



038724
P1-25/E

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DELIVERY PROGRAM

Product range
On-Off switch

Part group reference
P1

with black thumb grip and front plate

Information about equipment supplied
Auxiliary contact or neutral conductor fitted by user.

Number of poles
3 pole

Auxiliary contacts


0 NO

7
0 NC

Degree of Protection
Front IP65

Design
flush mounting

Contact sequence

Front plate no.

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

400 V [P]
11 kW

Rated uninterrupted current [I_u]
25 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, CSA, UL
Switch-disconnector according to IEC/EN 60947-3

Climatic proofing
Damp heat, constant, to IEC 60068-2-78
Damp heat, cyclic, to IEC 60068-2-30

Ambient temperature
Open
-25 - +50 °C

Ambient temperature
Enclosed
-25 - +40 °C

Overvoltage category/pollution degree
III/3


Rated impulse withstand voltage [U_{imp}]
6000 V AC


Mechanical shock resistance
15 g

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]
25 A

Electrical characteristics
Note on rated uninterrupted current I_u

Rated uninterrupted current I_u is specified for max. cross-section.

Load rating with intermittent operation, class 12
AB 25 % DF
 $2 \times I_e$

Load rating with intermittent operation, class 12
AB 40 % DF
 $1.6 \times I_e$

Load rating with intermittent operation, class 12
AB 60 % DF
 $1.3 \times I_e$

Short-circuit rating
Fuse
25 A gG/gL

Rated short-time withstand current (1 s current)
[I_{cw}]
 $640 A_{rms}$

Note on rated short-time withstand current I_{cw}
Current for a time of 1 second

Rated conditional short-circuit current [I_q]
50 kA

Switching capacity

$\cos \phi$ rated making capacity as per IEC 60947-3
240 A

Rated breaking capacity $\cos \phi$ to IEC 60947-3
230 V
190 A

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

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

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

Safe isolation to EN 61140
between the contacts
440 V AC

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

Lifespan, mechanical [Operations]
> 0.3 x 10⁶

Maximum operating frequency [Operations/h]
1200

AC
AC-3
Rating, motor load switch [P]
220 V 230 V [P]
5.5 kW

AC
AC-3
Rating, motor load switch [P]
400 V 415 V [P]
7.5 kW

AC
AC-3
Rating, motor load switch [P]
500 V [P]
7.5 kW

AC
AC-3
Rating, motor load switch [P]
690 V [P]
7.5 kW

AC
AC-3
Rated operational current motor load switch
230 V [I_e]
19.6 A

AC
AC-3

Rated operational current motor load switch
400V 415 V [I_e]
15.2 A

AC
AC-3
Rated operational current motor load switch
500 V [I_e]
12.1 A

AC
AC-3
Rated operational current motor load switch
690 V [I_e]
8.8 A

AC
AC-23A
MOTOR rating AC-23A, 50 - 60 Hz [P]
230 V [P]
5.5 kW

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

AC
AC-23A
MOTOR rating AC-23A, 50 - 60 Hz [P]
500 V [P]
11 kW

AC
AC-23A
MOTOR rating AC-23A, 50 - 60 Hz [P]
690 V [P]
11 kW

AC
AC-23A
Rated operational current motor load switch
230 V [I_e]
25 A

AC
AC-23A
Rated operational current motor load switch
400 V 415 V [I_e]
25 A

AC
AC-23A
Rated operational current motor load switch
500 V [I_e]
17.4 A

AC
AC-23A
Rated operational current motor load switch
690 V [I_e]
12.6 A

DC
DC-1, Load-break switches L/R = 1 ms
Rated operational current [I_e]
25 A

DC
DC-1, Load-break switches L/R = 1 ms
Voltage per contact pair in series
60 V

DC
DC-23A, motor load switch L/R = 15 ms
24 V
Rated operational current [I_e]
25 A

DC
DC-23A, motor load switch L/R = 15 ms
24 V
Contacts
1 Quantity

DC
DC-23A, motor load switch L/R = 15 ms
48 V
Rated operational current [I_e]
25 A

DC
DC-23A, motor load switch L/R = 15 ms
48 V
Contacts
2 Quantity

DC
DC-23A, motor load switch L/R = 15 ms
60 V
Rated operational current [I_e]
25 A

DC
DC-23A, motor load switch L/R = 15 ms
60 V
Contacts
2 Quantity

DC
DC-23A, motor load switch L/R = 15 ms
120 V
Rated operational current [I_{e}]
12 A

DC
DC-23A, motor load switch L/R = 15 ms
120 V
Contacts
3 Quantity

Control circuit reliability at 24 V DC, 10 mA [Fault probability]
< 10^{-5} , < 1 failure in 100,000 switching operations
H_F

Terminal capacities

Solid or stranded
1 x (1,5 - 6)
2 x (1,5 - 6) mm²

Flexible with ferrules to DIN 46228
1 x (1 - 4)
2 x (1 - 4) mm²

Terminal screw
M4

Tightening torque for terminal screw
1.6 Nm

Technical safety parameters:

Notes

B10_d values as per EN ISO 13849-1, table C1

Rating data for approved types

Contacts

Rated operational voltage [U_e]
600 V AC

Contacts
Rated uninterrupted current max.
Main conducting paths
General use
20 A

Contacts
Rated uninterrupted current max.
Auxiliary contacts
General Use [I_u]
10 A

Contacts
Rated uninterrupted current max.
Auxiliary contacts
Flot Duty
A 600
P 600

Switching capacity
Maximum motor rating
Single-phase
120 V AC
1 HP

Switching capacity
Maximum motor rating
Single-phase
200 V AC
2 HP

Switching capacity
Maximum motor rating
Single-phase
240 V AC
3 HP

Switching capacity
Maximum motor rating
Three-phase
200 V AC
3 HP

Switching capacity
Maximum motor rating
Three-phase
240 V AC
5 HP

Switching capacity
Maximum motor rating
Three-phase
480 V AC
10 HP

Switching capacity
Maximum motor rating
Three-phase
600 V AC
15 HP

Short Circuit Current Rating
Basic Rating
5 kA

Short Circuit Current Rating
max. Fuse
110 A

Short Circuit Current Rating
High fault rating
10 kA

Short Circuit Current Rating
max. Fuse
50, Class J A

Terminal capacity
Solid or flexible conductor with ferrule
14 - 8 AWG

Terminal capacity
Terminal screw
M4

Terminal capacity
Tightening torque
14.1 lb-in

DESIGN VERIFICATION AS PER IEC/EN 61439

Technical data for design verification

Rated operational current for specified heat
dissipation [I_n]

Heat dissipation per pole, current-dependent [P_{vid}]
1.1 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.
+50 °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 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
No

Version as maintenance-/service switch
No

Version as safety switch
No

Version as emergency stop installation
No

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

25 A

Rated permanent current at AC-23, 400 V

25 A

Rated permanent current at AC-21, 400 V

25 A

Rated operation power at AC-3, 400 V

7.5 kW

Rated short-time withstand current I_{cw}

0.64 kA

Rated operation power at AC-23, 400 V

13 kW

Switching power at 400 V

13 kW

Conditioned rated short-circuit current I_q

80 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

Mbtor drive optional
No

Mbtor drive integrated
No

Voltage release optional
No

Device construction
Built-in device fixed built-in technique

Suitable for ground mounting
No

Suitable for front mounting 4-hole
Yes

Suitable for front mounting centre
No

Suitable for distribution board installation
No

Suitable for intermediate mounting
No

Colour control element
Black

Type of control element
Toggle

Interlockable
No

Type of electrical connection of main circuit
Screw connection

Degree of protection (IP), front side
IP65

Degree of protection (NEMA)
12

APPROVALS

Product Standards
UL 60947-4-1; CSA - C22.2 No. 60947-4-1-14;
CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking

UL File No.
E36332

UL Category Control No.
NLRV

CSA File No.
12528

CSA Class No.
3211-05

North America Certification
UL listed, CSA certified

Suitable for
Branch circuits, suitable as motor disconnect

Degree of Protection
IEC: IP65; UL/CSA Type 1, 12

DIMENSIONS



