



6094969

DMM-160/4/M4/P-R

Overview

Specifications

Resources



Delivery program

Technical data

Design verification as  
per IEC/EN 61439

Technical data ETIM 7.0

## DELIVERY PROGRAM

Product range  
Switch-disconnector  
Main switch  
maintenance switch

Part group reference  
DMM

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

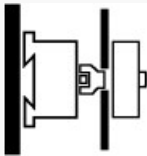
### Auxiliary contacts

  
0 NO

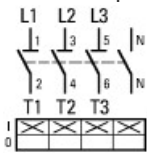
  
0 NC

Degree of Protection  
IP20

Design  
rear mounting



Contact sequence



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

400 V [P]  
80 kW

Rated uninterrupted current [ $I_u$ ]  
160 A

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

## TECHNICAL DATA

### 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 [9]  
-25 - +60 °C

Ambient temperature  
Storage [9]  
-40 - +80 °C

Overvoltage category/pollution degree  
III/3

Rated impulse withstand voltage [ $U_{imp}$ ]  
6 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 [ $I_u$ ]

160 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

160

#### Short-circuit rating

Rated conditional short-circuit current [ $I_q$ ]

415 V: 30

690 V: 50 kA

#### Short-circuit rating

Breaking current

13.5 kA

#### Short-circuit rating

max. let-through energy

86,9 kA<sup>2</sup>s

Rated short-time withstand current (1 s current)

[ $I_{cw}$ ]

2500 A<sub>rms</sub>

Note on rated short-time withstand current  $I_{cw}$

Current for a time of 1 second

Heat dissipation per pole, current-dependent [ $P_{id}$ ]

8 W

### Switching capacity

Rated breaking capacity  $\cos \phi$  to IEC 60947-3

400/415 V

1080 A

Rated breaking capacity  $\cos \phi$  to IEC 60947-3

500 V

528 A

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

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

Lifespan, mechanical [Operations]  
10000

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

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

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

AC  
AC-22A  
Rated operational current switch  
400 V 415 V [ $I_e$ ]  
160 A

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

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

AC  
AC-23A

Rated operational current switch  
400 V 415 V [ $I_e$ ]  
160 A

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

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

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

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

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

## Terminal capacities

Flexible with ferrules to DIN 46228  
flexible  
6 - 70 mm<sup>2</sup>

Stripping length  
21 mm

Tightening torque for terminal screw  
7 Nm

## Technical safety parameters:

### Notes

## DESIGN VERIFICATION AS PER IEC/EN 61439

### Technical data for design verification

Rated operational current for specified heat dissipation [ $I_r$ ]  
160 A

Heat dissipation per pole, current-dependent [ $P_{\text{vid}}$ ]  
8 W

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

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

Heat dissipation capacity [ $P_{\text{diss}}$ ]  
0 W

Operating ambient temperature min.  
-25 °C

Operating ambient temperature max.  
+40 °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  $I_u$   
160 A

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

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

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

Rated short-time withstand current  $I_{cw}$   
2.5 kA

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

Switching power at 400 V  
0 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



