


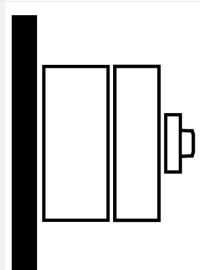
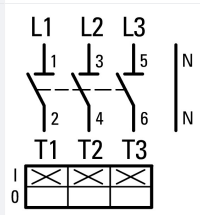




**Switch-disconnector, 3 pole + N, 40 A, With black rotary handle and drive shaft, surface mounting, Vertical connection**

**Part no. DCM-40/1**  
**Article no. 1314106**

## Delivery program

|   |                |     |   |
|---|----------------|-----|---|
| Product range   |                |     | Switch-disconnector<br>Main switch<br>maintenance switch  |
| Part group reference  |                |     | DCM   |
|   |                |     | With black rotary handle and drive shaft  |
| Number of poles   |                |     | 3 pole + N (direct)   |
| <b>Auxiliary contacts</b>   |                |     |   |
|  |                | N/O | 0   |
|  |                | N/C | 0   |
| Notes   |                |     | 1 padlock,  5 mm |
| Locking facility  |                |     | Lockable in the 0 (Off) position  |
| Degree of Protection  |                |     | IP20  |
| Design  |                |     | surface mounting  |
|   |                |     |                |
| Contact sequence  |                |     |               |
| <b>Motor rating AC-23A, 50 - 60 Hz</b>  |                |     |   |
| 400 V   | P              | kW  | 20  |
| Rated uninterrupted current   | I <sub>u</sub> | A   | 40  |
| Connection technique  |                |     | Vertical connection   |

## Technical data

|   |                  |    |  |
|---|------------------|----|--|
| <b>General</b>  |                  |    |  |
| Standards   |                  |    | IEC/EN 60947, VDE 0660, IEC/EN 60204,<br>Switch-disconnector according to IEC/EN 60947-3 |
| Certifications  |                  |    | CE, RoHs, KEMA, GOST-R, Lloyds   |
| Ambient temperature   |                  |    |  |
| Operation   | θ                | °C | -25 - +55  |
| Storage   | θ                | °C | -30 - +80  |
| Overvoltage category/pollution degree                                 |                  |    | III/3  |
| Rated impulse withstand voltage                                       | U <sub>imp</sub> | kV | 6  |
| Rated insulation voltage  | U <sub>i</sub>   | V  | 690  |
| Mounting position   |                  |    | As required  |
| Protection against direct contact when actuated from front (EN 50274) |                  |    | Finger and back-of-hand proof  |

Contacts

|  |                 |                   |   |
|--|-----------------|-------------------|---|
| Mechanical variables                                       |                 |                   |   |
| Number of poles  |                 |                   | 3 pole + N (direct)   |
| Auxiliary contacts   |                 |                   |   |
|  |                 | N/O               | 0   |
|  |                 | N/C               | 0   |
| Electrical characteristics                                 |                 |                   |   |
| Rated operational voltage                                  | U <sub>e</sub>  | V AC              | 415   |
| Rated uninterrupted current                                | I <sub>u</sub>  | A                 | 40  |
| Note on rated uninterrupted current I <sub>u</sub>         |                 |                   | Rated uninterrupted current I <sub>u</sub> is specified for max. cross-section. |
| Short-circuit rating                                       |                 |                   |   |
| fuse   |                 |                   | 50  |
| Rated conditional short-circuit current                    | I <sub>q</sub>  | kA                | 50  |
| Breaking current   |                 | kA                | 7   |
| max. let-through energy                                    |                 | kA <sup>2</sup> s | 12  |
| Rated short-time withstand current (1 s current)           | I <sub>cw</sub> | A <sub>rms</sub>  | 1000  |
| Note on rated short-time withstand current I <sub>cw</sub> |                 |                   | Current for a time of 1 second  |
| Rated short-circuit making capacity                        | I <sub>cm</sub> | kA <sub>eff</sub> | 2.2   |

Switching capacity

|   |                |    |       |
|---|----------------|----|-------|
| Rated breaking capacity cos φ to IEC 60947-3    |                | A  |       |
| 400/415 V                                       |                | A  | 320   |
| Safe isolation to EN 61140                      |                |    |       |
| Current heat loss per contact at I <sub>g</sub> |                | W  | 3     |
| Lifespan, mechanical                            | Operations     |    | 10000 |
| AC  |                |    |       |
| AC-21A  |                |    |       |
| Rated operational current switch                |                |    |       |
| 400 V 415 V                                     | I <sub>e</sub> | A  | 40    |
| AC-22A  |                |    |       |
| Rated operational current switch                |                |    |       |
| 400 V 415 V                                     | I <sub>e</sub> | A  | 40    |
| AC-23A  |                |    |       |
| Rated operational current switch                |                |    |       |
| 400 V 415 V                                     | I <sub>e</sub> | A  | 40    |
| Motor rating AC-23A, 50 - 60 Hz                 | P              | kW |       |
| 400 V 415 V                                     | P              | kW | 20    |

Terminal capacities

|                                     |  |                 |          |
|-------------------------------------|--|-----------------|----------|
| Solid                               |  | mm <sup>2</sup> | 2.5 - 16 |
| Flexible with ferrules to DIN 46228 |  | mm <sup>2</sup> |          |
| flexible                            |  | mm <sup>2</sup> | 1.5 - 25 |
| Max. tightening torque              |  | Nm              | 3        |

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 <sub>n</sub>    | A  | 40  |
| Heat dissipation per pole, current-dependent             | P <sub>vid</sub>  | W  | 3   |
| Equipment heat dissipation, current-dependent            | P <sub>vid</sub>  | W  | 0   |
| Static heat dissipation, non-current-dependent           | P <sub>vs</sub>   | W  | 0   |
| Heat dissipation capacity                                | P <sub>diss</sub> | W  | 0   |
| Operating ambient temperature min.                       |                   | °C | -25 |
| Operating ambient temperature max.                       |                   | °C | 55  |
| IEC/EN 61439 design verification                         |                   |    |     |

|  |  |  |  |
|--|--|--|--|
| 10.2 Strength of materials and parts   |  |  |  |
| 10.2.2 Corrosion resistance  |  |  | Meets the product standard's requirements.   |
| 10.2.3.1 Verification of thermal stability of enclosures   |  |  | Meets the product standard's requirements.   |
| 10.2.3.2 Verification of resistance of insulating materials to normal heat   |  |  | Meets the product standard's requirements.   |
| 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.   |
| 10.2.4 Resistance to ultra-violet (UV) radiation   |  |  | Meets the product standard's requirements.   |
| 10.2.5 Lifting   |  |  | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.2.6 Mechanical impact   |  |  | Does not apply, since the entire switchgear needs to be evaluated.   |
| 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.   |
| 10.9.3 Impulse withstand voltage   |  |  | Is the panel builder's responsibility.   |
| 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 6.0

|  |  |    |  |
|--|--|----|--|
| 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 (ecl@ss8.1-27-37-14-03 [AKF060010]) |  |    |  |
| 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                                       |
| Max. rated operation voltage Ue AC   |  | V  | 415                                      |
| Rated operating voltage  |  | V  | 415 - 415                                |
| Rated permanent current Iu   |  | A  | 40                                       |
| Rated permanent current at AC-21, 400 V  |  | A  | 40                                       |
| Rated operation power at AC-3, 400 V   |  | kW | 0  |
| Rated short-time withstand current Icw   |  | kA | 1  |
| Rated operation power at AC-23, 400 V  |  | kW | 0  |
| Switching power at 400 V   |  | kW | 20                                       |
| Conditioned rated short-circuit current Iq   |  | kA | 0  |
| 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 center   |  |    | No                                       |

|   |  |                  |
|---|--|------------------|
| Suitable for distribution board installation  |  | Yes              |
| 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         |  | IP20             |

## Dimensions

