



6094967  
DMV-400/3/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  
3 pole

Auxiliary contacts

  
0 NO

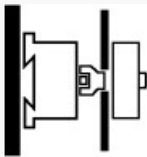
  
0 NC

Notes  
1 padlock, □ 5 mm

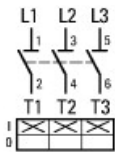
Locking facility  
Lockable in the 0 (Off) position

Degree of Protection  
Front IP65

Design  
rear mounting



Contact sequence



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  $I_u$   
Rated uninterrupted current  $I_u$  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  
3 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 kA<sup>2</sup>s

Rated short-time withstand current (1 s current)  
[ $I_{cw}$ ]  
12000 A<sub>rms</sub>

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

Heat dissipation per pole, current-dependent [ $P_{id}$ ]  
11.4 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<sub>e</sub>]  
400 A

AC  
AC-22A  
Rated operational current switch  
500 V [I<sub>e</sub>]  
400 A

AC  
AC-22A  
Rated operational current switch  
690 V [I<sub>e</sub>]  
315 A

AC  
AC-23A  
Rated operational current switch  
400 V 415 V [I<sub>e</sub>]  
333 A

AC  
AC-23A  
Rated operational current switch  
500 V [I<sub>e</sub>]  
254 A

AC  
AC-23A  
Rated operational current switch  
690 V [I<sub>e</sub>]  
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 mm<sup>2</sup>

Stripping length  
21 mm

Terminal screw  
M10 x 20

Tightening torque for terminal screw  
28 Nm

### Technical safety parameters:

#### Notes

B10<sub>d</sub> 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 [ $P_{id}$ ]  
11.4 W

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

Static heat dissipation, non-current-dependent [ $P_{is}$ ]  
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 (EO000216)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnecter (ecl@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  
3

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



