



6094971
DMV-400/4/M4/P-R

[Overview](#) [Specifications](#) [Resources](#)



[Delivery program](#)

[Technical data](#)

[Design verification as per IEC/EN 61439](#)

[Technical data ETIM 7.0](#)

[Dimensions](#)

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

0 NO

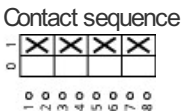
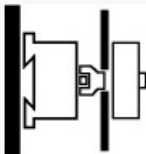
0 NC

Notes
1 padlock, □ 5 mm

Locking facility
Lockable in the 0 (Off) position

Degree of Protection
Front IP65

Design
rear mounting



Switching angle
90 °

Function

Motor rating AC-23A, 50 - 60 Hz [P]

400 V [P]
180 kW

Rated uninterrupted current [I_u]
400 A

Note on rated uninterrupted current I_N
Rated uninterrupted current I_N is specified for max.
cross-section.

Connection technique
11 mm connection bore

TECHNICAL DATA

General

Standards
IEC/EN 60947, VDE 0660, IEC/EN 60204
Switch-disconnector according to IEC/EN 60947-3

Certifications
CE, RoHS, KEWA, EAC, Lloyds

Ambient temperature
Operation [°]
-25 - +55 °C

Ambient temperature
Storage [°]
-30 - +80 °C

Overvoltage category/pollution degree
III/3

Rated impulse withstand voltage [U_{imp}]
8 kV

Rated insulation voltage [U_i]
1000 V

Mounting position
As required

Contacts

Mechanical variables

Number of poles
4 pole

Mechanical variables
Auxiliary contacts

0 NO

Mechanical variables
Auxiliary contacts

0 NC

Electrical characteristics
Rated operational voltage [U_e]
690 V AC

Electrical characteristics
Rated uninterrupted current [I_u]
400 A

Electrical characteristics
Note on rated uninterrupted current I_u
Rated uninterrupted current I_u is specified for max.
cross-section.

Short-circuit rating
fuse
500/250

Short-circuit rating
Rated conditional short-circuit current [I_q]
 $I_n = 500$: 50
 $I_n = 250$: 100 kA

Short-circuit rating
Breaking current
 $I_n = 500$: 40
 $I_n = 250$: 33 kA

Short-circuit rating
max. let-through energy
 $I_n = 500$: 1700
 $I_n = 250$: 380 kA²s

Rated short-time withstand current (1 s current)
[I_{cw}]
12000 A_{rms}

Note on rated short-time withstand current I_{cw}
Current for a time of 0.3 seconds

Heat dissipation per pole, current-dependent [P_{vd}]
11.5 W

Switching capacity

Rated breaking capacity $\cos \phi$ to IEC 60947-3
400/415 V
2664 A

Rated breaking capacity $\cos \phi$ to IEC 60947-3
500 V
2032 A

Rated breaking capacity $\cos \phi$ to IEC 60947-3
690 V
1120 A

Safe isolation to EN 61140
Current heat loss per contact at I_e
9 W

Lifespan, mechanical [Operations]
10000

AC
AC-21A
Rated operational current switch
400 V 415 V [I_e]
400 A

AC
AC-21A
Rated operational current switch
500 V [I_e]
400 A

AC
AC-21A
Rated operational current switch
690 V [I_e]
400 A

AC
AC-22A
Rated operational current switch

400 V 415 V [I_e]
400 A

AC
AC-22A
Rated operational current switch
500 V [I_e]
400 A

AC
AC-22A
Rated operational current switch
690 V [I_e]
315 A

AC
AC-23A
Rated operational current switch
400 V 415 V [I_e]
333 A

AC
AC-23A
Rated operational current switch
500 V [I_e]
254 A

AC
AC-23A
Rated operational current switch
690 V [I_e]
140 A

AC
AC-23A
Motor rating AC-23A, 50 - 60 Hz [P]
400 V 415 V [P]
180 kW

AC
AC-23A
Motor rating AC-23A, 50 - 60 Hz [P]
500 V [P]
180 kW

AC
AC-23A
Motor rating AC-23A, 50 - 60 Hz [P]
690 V [P]
132 kW

Terminal capacities

Flat conductor connection with busbars
240 mm²

Terminal screw
M10 x 20

Tightening torque for terminal screw
28 Nm

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]
400 A

Heat dissipation per pole, current-dependent [P_{vid}]
11.5 W

Equipment heat dissipation, current-dependent
[P_{vid}]
0 W

Static heat dissipation, non-current-dependent [P_{vs}]
0 W

Heat dissipation capacity [P_{diss}]
0 W

Operating ambient temperature min.
-25 °C

Operating ambient temperature max.
+55 °C

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 Strength of materials and parts
10.2.3.1 Verification of thermal stability of enclosures
Meets the product standard's requirements.

10.2 Strength of materials and parts
10.2.3.2 Verification of resistance of insulating materials to normal heat
Meets the product standard's requirements.

10.2 Strength of materials and parts
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 Strength of materials and parts
10.2.4 Resistance to ultra-violet (UV) radiation
Meets the product standard's requirements.

10.2 Strength of materials and parts
10.2.5 Lifting
Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts
10.2.6 Mechanical impact
Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts
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 Insulation properties
10.9.3 Impulse withstand voltage
Is the panel builder's responsibility.

10.9 Insulation properties
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 disconnecter (EC000216)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnecter (ec1@ss10.0.1-27-37-14-03 [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 U_e AC
690 V

Rated operating voltage
690 - 690 V

Rated permanent current I_u
400 A

Rated permanent current at AC-23, 400 V
333 A

Rated permanent current at AC-21, 400 V
400 A

Rated operation power at AC-3, 400 V
0 kW

Rated short-time withstand current I_{cw}
12 kA

Rated operation power at AC-23, 400 V
400 kW

Switching power at 400 V
400 kW

Conditioned rated short-circuit current I_q
50 kA

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
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

Degree of protection (NEMA)
Other

DIMENSIONS

