 V B W Rated operation power at AC-3,400 V B W Rated short-time withstand current low B W 90 Switching power at AC-3,400 V W 90 90 Number of suxiliary contacts as normally closed contact B Y 90 90 Number of auxiliary contacts as change-over contact B Y Y 90 90 Noto-or drive pitione for suxiliary contacts as change-ov			
Rated permanent current at AC-23, 400 V A 333 Rated permanent current at AC-21, 400 V A 40 Rated operation power at AC-3, 400 V KM 0 Rated short-time withstand current lcw KM 12 Rated short-time withstand current lcw MM 400 Switching power at AC-23, 400 V WM 400 Switching power at AC-23, 400 V WM 400 Conditioned rated short-circuit current lq KM 50 Number of poles MM 6 Number of auxiliary contacts as normally closed contact MM 6 Number of auxiliary contacts as normally open contact MM 6 Motor drive optional MM N N Motor drive integrated MM N N Voltage release a ptional MM N N Suitable for ground mounting MM N N Suitable for front mounting 4-hole MM N N Suitable for front mounting centre MM N N Suitable for intermediate mo	Rated operating voltage	V	690 - 690
Rated permanent current at AC-21, 400 V A 40 400 Rated operation power at AC-3, 400 V KM 0 0 Rated short-time withstand current lcw KM 40 40 Rated short-time withstand current lcw KW 40 40 Switching power at 400 V KW 40 40 Conditioned rated short-circuit current lq KW 4 40 Number of plose LW 4 40 Number of auxiliary contacts as normally closed contact LW 6 4 Number of auxiliary contacts as normally open contact LW 6 4 Motor drive optional LW 7 No Motor drive integrated LW 8 No Voltage release optional LW 8 Built-in device fixed built-in technique Suitable for ground mounting LW Ye No Suitable for front mounting 4-hole LW Ye No Suitable for intermediate mounting LW Ye Ye Suitable for intermediate mounting	Rated permanent current lu	Α	400
Rated operation power at AC-3,400 V KW 0 Rated short-time withstand current lew kA 12 Rated operation power at AC-23,400 V kW 400 Switching power at 400 V kW 50 Conditioned rated short-circuit current lq kA 50 Number of poles C 4 6 Number of auxiliary contacts as normally closed contact C 0 6 Number of auxiliary contacts as change-over contact C 0 0 Mottor drive integrated C No 0 Motor drive integrated C No 0 Voltage release optional C No 0 Device construction C Yes No Suitable for ground mounting C Yes No Suitable for front mounting 4-hole No No No Suitable for front mounting centre Yes Yes Suitable for front mounting centre Yes Yes Colour control element Yes Yes Type of	Rated permanent current at AC-23, 400 V	Α	333
Rated short-time withstand current low kA 12 Rated operation power at AG-23, 400 V kW 400 Switching power at 400 V kW 400 Conditioned rated short-circuit current lq kM 50 Number of poles kM 50 Number of auxiliary contacts as normally closed contact 60 60 Number of auxiliary contacts as normally open contact 60 60 Mumber of auxiliary contacts as change-over contact 60 60 Motor drive integrated 60 70 70 Motor drive integrated 60 80 80 Voltage release optional 60 80 80 Suitable for ground mounting 60 80 80 Suitable for front mounting earter 60 80 80 Suitable for front mounting centre 70 80 80 Suitable for intermediate mounting 70 80 80 Suitable for intermediate mounting 70 80 80 Suitable for intermediate mounting 70 80	Rated permanent current at AC-21, 400 V	Α	400
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 Number of auxiliary contacts as normally closed contact Number of auxiliary contac	Rated operation power at AC-3, 400 V	kW	0
Switching power at 400 V kW 400 Conditioned rated short-circuit current Iq kA 50 Number of poles 4 4 Number of auxiliary contacts as normally closed contact 6 4 Number of auxiliary contacts as normally contacts as normally open contact 6 0 Number of auxiliary contacts as change-over contact 6 0 Motor drive optional 6 No No Motor drive integrated 6 No No Voltage release optional 7 No No Suitable for ground mounting 8 7 No Suitable for front mounting 4-hole 8 No No Suitable for distribution board installation 8 No No Suitable for intermediate mounting 8 No No Suitable for intermediate mounting 8 No No Suitable for intermediate mounting 8 No No Colour control element 9 No No Type of control element 9	Rated short-time withstand current lcw	kA	12
Conditioned rated short-circuit current Iq KA 50 Number of poles 4 4 Number of auxiliary contacts as normally closed contact 6 6 Number of auxiliary contacts as normally open contact 6 6 Number of auxiliary contacts as change-over contact 6 7 Motor drive optional 6 7 8 Motor drive integrated 7 8 8 Voltage release optional 8 9 8 9 Device construction 8 9 8 9 10 Suitable for ground mounting 8 9 9 8 10 9 Suitable for front mounting 4-hole 8 9 9 10 9 10<	Rated operation power at AC-23, 400 V	kW	400
Number of poles4Number of auxiliary contacts as normally closed contact0Number of auxiliary contacts as normally open contact0Number of auxiliary contacts as change-over contact0Motor drive optionalNoMotor drive integratedNoVoltage release optionalNoDevice constructionBuilt-in device fixed built-in techniqueSuitable for ground mountingYesSuitable for front mounting 4-holeNoSuitable for distribution board installationNoSuitable for distribution board installationYesColour control elementRedType of control elementToggleInterlockableYesType of electrical connection of main circuitScrew connectionDegree of protection (IP), front sideFeze	Switching power at 400 V	kW	400
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 Suitage release optional 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 Type of control element Type of electrical connection of main circuit Degree of protection (IP), front side	Conditioned rated short-circuit current Iq	kA	50
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 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 entre Suitable for firnt mounting centre Suitable for front mounting centre Suitable for distribution board installation Suitable for intermediate mounting No Suitable for intermediate mount	Number of poles		4
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 front mounting centre Suitable for front mounting centre Suitable for fortn mounting centre Suitable for font mounting centre Suitable for intermediate mounting Suitable for fortention board installation No Suitable for fortention board i	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 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 front mounting 4-hole No Suitable for intermediate mounting No Suitable for intermediate mounting Suitable for intermediate mounting No Suitable for intermediate mo	Number of auxiliary contacts as normally open contact		0
Motor drive integrated No Notor drive integrated No No 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 Type of electrical connection of main circuit Degree of protection (IP), front side No	Number of auxiliary contacts as change-over contact		0
Voltage release optional No Device construction Built-in device fixed built-in technique 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 Yes Colour control element Red Type of control element Toggle Interlockable Yes 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 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 Built-in device fixed built-in technique Suitable for intermediate No No Suitable for front mounting centre No No Suitable for intermediate mounting Yes Red Type of control element Toggle Type of control element Type of electrical connection of main circuit Degree of protection (IP), front side Interlockable Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side	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 Type of electrical connection of main circuit Degree of protection (IP), front side Yes Yes Yes Yes Type of electrical connection of main circuit Degree of protection (IP), front side Yes Type of electrical connection of main circuit Pes Type of electrical connection of main circuit Pes Type of electrical connection of main circuit Pes Type of electrical connection (IP), front side Pes Type of electrical connection (IP), front side	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		Built-in device fixed built-in technique
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 Yes Red Toggle Toggle Yes Screw connection IP20	Suitable for ground mounting		Yes
Suitable for distribution board installation Suitable for intermediate mounting Yes 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 Yes Red Tygs Tyggle Yes Tygele Yes Type of electrical connection of main circuit Degree of protection (IP), front side 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 Yes Yes Yes Type of electrical connection of main circuit Degree of protection (IP), front side Yes Screw connection 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 Red Toggle Yes Screw connection IP20	Suitable for distribution board installation		No
Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side Toggle Yes Screw connection IP20	Suitable for intermediate mounting		Yes
Interlockable Yes Type of electrical connection of main circuit Screw connection Degree of protection (IP), front side IP20	Colour control element		Red
Type of electrical connection of main circuit Degree of protection (IP), front side Screw connection IP20	Type of control element		Toggle
Degree of protection (IP), front side	Interlockable		Yes
	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



Assets (links)

Declaration of CE Conformity

00003044

Instruction Leaflets

IL008008ZU2018_05