**172802**
**DMM-160/3/I5/C-G**



## DELIVERY PROGRAM

Delivery program

Technical data

Product range
Switch-disconnector
Main switch
maintenance switch

Design verification as per IEC/EN 61439

Part group reference
DMM

Technical data ETIM 7.0

with grey knob

Dimensions

Information about equipment supplied
auxiliary contact fitted by user.

Notes
in CI-K5 enclosure

Number of poles
3 pole

### Auxiliary contacts

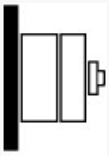
0 N/O

0 N/C

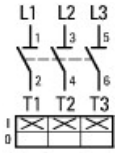
locking arrangement
cylinder lock

Degree of Protection
IP65

Design
surface 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 [ϑ]
-25 - +60 °C

Ambient temperature
Storage [ϑ]
-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
3 pole

Mechanical variables
Auxiliary contacts

0 N/O

Mechanical variables
Auxiliary contacts

0 N/C

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 [Iq]
415 V: 30
690 V: 50 kA

Short-circuit rating
Breaking current
13.5 kA

Short-circuit rating
max. let-through energy
86,9 $kA^2s$

Rated short-time withstand current (1 s current) [$I_{cw}$]
2500 $A_{rms}$

Note on rated short-time withstand current Icw
Current for a time of 1 second

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

## Switching capacity

Rated breaking capacity cos ϕ to IEC 60947-3
400/415 V
1080 A

Rated breaking capacity cos ϕ to IEC 60947-3
500 V
528 A

Rated breaking capacity cos ϕ 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 [$I_e$]
140 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 $mm^2$

Stripping length
21 mm

Tightening torque for terminal screw
7 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 [$I_n$]
160 A

Heat dissipation per pole, current-dependent [$P_{vid}$]
8 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.
+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
UV resistance only in connection with protective shield.

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 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])

Version as main switch
Yes

Version as maintenance-/service switch

Yes

Version as safety switch
No

Version as emergency stop installation
No

Version as reversing switch
No

Number of switches
1

Max. rated operation voltage Ue AC
690 V

Rated operating voltage
690 - 690 V

Rated permanent current Iu
160 A

Rated permanent current at AC-23, 400 V
140 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 Icw
2.5 kA

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

Switching power at 400 V
0 kW

Conditioned rated short-circuit current Iq
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
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
Grey

Type of control element
Short thumb-grip

Interlockable
Yes

Type of electrical connection of main circuit
Screw connection

Degree of protection (IP), front side
IP65

Degree of protection (NEMA)
Other

## DIMENSIONS