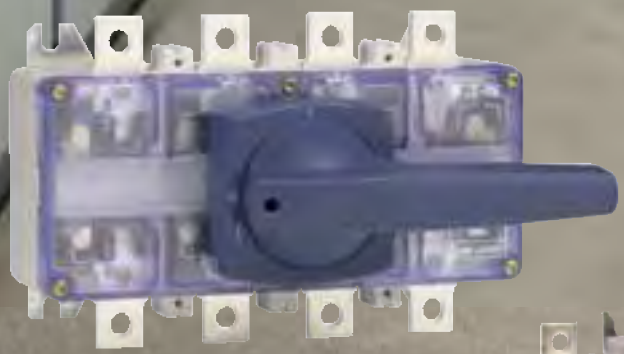
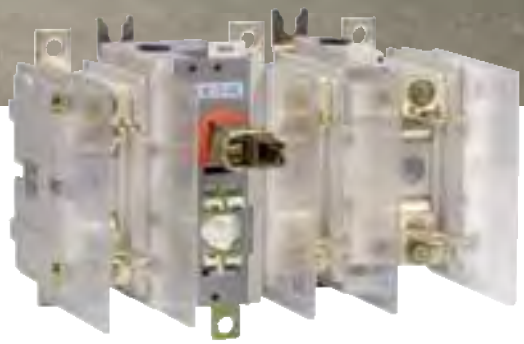
Product Range Catalog
Dumeco Switch-Disconnectors
QSA Fuse Combination Switches





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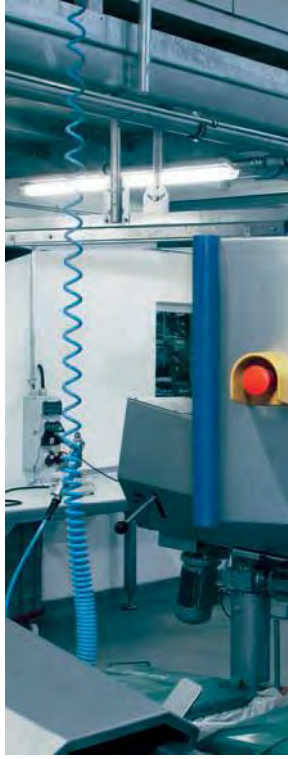

Powering electrical systems worldwide

Buildings

- Residential
- Healthcare
- Education
- Commercial offices
- Retail
- Public sector
- Airports

- Electrical distribution solutions for safe and efficient power delivery
- Power quality systems for uptime and reliability
- Power metering and monitoring to add intelligence and save costs
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Eaton Catalogs in the App Store – all catalogues close at hand!

In order to meet the needs of increasingly mobile customers and employees, Eaton is offering a mobile solution for communication and product information from June 2011.

Clearly designed shelf view

The Eaton Catalogs app offers an outstandingly clear user interface and several fully developed functions. In the form of a shelf view, the user is provided with a clear overview of Eaton's latest product catalogues. These can be leafed through on the fly or downloaded to the device – for situations when there is no Internet access. Choose for yourself which catalogues are of interest and keep up-to-date using the Update function.

Intuitive browsing, searching and finding

Users can simply browse through the catalogues with intuitive navigation ensured. A linked table of contents, thumbnail views and a rapid search function are also provided for finding information quickly and conveniently.

Linked data sheets

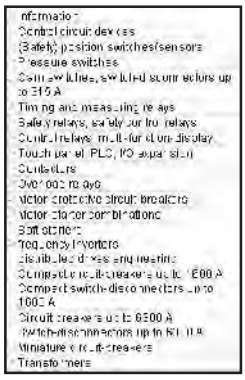
It is often the case that product information is required which is not available in the product catalogues. The "Eaton Catalogs" contain article numbers and type designations that are linked to the Online Catalogue. This enables the user to access highly detailed production information in the form of a technical data sheet. From here other documents such as installation instructions and technical publications can be called up.

Whether on the building site, at the customer, on the train or at home – "Eaton Catalogs" make sure that all product information is close to hand.

Scan the QR code with your iPhone or iPad and you will immediately access "Eaton Catalogs".

The Eaton online catalogue

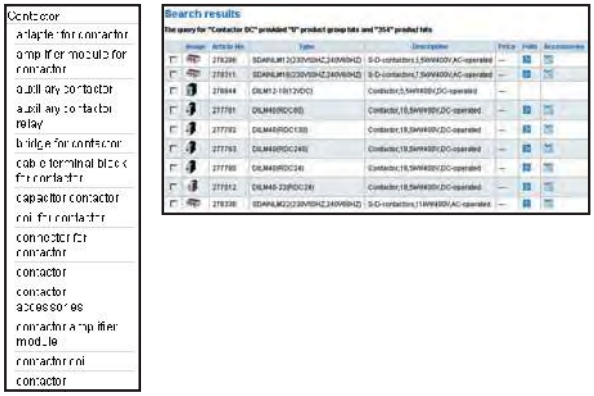
THE PRODUCT GROUP TREE



The product group tree:
Clear layout of the Eaton products in product groups.

The one-dimensional product structure ensures the user can easily locate the product with a few clicks.

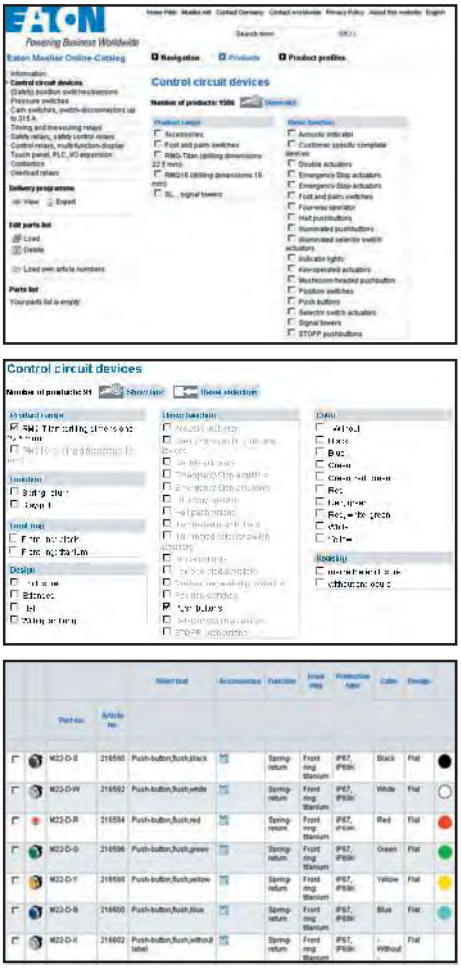
THE SEARCH



Search/result list: high performance search with suggestion list by "Entry".

A suggestion list brings the search an above-average success rate, because nothing makes less sense than a 0-hit result.

SELECTION AIDS



The selection tools:
3 clicks to product

Selection-relevant features allow users to locate their products easily, without problems. From general to specific to product – 3 clicks!

The catalogue portal is the entry page to the Online Catalogue. Important elements include the powerful search function and the graphical navigation. The clearly designed user interface makes the application particularly easy to use.

Continuous updating ensures that you will always find the latest product data and news.
http://ecat.moeller.net

Product Guide Index

Switch-disconnector-fuses, type QSA, general characteristics

40 - 800 A, 690 V_{ac}

The QSA flexible Fused Combination Switches product range contains 3-pole configurations. This chapter gives information on **standard DIN fuse-link and standard BS fuse-link, type QSA fused combination switches**.

Standards

- The range complies with EN-IEC 60947-3.
- Certification: KEMA-KEUR approval (note: DIN fuse-link only up to 315 A), Lloyd's (LR), Veritas and CSA.

Technical characteristics

Type QSA switch-fuses are characterized by the following features:

- All standard switches have a 3-pole frame.
- Switches will accommodate BS or DIN fuse-links.
- Separate switched or bolted neutrals can be mounted to the switch on location.
- Totally enclosed compact housing made of creepage-proof, heat-resistant, insulation material.
- Spring-loaded silver-plated roller contacts.
- Independent manual operation.
- Double current interruption.
- Easy to install in any position.
- Optional solid or switched neutral pole.

See page 6 for accessories of switch-disconnnector-fuses, type QSA.

Switch-disconnector-fuses, type QSA, DIN fuse-links

40 - 800 A, 690 V_{ac}

The product range contains 3-pole configurations (with optional switched and solid neutral).
This chapter gives information on **standard (DIN fuse-link) type QSA switches**.

Standards

- The range complies with IEC 60947-3 and has KEMA-KEUR approval up to 315 A, Lloyd's (LR), Veritas and CSA.
- Switches will accommodate DIN fuse-links.

See page 6 for accessories of switch-disconnector-fuses, type QSA.
See page 31 for the technical characteristics of switch-disconnector-fuses, type QSA.
See page 25 for knobs and handles, K-line.

1320203

Switch-disconnector-fuses, frame size 0

■ Type QSA, 690 V_{ac}, DIN fuse-links

- Suitable for DIN fuse-links (blade contacts type).

Description	Thermal current I_{the}	Pole configuration	Frame size	Part no.	Std. pack	Article no.
Switch-disconnector-fuse, DIN fuse-link	40 A	3P	0	QSA 40N0-00/3	1	**1320201**
Switch-disconnector-fuse, DIN fuse-link	63 A	3P	0	QSA 63N0-00/3	1	**1320203**
Switch-disconnector-fuse, with pillars, DIN fuse-link	40 A	3P	0	QSA 40N0-00/3	1	**1320205**
Switch-disconnector-fuse, with pillars, DIN fuse-link	63 A	3P	0	QSA 63N0-00/3	1	**1320207**

1318033

Switch-disconnector-fuses, frame size 1

■ Type QSA, 690 V_{ac}, DIN fuse-links

- Suitable for DIN fuse-links (blade contacts type).

Description	Thermal current I_{the}	Pole configuration	Frame size	Part no.	Std. pack	Article no.
Switch-disconnector-fuse, DIN fuse-link	63 A	3P	1	QSA 63N1-00/3	1	**1318027**
Switch-disconnector-fuse, DIN fuse-link	100 A	3P	1	QSA 100N1-00/3	1	**1318546**
Switch-disconnector-fuse, DIN fuse-link	125 A	3P	1	QSA 125N1-00/3	1	**1318030**
Switch-disconnector-fuse, DIN fuse-link	160 A	3P	1	QSA 160N1-00/3	1	**1318033**

1318547

Switch-disconnector-fuses, frame size 2

■ Type QSA, 690 V_{ac}, DIN fuse-links

- Suitable for DIN fuse-links (blade contacts type).

Description	Thermal current I_{the}	Pole configuration	Frame size	Part no.	Std. pack	Article no.
Switch-disconnector-fuse, DIN fuse-link	200 A	3P	2	QSA 200N-2/3	1	**1318547**
Switch-disconnector-fuse, DIN fuse-link	250 A	3P	2	QSA 250N-2/3	1	**1318526**
Switch-disconnector-fuse, DIN fuse-link	315 A	3P	2	QSA 315N-2/3	1	**1318548**
Switch-disconnector-fuse, DIN fuse-link	400 A	3P	2	QSA 400N-2/3	1	**1318533***

*) In ventilated enclosure.

1318542

Switch-disconnector-fuses, frame size 3

■ Type QSA, 690 V_{ac}, DIN fuse-links

- Suitable for DIN fuse-links (blade contacts type).

Description	Thermal current I_{the}	Pole configuration	Frame size	Part no.	Std. pack	Article no.
Switch-disconnector-fuse, DIN fuse-link	400 A	3P	3	QSA 400-3/3	1	**1318549**
Switch-disconnector-fuse, DIN fuse-link	630 A	3P	3	QSA 630-3/3	1	**1318542**
Switch-disconnector-fuse, DIN fuse-link	800 A	3P	3	QSA 800-3/3	1	**1318543***

*) I_{the} 750 A.

Accessories for switches, type QSA

Additional accessories include safety handles with standard interlocking and padlocking facility, auxiliary switches and protective terminal covers.
See page 6 for accessories of switch-disconnector-fuses, type QSA for more information.

Shielding
Wide range of terminal covers, front and rear covers are available.

Knobs and handles
To optimise the application of different switch and handle mechanisms, without the burden of high inventories, the switches and handles are packaged and ordered as separate items.
A wide range of K-line handles is available for any application.
See page 25 for K-line knobs and handles, K-line for different shafts with various lengths for type QSA switches.

Switch-disconnector-fuses, type QSA, BS fuse-links

40 - 800 A, 690 V_{ac}

Product range contains 3-pole configurations.
This chapter gives information on **standard (BS fuse-link) type QSA switches.**

Standards

- The range complies with IEC 60947-3 and has KEMA-KEUR approval up to 315 A.
- Switches will accommodate BS 88 fuse-links.

See page 6 for accessories of switch-disconnector-fuses, type QSA.
See page 31 for the technical characteristics of switch-disconnector-fuses, type QSA.
See page 25 for knobs and handles, K-line.


1320202

Switch-disconnector-fuses, frame size 0

■ **Type QSA, 690 V_{ac}, BS fuse-links**

- Suitable for BS fuse-links (solid connection type).

Description	Thermal current I_{the}	Pole configurations	Frame size	Part no.	Std. pack	Article no.
Switch-disconnector-fuse, BS fuse-link	40 A	3P	0	QSA 40N0-A3/3	1	**1320200**
Switch-disconnector-fuse, BS fuse-link	63 A	3P	0	QSA 63N0-A3/3	1	**1320202**
Switch-disconnector-fuse, with pillars, BS fuse-link	40 A	3P	0	QSA 40N0-A3/3	1	**1320204**
Switch-disconnector-fuse, with pillars, BS fuse-link	63 A	3P	0	QSA 63N0-A3/3	1	**1320206**


1318011

Switch-disconnector-fuses, frame size 1

■ **Type QSA, 690 V_{ac}, BS fuse-links**

- Suitable for BS fuse-links (solid connection type).

Description	Thermal current I_{the}	Pole configuration	Frame size	Part no.	Std. pack	Article no.
Switch-disconnector-fuse, BS fuse-link	63 A	3P	1	QSA 63N1-A3/3	1	**1318011**
Switch-disconnector-fuse, BS fuse-link	100 A	3P	1	QSA 100N1-A4/3	1	**1318016**
Switch-disconnector-fuse, BS fuse-link	125 A	3P	1	QSA 125N1-B2/3	1	**1318020**
Switch-disconnector-fuse, BS fuse-link	160 A	3P	1	QSA 160N1-B2/3	1	**1318023**


1319056

Switch-disconnector-fuses, frame size 2

■ **Type QSA, 690 V_{ac}, BS fuse-links**

- Suitable for BS fuse-links (solid connection type).

Description	Thermal current I_{the}	Pole configuration	Frame size	Part no.	Std. pack	Article no.
Switch-disconnector-fuse, BS fuse-link	160 A	3P	2	QSA 160N-B2/3	1	**1319056**
Switch-disconnector-fuse, BS fuse-link	200 A	3P	2	QSA 200N-B2/3	1	**1319065**
Switch-disconnector-fuse, BS fuse-link	250 A	3P	2	QSA 250N-B4/3	1	**1319074**
Switch-disconnector-fuse, BS fuse-link	315 A	3P	2	QSA 315N-B4/3	1	**1319095**
Switch-disconnector-fuse, BS fuse-link	400 A	3P	2	QSA 400N-B4/3	1	**1319103***

*) In ventilated enclosure.

1318537

Switch-disconnector-fuses, frame size 3

■ Type QSA, 690 V_{ac}, BS fuse-links

- Suitable for BS fuse-links (solid connection type).

Description	Thermal current I_{the}	Pole configuration	Frame size	Part no.	Std. pack	Article no.
Switch-disconnector-fuse, BS fuse-link	400 A	3P	3	QSA 400-C3/3	1	**1318537**
Switch-disconnector-fuse, BS fuse-link	630 A	3P	3	QSA 630-C3/3	1	**1318544**
Switch-disconnector-fuse, BS fuse-link	800 A	3P	3	QSA 800-C3/3	1	**1319175**

Accessories for switches, type QSA

Additional accessories include safety handles with standard interlocking and padlocking facility, auxiliary switches and protective terminal covers.
See page 6 for accessories of switch-disconnector-fuses, type QSA for more information.

Shielding
Wide range of terminal covers, front and rear covers are available.

Knobs and handles
To optimise the application of different switch and handle mechanisms, without the burden of high inventories, the switches and handles are packaged and ordered as separate items.
A wide range of K-line handles is available for any application.
See page 25 for knobs and handles, K-line for different shafts with various lengths for type QSA switches.

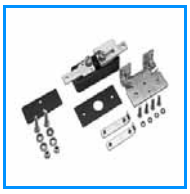
DIN and BS fuse-links

Additional accessories include safety handles with standard interlocking and padlocking facility, auxiliary switches and protective terminal covers.

Shielding
Wide range of terminal covers, front and rear covers are available.

Knobs and handles
To optimise the application of different switch and handle mechanisms, without the burden of high inventories, the switches and handles are packaged and ordered as separate items.
A wide range of K-line handles is available for any application.

See page 39 for dimensional drawings of solid and switched neutrals.
See page 29 for shafts with various lengths for QSA switches.



1319460

Solid neutrals

- Solid neutrals are designed for mounting on-site.

Description	Thermal current I_{the}	For switch-disconnector- fuse type	Std. pack	Article no.
Solid neutral	40 / 63 A	QSA 40N0 - QSA 63N0 - QSA 63N1	1	**1319460**
Solid neutral	100 / 125 A	QSA 100N1 - QSA125N1	1	**1319466**
Solid neutral	160 A	QSA 160N1	1	**1319472**
Solid neutral	160 / 200 A	QSA 160N - QSA200N	1	**1319473**
Solid neutral	250 / 315 / 400 A	QSA 250N - QSA 315N - QSA 400N	1	**1319480**
Solid neutral	400 / 630 / 800 A	QSA 400 - QSA 630 - QSA 800	1	**1319486**

1319482

Switched neutrals

- Switched neutrals are designed for mounting on-site.

Description	Thermal current I_{the}	For switch-disconnector-fuse type	Std. pack	Article no.
Switched neutral	40 / 63 A	QSA 40N0 - QSA 63N0 - QSA 63N1	1	**1319462**
Switched neutral	100 / 125 A	QSA 100N1 - QSA 125N1	1	**1319467**
Switched neutral	160 A	QSA 160N1	1	**1319474**
Switched neutral	160 / 200 A	QSA 160N - QSA 200N	1	**1319476**
Switched neutral	250 / 315 / 400 A	QSA 250N - QSA 315N - QSA 400N	1	**1319482**
Switched neutral	400 / 630 / 800 A	QSA 400 - QSA 630 - QSA 800	1	**1319662**

6028292, 6028293, 6028294

Auxiliary switches for switch-disconnector-fuses type QSA

- The auxiliary switch is excluding adaptor, one adaptor needed per auxiliary switch. Except 630 / 800 A.

Description	For switch-disconnector-fuse type	Contact configuration	Std. pack	Article no.
Adaptor for auxiliary switch	For all QSA-types	-	5	**6028292**
Auxiliary switch	For all QSA-types	1 NO + 1 NC	1	**6028293**
Auxiliary switch	For all QSA-types	2 NO	1	**6028294**
Auxiliary switch incl. adaptor	For types 630 / 800 A	1 NO + 1 NC	1	**6030647**

1319411

Terminal covers (transparant), 1-pole

■ **For QSA types**

- Terminal cover for cable lugs on connection terminals of QSA types.

Description	For switch-disconnector- type	Bolt	Std. pack	Article no.
Terminal cover (transparent) for cable lugs on connection terminal	QSA 40N0, QSA 63N0, QSA 100N1, QSA 125N1	M6	1	**1319409**
Terminal cover (transparent) for cable lugs on connection terminal	QSA 160N1, QSA 160N, QSA 200N (BS)	M8	1	**1319411**
Terminal cover (transparent) for cable lugs on connection terminal	QSA 200N (DIN) - QSA 250N, QSA 315N, QSA 400N	M10	1	**1319413**
Terminal cover (transparent) for cable lugs on connection terminal	QSA 400, QSA 630, QSA 800	M12	1	**1319415**

1319439

Rear covers for switch-disconnector-fuse, 1-pole

- Rear cover to shield live parts on rear of switch-disconnector-fuse.

Description	Pole configuration	For switch-disconnector fuse type	Std. pack	Article no.
Rear cover for switch-disconnector-fuse	1P	QSA 63N1-00/3, QSA 63N1-A3/3, QSA 100N1-A4/3, QSA 125N1-00/3QSA 125N1-B2/3, QSA 160N1-B2/3, QSA 160 N1-00/3	1	**1319439**
Rear cover for switch-disconnector-fuse	1P	QSA 160N-00/3, QSA 160N-B2/3, QSA 200N-2/3, QSA 200N-B2/3, QSA 250N-2/3, QSA 250N-B4/3, QSA 315-2/3, QSA 315N-B4/3, QSA 400N-B4/3	1	**1319441**

1319432

Terminal covers (transparent), 3-pole

- For cable lugs on connection terminals of QSA-types.

Description	Pole configuration	For switch-disconnector-fuse type	Std. pack	Article no.
Terminal cover (transparent)	3P	QSA 40N0, QSA 63N0	1	**1320239**
Terminal cover (transparent)	3P	QSA 63N1, QSA 100N1, QSA 125N1, QSA 160N1	1	**1319432**
Terminal cover (transparent)	3P	QSA 160N, QSA 200N, QSA 250N, QSA 315N, QSA 400N	1	**1319418**

1319435

Front covers (transparent) for switch-disconnector-fuse

- To shield live parts on front of switch-disconnector-fuse.

Description	For switch-disconnector fuse type	Std. pack	Article no.
Front cover (transparent) for switch-disconnector-fuse	QSA 40N0, QSA 63N0, QSA 63N1, QSA 100N1-00/3	1	**1320237**
Front cover (transparent) for switch-disconnector-fuse	QSA 63N1-00/3, QSA100N1-00/3, QSA 125N1-00/3	1	**1319435**
Front cover (transparent) for switch-disconnector-fuse	QSA 160N1-00/3	1	**1318476**
Front cover (transparent) for switch-disconnector-fuse	QSA 100N1-A4/3	1	**1319423**
Front cover (transparent) for switch-disconnector-fuse	QSA 125N1-B2/3, QSA 160N1-B2/3	1	**1319438**
Front cover (transparent) for switch-disconnector-fuse	QSA 160N, QSA 200N, QSA 250N, QSA 315N, QSA 400N	1	**1319429**
Front cover (transparent) for switch-disconnector-fuse	QSA 400, QSA 600, QSA 800	1	**1319426**

1319417

Rear cover for switch-disconnector-fuse

- Rear cover to shield live parts on rear of switch-disconnector-fuse.

Description	For switch-disconnector fuse type	Std. pack	Article no.
Rear cover for switch-disconnector-fuse	QSA 400-3/3, QSA 400-C3/3, QSA 630-3/3. QSA 630-C3/3, QSA 800-C3/3	1	**1319417**

Switch-disconnectors Duco, type DMV

40 - 63 A, 400 / 690 V_{ac}

Product range contains following pole-configurations:
- 2-pole (400 V_{ac}).
- 3-pole, 3-pole + solid N and 4-pole (690 V_{ac}).

Standards
- Eaton type DMV switch-disconnectors comply with EN-IEC 60947-3.
- Certification: KEMA-KEUR approval, Lloyd's (LR) and Veritas.

Technical characteristics
- Utilization categories: AC-23 A.
- Optimum safety due to visible contact separation.
- Complete range 40 A up to 63 A.
- Easy installation due to very compact design.
- Suitable for DIN rail mounting.
- Many application possibilities due to excellent technical specifications.
- Suitable for padlocking in ON or OFF position (max. 3 padlocks, shackle diameter 8 mm).
- Locking facilities.
- Complete range of accessories.

See page 41 for the technical characteristics of switch-disconnectors Duco, type DMV.

1713124

Switch-disconnectors Duco, visible contact separation

■ Type DMV

- With fixed shaft and knob.

Description	Current rating	Pole configuration	Part no.	Std. pack	Article no.
Switch-disconnector Duco	40 A	2P	DMV 40/2	1	**1713121**
Switch-disconnector Duco	40 A	3P	DMV 40/3	1	**1713123**
Switch-disconnector Duco	40 A	3P+sldN	DMV 40/1	1	**1713124**
Switch-disconnector Duco	40 A	4P	DMV 40/4	1	**1713125**
Switch-disconnector Duco	63 A	2P	DMV 63/2	1	**1713170**
Switch-disconnector Duco	63 A	3P	DMV 63/3	1	**1713171**
Switch-disconnector Duco	63 A	3P+sldN	DMV 63/1	1	**1713172**
Switch-disconnector Duco	63 A	4P	DMV 63/4	1	**1713173**

1713101

Switch-disconnectors Duco, visible contact separation

■ Type DMV

- Without shaft and knob.

Description	Current rating	Pole configuration	Part no.	Std. pack	Article no.
Switch-disconnector Duco	40 A	3P	DMV 40/3	1	**1713100**
Switch-disconnector Duco	40 A	3P+sldN	DMV 40/1	1	**1713101**
Switch-disconnector Duco	40 A	4P	DMV 40/4	1	**1713103**
Switch-disconnector Duco	63 A	3P+sldN	DMV 63/1	1	**1713151**
Switch-disconnector Duco	63 A	3P	DMV 63/3	1	**1713150**
Switch-disconnector Duco	63 A	4P	DMV 63/4	1	**1713153**

1050200

Operating shafts for Duco

■ For types DMV 40 / 63

- 6 mm square.

Description	Height	Std. pack	Article no.
Operating shaft	100 mm	1	**1050200***
Operating shaft	116 mm	1	**1050201***
Operating shaft	124 mm	1	**1050202***
Operating shaft	148 mm	1	**1050203***
Operating shaft	156 mm	1	**1050204***
Operating shaft	172 mm	1	**1050205***
Operating shaft	254 mm	1	**1050206***
Operating shaft	400 mm	1	**1050207***

*) Height of switch, from bottom of switch to top of operating shaft.

1713201

Front mounting kits

- Terminal size: 2 x 2.5 mm^2 up to 16 mm^2.

Description	Pole configuration	Std. pack	Article no.
Front mounting kit	2P	1	**1713201***
Front mounting kit	3P	1	**1713204**

*) 4P = 2 x 2P.

1713203

Protective covers, transparant

- Cover for protection against accidental touching of terminals.

Description	Pole configuration	Std. pack	Article no.
Protective cover, transparent	2P	1	**1713202***
Protective cover, transparent	3P	1	**1713203**

*) 4P = 2 x 2P.

Switch-disconnectors Duco, type DCM

40 - 63 A, 415 V_{ac}

Product range contains 3-pole + solid N and 4-pole configurations (415 V_{ac}).

Standards
- Complying with standards IEC 60947-3.
- Certification: KEMA-KEUR approval, Lloyd's (LR), Veritas and CSA.

Technical characteristics
- Compact.
- Enclosure of non-tracking synthetic material.
- Suitable for DIN mounting rail and 45 mm sleave connection.
- Connecting contacts with pillar terminals.
- Interchangeable operating shaft.
- Semi-independent manual operating mechnism.
- With or without changeable operating shaft and knob and with escutcheon and/or locking facilities.
- Operating shafts of various lengths.
- Suitable for padlocking in OFF position (1 padlock, shackle diameter 5 mm).
- Utilizations catagories AC-21 A and AC-22 A.

See page 44 for the technical characteristics of switch-disconnectors Duco, type DCM.

1314106

Switch-disconnectors Duco, with fixed shaft and fixed mounted knob

■ Type DCM

- For bottom mounting, vertical connection.
- Height of switch = 91 mm from bottom of switch to top of operating shaft.

Description	Current rating	Pole configuration	Height	Part no.	Std. pack	Article no.
Switch-disconnector Duco, with fixed mounted knob	40 A	3P+sldN	91 mm	DCM 40/1	1	**1314106**
Switch-disconnector Duco, with fixed mounted knob	40 A	4P	91 mm	DCM 40/4	1	**1314110**
Switch-disconnector Duco, with fixed mounted knob	63 A	3P+sldN	91 mm	DCM 63/1	1	**1314004**
Switch-disconnector Duco, with fixed mounted knob	63 A	4P	91 mm	DCM 63/4	1	**1314006**

1314105

Switch-disconnectors Duco, without shaft and knob

■ Type DCM

- For bottom mounting, vertical connection.

Description	Current rating	Pole configuration	Part no.	Std. pack	Article no.
Switch-disconnector Duco, without shaft and knob	40 A	3P+sldN	DCM 40/1	1	**1314105**
Switch-disconnector Duco, without shaft and knob	40 A	4P	DCM 40/4	1	**1314109**
Switch-disconnector Duco, without shaft and knob	63 A	3P+sldN	DCM 63/1	1	**1314003**
Switch-disconnector Duco, without shaft and knob	63 A	4P	DCM 63/4	1	**1314016**

1314104

Switch-disconnectors Duco, without shaft and knob - horizontal connection

■ Type DCM

- For bottom mounting, horizontal connection.

Description	Current rating	Pole configuration	Part no.	Std. pack	Article no.
Switch-disconnector Duco, horizontal connection	40 A	3P+sldN	DCM 40/1	1	**1314104**
Switch-disconnector Duco, horizontal connection	40 A	4P	DCM 40/4	1	**1314108**
Switch-disconnector Duco, horizontal connection	63 A	3P+sldN	DCM 63/1	1	**1314002**
Switch-disconnector Duco, horizontal connection	63 A	4P	DCM 63/4	1	**1314015**

1314112

Switch-disconnectors Duco, without shaft and knob - front mounting

■ Type DCM

- For front mounting, vertical connection.

Description	Current rating	Pole configuration	Part no.	Std. pack	Article no.
Switch-disconnector Duco, front mounting	40 A	3P+sldN	DCM 40/1	1	**1314112***
Switch-disconnector Duco, front mounting	40 A	4P	DCM 40/4	1	**1314113***
Switch-disconnector Duco, front mounting	63 A	4P	DCM 63/4	1	**1314009***

*) Rear connection; for front connection set, see accessories.

1314111

Switch-disconnectors Duco, with shaft and C-type handle for cover mounting

■ Type DCM

- For cover mounting, vertical connection.
- Height of switch: 116 mm (height from bottom of switch to top of operating shaft/knob).

Description	Current rating	Pole configuration	Height	Part no.	Std. pack	Article no.
Switch-disconnector Duco, C-type handle for cover mounting	40 A	3P+sldN	116 mm	DCM 40/1	1	**1314107**
Switch-disconnector Duco, C-type handle for cover mounting	40 A	4P	116 mm	DCM 40/4	1	**1314111**
Switch-disconnector Duco, C-type handle for cover mounting	63 A	3P+sldN	116 mm	DCM 63/1	1	**1314005**
Switch-disconnector Duco, C-type handle for cover mounting	63 A	4P	116 mm	DCM 63/4	1	**1314007**

1314280

Operating shafts for type DCM

■ Types DCM 40 / 63

- 6 mm, square.

Description	Height DCM	Std. pack	Article no.
Operating shaft	100 mm	1	**1314280***
Operating shaft	116 mm	1	**1314279***
Operating shaft	124 mm	1	**1314994***
Operating shaft	148 mm	1	**1314995***
Operating shaft	156 mm	1	**1314278***
Operating shaft	172 mm	1	**1314281***
Operating shaft	254 mm	1	**1314375***
Operating shaft	400 mm	1	**1314372****

*) Height of switch, from bottom of switch to top of operating shaft.
**)See shaft supporting set. Can not be used in combination with connection set.

1314344

Front mounting kit for types DCM 40 / 63

Description	Std. pack	Article no.
Front mounting kit for DCM 40 / 63	1	**1314344**

1314369

Shaft supporting set for type DCM

- For switch heights greater than 270 mm.

Description	Std. pack	Article no.
Shaft supporting set	1	**1314369**

1314331

Protective covers, transparent

- For protection against accidental touching of terminals.

Description	For type	Std. pack	Article no.
Protective cover, transparent	DCM 40, DCM 63	1	**1314331**

Switch-disconnectors Dumeco, type DMM

40 - 125 A, 690 V_{ac}, bottom mounting

Product range contains 3-pole + solid N and 4-pole configurations, 690 V_{ac}.

Standards

- Complying with standards EN-IEC 60947-3.
- Certification: KEMA-KEUR approval, Lloyd's (LR), Veritas and CSA.

Technical characteristics

- Enclosure of non-tracking synthetic material.
- Compact.
- Suitable for DIN mounting rail and 45 mm sleave connection.
- Connecting contacts with pillar terminals.
- Interchangeable operating shaft.
- Independent manual operating mechnism.
- Utilizations catagories AC-23.
- With or without changeable operating shaft and knob and with escutcheon and/or locking facilities.
- Operating shafts of various lengths.
- Suitable for padlocking in OFF position (1 padlock, shackle diameter 5 mm).

See page 45 for the technical characteristics of switch-disconnectors Dumeco, type DMM.
See page 25 for knobs and handles, K-line.

1314056

Switch-disconnectors Dumeco, with operating shaft and knob, 40 - 63 A

■ Types DMM 40 / 63

- For bottom mounting, vertical connection.
- Height of switch-disconnector: 107 mm (from bottom of switch to top of handle).

Description	Current rating	Pole configuration	Height	Part no.	Std. pack	Article no.
Switch-disconnector Dumeco, with fixed mounted knob	40 A	3P+sldN	107 mm	DMM 40/1	1	**1314056**
Switch-disconnector Dumeco, with fixed mounted knob	40 A	4P	107 mm	DMM 40/4	1	**1314057**
Switch-disconnector Dumeco, with fixed mounted knob	63 A	3P+sldN	107 mm	DMM 63/1	1	**1314161**
Switch-disconnector Dumeco, with fixed mounted knob	63 A	4P	107 mm	DMM 63/4	1	**1314162**

1314052

Switch-disconnectors Dumeco, without operating shaft and knob, 40 - 63 A

■ Types DMM 40 / 63

- For bottom mounting, vertical connection.

Description	Current rating	Pole configuration	Part no.	Std. pack	Article no.
Switch-disconnector Dumeco, without shaft and knob	40 A	3P+sldN	DMM 40/1	1	**1314052**
Switch-disconnector Dumeco, without shaft and knob	40 A	4P	DMM 40/4	1	**1314053**
Switch-disconnector Dumeco, without shaft and knob	63 A	3P+sldN	DMM 63/1	1	**1314157**
Switch-disconnector Dumeco, without shaft and knob	63 A	4P	DMM 63/4	1	**1314158**

1314054

Switch disconnectors Dumeco, with operating shaft and knob, 40 - 63 A - height 172 mm

■ Types DMM 40 / 63

- For bottom mounting, vertical connection.
- Height of swith: 172 mm (from bottom of switch to top of operating shaft/knob).

Description	Current rating	Pole configuration	Height	Part no.	Std. pack	Article no.
Switch-disconnector Dumeco for cover mounting	40 A	3P+sIdN	172 mm	DMM 40/1	1	**1314054**
Switch-disconnector Dumeco for cover mounting	40 A	4P	172 mm	DMM 40/4	1	**1314055**
Switch-disconnector Dumeco for cover mounting	63 A	3P+sIdN	172 mm	DMM 63/1	1	**1314159**
Switch-disconnector Dumeco for cover mounting	63 A	4P	172 mm	DMM 63/4	1	**1314160**

1314210

Switch-disconnectors Dumeco, with operating shaft and knob, 125 A

■ Type DMM 125

- For bottom mounting, vertical connection.
- Height of switch: 107 mm (from bottom of switch to top of operating shaft).

Description	Current rating	Pole configuration	Height	Part no.	Std. pack	Article no.
Switch-disconnector Dumeco, with fixed mounted knob	125 A	3P+sIdN	107 mm	DMM 125/1	1	**1314210**
Switch-disconnector Dumeco, with fixed mounted knob	125 A	4P	107 mm	DMM 125/4	1	**1314211**

1314203

Switch-disconnectors Dumeco, without operating shaft and knob, 125 A

■ Type DMM 125

- For bottom mounting, vertical connection.

Description	Current rating	Pole configuration	Part no.	Std. pack	Article no.
Switch-disconnector Dumeco, without knob	125 A	3P+sIdN	DMM 125/1	1	**1314203**
Switch-disconnector Dumeco, without knob	125 A	4P	DMM 125/4	1	**1314204**

1314206

Switch-disconnectors Dumeco, with operating shaft and C-type handle for cover mounting , 125 A - height 172 mm

■ Type DMM 125

- For cover mounting, vertical connection.
- Height of switch: 172 mm (from bottom of switch to top of operating shaft).

Description	Current rating	Pole configuration	Height	Part no.	Std. pack	Article no.
Switch-disconnector Dumeco for cover mounting	125 A	3P+sIdN	172 mm	DMM 125/1	1	**1314206**
Switch-disconnector Dumeco for cover mounting	125 A	4P	172 mm	DMM 125/4	1	**1314207**

1314280

Operating shafts for type DMM 40 / 63 A

■ Types DMM 40 / 63

- 6 mm, square.

Description	Height DMM	Std. pack	Article no.
Operating shaft	116 mm	1	**1314280***
Operating shaft	132 mm	1	**1314279***
Operating shaft	140 mm	1	**1314994***
Operating shaft	164 mm	1	**1314995***
Operating shaft	172 mm	1	**1314278***
Operating shaft	188 mm	1	**1314281***
Operating shaft	270 mm	1	**1314375***
Operating shaft	400 mm	1	**1314371****

*) Height of switch, from bottom of switch to top of operating shaft.
**)See shaft supporting set. Can not be used in combination with connection set.


1314280

Operating shafts for type DMM 125 A

■ Type DMM 125

- 6 mm square.

Description	Height DMM	Std. pack	Article no.
Operating shaft for Dumeco	116 mm	1	**1314335***
Operating shaft for Dumeco	132 mm	1	**1314341***
Operating shaft for Dumeco	148 mm	1	**1314342***
Operating shaft for Dumeco	172 mm	1	**1314334***
Operating shaft for Dumeco	270 mm	1	**1314374****
Operating shaft for Dumeco	400 mm	1	**1314370****

*) Height of switch, from bottom of switch to top of operating shaft.
**)See shaft supporting set. Can not be used in combination with connection set.


1314300

Auxiliary switch sets for type DMM

Description	Current rating	Contact	Std. pack	Article no.
1 auxiliary switch	16 A, 380 V_{ac}	1 NO + 1 NC	1	**1314300**
2 auxiliary switches	16 A, 380 V_{ac}	2 NO + 2 NC	1	**1314301**


1314369

Shaft supporting set for Duco type DCM and Dumeco type DMM

- For switch heights greater than 270 mm.

Description	Std. pack	Article no.
Shaft supporting set	1	**1314369**


1314232

Connection set for Dumeco

■ Type DMM 125

Description	Connecting capacity	Std. pack	Article no.
Connection set for Dumeco	2 x 2.5 mm^2 up to 50 mm^2	1	**1314232***

*) Can not be used in combination with transparent cover, Article no. 1314330.


1314331

Protective covers, transparent

- For protection against accidental touching of terminals.

Description	For type	Std. pack	Article no.
Protective cover, transparent	DMM 40, DMM 63	1	**1314331**
Protective cover, transparent	DMM 125	1	**1314330***

*) Can not be used in combination with transparent cover, Article no. 1314232.

Change-over and multipole switches, type QM

40 - 100 A, 690 V_{ac}

Technical characteristics

- Compact.
- Enclosure made of non-tracking material.
- Independent manual operation for ON and OFF switching.
- Easy installation of switched or solid neutral for 4-pole version.
- Suitable for utilisation category AC-23 A.
- Designed for baseplate or DIN-rail mounting.
- Terminals are protected against inadvertent contact.

See page 48 for the technical characteristics of change-over and multipole switches, type QM.

1319807

Change-over switches, 3- and 4-pole

■ Type QM

- With operating shaft 6 mm square.

Description	Pole configuration	Thermal current I_{the}	Part no.	Std. pack	Article no.
Change-over switch	2 x 4P	40 A	QM 40/3N	1	**1319970***
Change-over switch	2 x 3P	63 A	QM 63/3	1	**1319807**
Change-over switch	2 x 4P	63 A	QM 63/3N	1	**1319915***
Change-over switch	2 x 3P	100 A	QM 100/3	1	**1319815**
Change-over switch	2 x 4P	100 A	QM 100/3N	1	**1319916***

*) 3P + switched N.

1319814

Multipole switches, 6- and 8-pole

■ Type QM

- With operating shaft 6 mm square.

Description	Pole configuration	Thermal current I_{the}	Part no.	Std. pack	Article no.
Multipole switch	6P	50 A	QM 63/6	1	**1319806**
Multipole switch	8P	50 A	QM 63/6N2	1	**1319904***
Multipole switch	6P	80 A	QM 100/6	1	**1319814**
Multipole switch	8P	80 A	QM 100/6N2	1	**1319905***

*) 6P + 2 switched N.

1319969

Connection sets (4-pole) for change-over switch

Description	Part no.	Std. pack	Article no.
Connection set for change-over switch	For type QM 40 / QM 63	1	**1319969**
Connection set for change-over switch	For type QM 100	1	**1319967**

1319832

Operating shafts, universal

Description	Shaft (square)	Length	For knob	Std. pack	Article no.
Operating shaft, universal	6 x 6 mm	180 mm	K1/K2S	1	**1319830**
Operating shaft, universal	6 x 6 mm	300 mm	K1/K2S	1	**1319831**
Operating shaft, universal	6 x 6 mm	600 mm	K1/K2S	1	**1319832**


1319833

Coupling piece for extension of operating shaft

Description	Std. pack	Article no.
Coupling piece for extension of operating shaft 6 x 6 mm	1	**1319833**


1319856

Knobs for door mounting

- The door coupling base-plate provides position indication for change-over switch (1-0-2) and multipole switch.

Description	Std. pack	Article no.
Knob, black (1-0-2) for change-over switch	1	**1319856**
Knob, black (1-0) for multipole switch	1	**1319855**
Door coupling base-plate for change-over and multipole switch	1	**1319857**


1319858

Solid neutrals for 4-pole configuration

Description	Pole configuration	For switch type	Std. pack	Article no.
Solid neutral for all versions	4P	QM 40/3, QM 63/3	1	**1319858**
Solid neutral for all versions	4P	QM 80/3, QM 100/3	1	**1319859**


1319868

Earth terminals

Description	For switch type	Std. pack	Article no.
Earth terminal	QM 40, QM 63	1	**1319868**
Earth terminal	QM 80, QM 100	1	**1319869**


1319851

Auxiliary switches

Description	Contact configuration	For switch type	Std. pack	Article no.
Auxiliary switch	1 NO + NC	QM 40, QM 63	1	**1319851**
Auxiliary switch	1 NO + NC	QM 80, QM 100	1	**1319853**


1319870

Protective covers (set) for connection terminals

- For protection of connection terminals.

Description	Pole configuration	For switch type	Std. pack	Article no.
Protective covers (set) for connection terminals	3P	QM 40/3, QM 63/3	1	**1319870**
Protective covers (set) for connection terminals	3P	QM 80/3, QM 100/3	1	**1319872**
Protective covers (set) for connection terminals	3P+N	QM 40/3N, QM 63/3N	1	**1319871**
Protective covers (set) for connection terminals	3P+N	QM 80/3, QM 100/3N	1	**1319873**

Switch-disconnectors Dumeco, type DMV

160 - 2000 A, 690 V_{ac}

Dumeco type DMV switch-disconnectors have excellent short-circuit making capacities, due to its parallel knife contacts with double break per phase.

Rated currents range from 160 A up to 2000 A.

Application area
Switches are especially capable to switch motor loads or other highly inductive loads.
Dumeco switch-disconnectors cover a broad field of application, ranging from motor emergency switches in MCC's to incoming feeders in heavy duty switchboards.

Standards
- Eaton switch-disconnectors comply with IEC 60947-3.
- Certification: KEMA-KEUR, Lloyd's (LR), Veritas and CSA.

Technical characteristics
- Dumeco type DMV switch-disconnectors are available in 3-pole, 3-pole with solid neutral and in 4-pole designed for a rated operational voltage up to 690 V_{ac}.
- Totally enclosed compact housing, made of non-tracking, heat resistent insulations material.
- Independent manual operation.
- Centrally located, interchangeable operating shaft.
- Heat resistant stainless steel contact springs.
- Parallel knife-contacts with double break per phase.
- Visible contact separation.
- Forced breaking within 90 degrees.
- Easy to install and connect in any position.
- Various lengths of operating shafts and knobs or handles with escutcheon and door coupling and locking facilities in ON and OFF switch position are available.

See page 50 for the technical characteristics of switch-disconnectors Dumeco, type DMV.
See page 25 for knobs and handles, K-line.

1814408

Switch-disconnectors Dumeco, without operating shaft and handle, 3-pole

■ Type DMV

- Including connection materials.

Description	Current rating	Pole configuration	Part no.	Std. pack	Article no.
Switch-disconnector Dumeco	160 A	3P	DMV 160N/3	1	**1814178***
Switch-disconnector Dumeco	160 A	3P	DMV 160N/3	1	**1814175****
Switch-disconnector Dumeco	160 A	3P	DMVS 160N/3	1	**1814186*****
Switch-disconnector Dumeco	250 A	3P	DMV 250N/3	1	**1814408**
Switch-disconnector Dumeco	400 A	3P	DMV 400N/3	1	**1814411**
Switch-disconnector Dumeco	630 A	3P	DMV 630N/3	1	**1814442**
Switch-disconnector Dumeco	1000 A	3P	DMV 1000N/3	1	**1814445**
Switch-disconnector Dumeco	1250 A	3P	DMV 1250N/3	1	**1814590**
Switch-disconnector Dumeco	1600 A	3P	DMV 1600N/3	1	**1814595**
Switch-disconnector Dumeco	2000 A	3P	DMV 2000N/3	1	**1814065**

*) With bolt connection.
**) With tunnel clamp.
***) With enlarged terminals.

1814409

Switch-disconnectors Dumeco, without operating shaft and handle, 3-pole + solid N

■ Type DMV

- Including connection materials.

Description	Current rating	Pole configuration	Part no.	Std. pack	Article no.
Switch-disconnector Dumeco	160 A	3P+sldN	DMV 160N/1	1	**1814177***
Switch-disconnector Dumeco	160 A	3P+sldN	DMV 160N/1	1	**1814174****
Switch-disconnector Dumeco	160 A	3P+sldN	DMVS 160N/1	1	**1814187*****
Switch-disconnector Dumeco	250 A	3P+sldN	DMV 250N/1	1	**1814409**
Switch-disconnector Dumeco	400 A	3P+sldN	DMV 400N/1	1	**1814412**
Switch-disconnector Dumeco	630 A	3P+sldN	DMV 630N/1	1	**1814443**
Switch-disconnector Dumeco	1000 A	3P+sldN	DMV 1000N/1	1	**1814446**
Switch-disconnector Dumeco	1250 A	3P+sldN	DMV 1250N/1	1	**1814591**
Switch-disconnector Dumeco	1600 A	3P+sldN	DMV 1600N/1	1	**1814596**

*) With bolt connection.
**) With tunnel clamp.
***) With enlarged terminals.

1814410

Switch-disconnectors Dumeco, without operating shaft and handle, 4-pole

■ Type DMV

- Including connection materials.

Description	Current rating	Pole configuration	Part no.	Std. pack	Article no.
Switch-disconnector Dumeco	160 A	4P	DMV 160N/4	1	**1814179***
Switch-disconnector Dumeco	160 A	4P	DMV 160N/4	1	**1814176****
Switch-disconnector Dumeco	160 A	4P	DMVS 160N/4	1	**1814188*****
Switch-disconnector Dumeco	250 A	4P	DMV 250N/4	1	**1814410**
Switch-disconnector Dumeco	400 A	4P	DMV 400N/4	1	**1814413**
Switch-disconnector Dumeco	630 A	4P	DMV 630N/4	1	**1814444**
Switch-disconnector Dumeco	1000 A	4P	DMV 1000N/4	1	**1814447**
Switch-disconnector Dumeco	1250 A	4P	DMV 1250N/4	1	**1814592**
Switch-disconnector Dumeco	1600 A	4P	DMV 1600N/4	1	**1814597**

*) With bolt connection.
**) With tunnel clamp.
***) With enlarged terminals.

1814420

Switch-disconnectors Dumeco, with operating shaft and C-type handle, 3-pole

■ Type DMV

- Including connection materials.
- C-type handle with position indication I/O.

Description	Current rating	Pole configuration	Height	Part no.	Std. pack	Article no.
Switch-disconnector Dumeco	250 A	3P	170 mm	DMV 250N/3	1	**1814420***
Switch-disconnector Dumeco	400 A	3P	170 mm	DMV 400N/3	1	**1814423***
Switch-disconnector Dumeco	630 A	3P	182 mm	DMV 630N/3	1	**1814448***
Switch-disconnector Dumeco	1000 A	3P	182 mm	DMV 1000N/3	1	**1814451***

*) Height of switch from bottom of switch to top of operating shaft.

1814421

Switch-disconnectors Dumeco, with operating shaft and C-type handle, 3-pole + solid N

■ Type DMV

- Including connection materials.
- C-type handle with position indication I/O.

Description	Current rating	Pole configuration	Height	Part no.	Std. pack	Article no.
Switch-disconnector Dumeco	250 A	3P+sldN	170 mm	DMV 250N/1	1	**1814421***
Switch-disconnector Dumeco	400 A	3P+sldN	170 mm	DMV 400N/1	1	**1814424***
Switch-disconnector Dumeco	630 A	3P+sldN	182 mm	DMV 630N/1	1	**1814449***
Switch-disconnector Dumeco	1000 A	3P+sldN	182 mm	DMV 1000N/1	1	**1814452***

*) Height of switch from bottom of switch to top of operating shaft.

1814422

Switch-disconnectors Dumeco, with operating shaft and C-type handle, 4-pole

■ Type DMV

- Including connection materials.
- C-type handle with position indication I/O.

Description	Current rating	Pole configuration	Height	Part no.	Std. pack	Article no.
Switch-disconnector Dumeco	250 A	4P	170 mm	DMV 250N/4	1	**1814422***
Switch-disconnector Dumeco	400 A	4P	170 mm	DMV 400N/4	1	**1814425***
Switch-disconnector Dumeco	630 A	4P	182 mm	DMV 630N/4	1	**1814450***
Switch-disconnector Dumeco	1000 A	4P	182 mm	DMV 1000N/4	1	**1814453***

*) Height of switch from bottom of switch to top of operating shaft.

1314230

Protective covers (transparant) for connection terminals

- Protective cover against accidental touching of terminals.
- Including connection materials.

Description	For type switch-disconnector	Std. pack	Article no.
Protective cover (transparent)	DMV 160N	1	**1314230**
Protective cover (transparent)	DMVS160N, DMV 250N and DMV 400N	1	**1314735**
Protective cover (transparent)	DMV 630N and DMV 1000N	1	**1314830**

1314398

Auxiliary switch, including connection materials

■ For type DMV 160N

- Per switch 2 pieces can be mounted.

Description	Current rating	Contacts	Std. pack	Article no.
Auxiliary switch, including connection materials	16 A, 380 V_{ac}	1 NO + 1 NC	1	**1314398**

1314736

Auxiliary switch, including connection materials

■ For types DMVS 160N and DMV 250N - 2000N

- Per switch 2 pieces can be mounted.

Description	Current rating	Contacts	Std. pack	Article no.
Auxiliary switch, including connection materials	16 A, 380 V_{ac}	1 NO + 1 NC	1	**1314736**

1314915

Connection kits

Description	For type switch-disconnector	Bolt connection	Std. pack	Article no.
Connection kit	DMV 160N	M6 x 20	1	**1314031**
Connection kit	DMVS 160N, DMV 250N	M8 x 20	1	**1314927**
Connection kit	DMV 400N	M10 x 20	1	**1314915**
Connection kit	DMV 630N	M10 x 30	1	**1314648**
Connection kit	DMV 1000N	M12 x 35	1	**1314857**

160 - 1600 A, 690 V_{ac}

Required parts for change-over and multipole mechanisms

Required parts for change-over-switch:
- 2 switch-disconnectors.
- 1 change-over driving mechanism.
- 1 through-connector set (4-pole).
- 1 operating shaft (6 mm, 10 mm or 14 mm square).
- 1 change-over handle. For 1250 A / 1600 A switch use 2 standard handles.

Required parts for multipole change-over switch:
- 2 switch-disconnectors.
- 1 multipole change-over driving mechanism.
- 1 operating shaft (6 mm, 10 mm or 14 mm square).
- 1 operating handle.

See page 56 for the technical characteristics of change-over and multipole mechanisms, type DMV.

1314884

Change-over driving mechanisms

■ For Dumeco switch-disconnectors

- Without switch-disconnectors operating shaft and handle for Dumeco switch-disconnectors.

Description	For switch-disconnector type	Std. pack	Article no.
Change-over driving mechanism	DMV 160N	1	**1314314****
Change-over driving mechanism	DMVS 160N, DMV 250N and DMV 400N	1	**1314884**
Change-over driving mechanism	DMV 630N and DMV 1000N	1	**1314682**
Change-over driving mechanism	DMV 1250N and DMV 1600N	1	**1314336***

*) Use 2 standard shafts (article no. 1050250) and 2 handles (article no. 1818062).
**) Delivered with operating shaft.

1314878

Through connector sets (4-pole) for change-over mechanism

Description	For switch-disconnector type	Pole configuration	Std. pack	Article no.
Through connector set	DMV 160N	4P	1	**1314320**
Through connector set	DMVS 160N, DMV 250N	4P	1	**1314878**
Through connector set	DMV 400N	4P	1	**1314879**
Through connector set	DMV 630N	4P	1	**1314881**
Through connector set	DMV 1000N	4P	1	**1314883**

1314039

Multipole change-over mechanisms

■ For Dumeco switch-disconnectors

- Complete with driving shaft.
- Without switches, operating shaft and handles.

Description	For type	Std. pack	Article no.
Multipole change-over driving mechanism	DMV 160N	1	**1314337**
Multipole change-over driving mechanism	DMVS 160N, DMV 250N and DMV 400N	1	**1314039**
Multipole change-over driving mechanism	DMV 630N and DMV 1000N	1	**1314040**

Switch-disconnectors Dumeco, type DMS

2500 / 3150 A, 690 V_{ac}

Switch-disconnectors Dumeco, type DMS, 2500 / 3150 A, 690V_{ac}.
3 pole, 3 pole + solid neutral, 4 pole.

Technical characteristics

- Eaton switch-disconnectors comply with IEC 60947-3.
- Independent manual operation.
- Clear ON and OFF position indication.
- Forced breaking within 90 degrees.
- Totally enclosed compact housing, of non-tracking synthetic material.
- Long creepage distances and clearances.

See page 59 for the technical characteristics of switch-disconnectors Dumeco, type DMS.

1313335

Switch-disconnectors Dumeco, type DMS

- Without handle, with operating shaft.
- Including connection material.
- When applying operation handles an extension shaft is required.
- Height of switch: 280 mm (from bottom of switch to top of operating shaft).

Description	Current rating	Pole configuration	Height	Part no.	Std. pack	Article no.
Switch-disconnectors	2500 A	3P	280 mm	DMS 2500/3	1	**1313333**
Switch-disconnectors	3150 A	3P	280 mm	DMS 3150/3	1	**1313601**
Switch-disconnectors	2500 A	3P + solid neutral	280 mm	DMS 2500/1	1	**1313335**
Switch-disconnectors	2500 A	4P	280 mm	DMS 2500/4	1	**1313334**
Switch-disconnectors	3150 A	4P	280 mm	DMS 3150/4	1	**1313447**

Universally applicable knobs and handles

In low voltage switchboards, various makes of switches and their associated knobs or handles are applied. The result is a switchboard with a wide variety of operating knobs with all sort of shapes and methods of locking. Therefore Eaton designed a range of versatile knobs and handles called K-line that can be applied **universally**:

- A-type handle: For direct mounting on switch.
- C-type handle: For mounting on cover.
- D-type handle: For mounting on hinged door.

The D-type handle can be supplied with an integrated padlock (D/P type) or cylinder lock (D/C type).

Technical characteristics

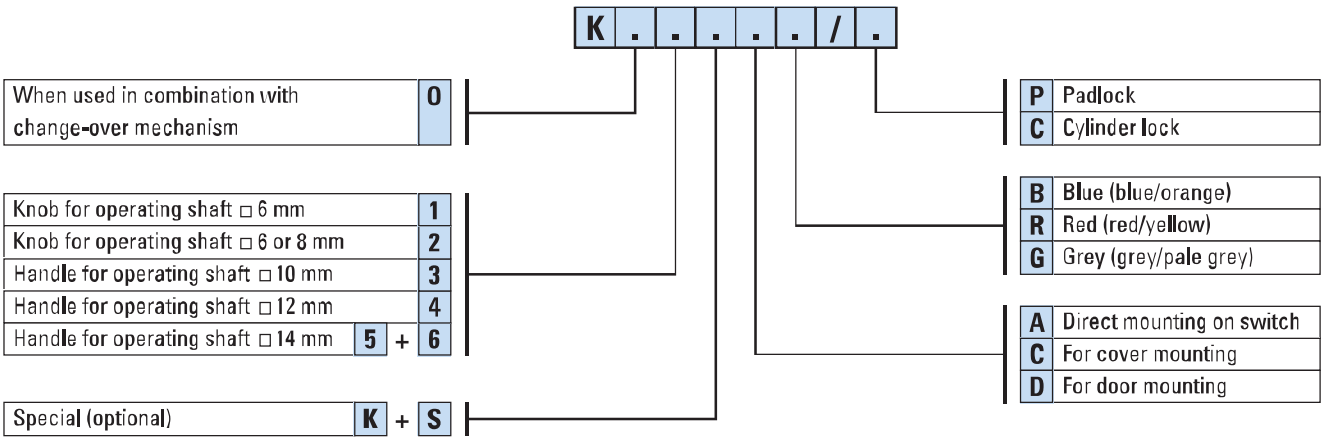
- Universal/versatile application for almost all types and makes of switches.
- Higher degree of safety is achieved because all switches are operated and locked in identical and familiar fashion.
- For shafts with a diameter of 6, 8, 10, 12 and 14 mm square.
- Modern, exceptionally compact design that complies with all market demands.
- Suitable for operating a large number and various types of switch-disconnectors and switch-disconnector fuses.
- Knobs and handles with legend plate with degree of protection up to IP 65.
- Fixed position of handle when door is open.
- Switches can be interlocked (feeder and sectionalizer switches) and the switch position fixed by means of padlocks or cylinder locks (other possibilities on request).
- Suitable for various locking applications.
- Suitable for Ex, Zone 12 applications.

Features and benefits

- Exceptionally compact design that complies with all market demands. For example the legend plate of the smallest type of knob is only 50 x 50 mm which makes it ideally suited for application in combination with ever increasing compact switches.
- By limiting the number of knobs and handles to only six different sizes, that can be applied on a wide range of switches, stocks can be kept to a minimum. In this way, costly storage space can be saved whilst the required knob or handle is always available.
- Higher degree of safety is achieved because all switches are operated and locked in identical familiar fashion.

See page 61 for the technical characteristics of knobs and handles, K-line.

K-line, type number code



1818110

Knobs and handles for direct mounting, A-type

Description	For shaft (square)	Colour	Part no.	Std. pack	Article no.
Direct mounting, A-type	6 mm	Blue	K1AB	1	**1818001**
Direct mounting, A-type	6 mm	Blue	K2SAB	1	**1818003**
Direct mounting, A-type	8 mm	Blue	K2AB	1	**1818005**
Direct mounting, A-type	10 mm	Blue	K3KAB	1	**1818110**
Direct mounting, A-type	12 mm	Blue	K4AB	1	**1818009**
Direct mounting, A-type	14 mm	Blue	K5AB	1	**1818011**
Direct mounting, A-type	14 mm	Blue	K6AB	1	**1818013**
Direct mounting, A-type	6 mm	Red	K1AR	1	**1818002**
Direct mounting, A-type	6 mm	Red	K2SAR	1	**1818004**
Direct mounting, A-type	8 mm	Red	K2AR	1	**1818006**
Direct mounting, A-type	10 mm	Red	K3KAR	1	**1818111**
Direct mounting, A-type	12 mm	Red	K4AR	1	**1818010**
Direct mounting, A-type	14 mm	Red	K5AR	1	**1818012**
Direct mounting, A-type	14 mm	Red	K6AR	1	**1818014**

1818023

Knobs and handles for cover mounting, C-type

Description	For shaft (square)	Colour	Part no.	Std. pack	Article no.
Cover mounting, C-type	6 mm	Blue	K1CB	1	**1818015**
Cover mounting, C-type	6 mm	Blue	K2SCB	1	**1818017**
Cover mounting, C-type	8 mm	Blue	K2CB	1	**1818019**
Cover mounting, C-type	10 mm	Blue	K3KCB	1	**1818068**
Cover mounting, C-type	12 mm	Blue	K4CB	1	**1818023**
Cover mounting, C-type	14 mm	Blue	K5CB	1	**1818025**
Cover mounting, C-type	14 mm	Blue	K6CB	1	**1818027**
Cover mounting, C-type	6 mm	Red/yellow	K1CR	1	**1818016**
Cover mounting, C-type	6 mm	Red/yellow	K2SCR	1	**1818018**
Cover mounting, C-type	8 mm	Red/yellow	K2CR	1	**1818020**
Cover mounting, C-type	10 mm	Red/yellow	K3KCR	1	**1818112**
Cover mounting, C-type	12 mm	Red/yellow	K4CR	1	**1818024**
Cover mounting, C-type	14 mm	Red/yellow	K5CR	1	**1818026**
Cover mounting, C-type	14 mm	Red/yellow	K6CR	1	**1818028**

1818033

Knobs and handles for door mounting, D-type, with padlock

Description	For shaft (square)	Colour	Part no.	Std. pack	Article no.
Door mounting, with padlock, D/P-type	6 mm	Blue	K1DB/P	1	**1818029**
Door mounting, with padlock, D/P-type	6 mm	Blue	K2SDB/P	1	**1818032**
Door mounting, with padlock, D/P-type	8 mm	Blue	K2DB/P	1	**1818035**
Door mounting, with padlock, D/P-type	10 mm	Blue	K3KDB/P	1	**1818113**
Door mounting, with padlock, D/P-type	12 mm	Blue	K4DB/P	1	**1818050**
Door mounting, with padlock, D/P-type	14 mm	Blue	K5DB/P	1	**1818056**
Door mounting, with padlock, D/P-type	14 mm	Blue	K6DB/P	1	**1818062***
Door mounting, with padlock, D/P-type	6 mm	Red/yellow	K1DR/P	1	**1818030**
Door mounting, with padlock, D/P-type	6 mm	Red/yellow	K2SDR/P	1	**1818033**
Door mounting, with padlock, D/P-type	8 mm	Red/yellow	K2DR/P	1	**1818036**
Door mounting, with padlock, D/P-type	10 mm	Red/yellow	K3KDR/P	1	**1818096**
Door mounting, with padlock, D/P-type	12 mm	Red/yellow	K4DR/P	1	**1818051**
Door mounting, with padlock, D/P-type	14 mm	Red/yellow	K5DR/P	1	**1818057**
Door mounting, with padlock, D/P-type	14 mm	Red/yellow	K6DR/P	1	**1818063***
Door mounting, with padlock, D/P-type	6 mm	Grey	K1DG/P	1	**1818031**
Door mounting, with padlock, D/P-type	6 mm	Grey	K2SDG/P	1	**1818034**
Door mounting, with padlock, D/P-type	8 mm	Grey	K2DG/P	1	**1818037**
Door mounting, with padlock, D/P-type	10 mm	Grey	K3DG/P	1	**1818046**
Door mounting, with padlock, D/P-type	10 mm	Grey	K3KDG/P	1	**1818069**
Door mounting, with padlock, D/P-type	12 mm	Grey	K4DG/P	1	**1818052**
Door mounting, with padlock, D/P-type	14 mm	Grey	K5DG/P	1	**1818058**
Door mounting, with padlock, D/P-type	14 mm	Grey	K6DG/P	1	**1818064***

*) Order 2 handles in combination with change-over mechanism 1250 / 1600 A.

1818114

Knobs and handles for door mounting, D-type, with cylinder lock

Description	For shaft (square)	Colour	Part no.	Std. pack	Article no.
Door mounting, with cylinder lock	6 mm	Blue	K2SDB/C	1	**1818038**
Door mounting, with cylinder lock	8 mm	Blue	K2DB/C	1	**1818041**
Door mounting, with cylinder lock	10 mm	Blue	K3KDB/C	1	**1818114**
Door mounting, with cylinder lock	12 mm	Blue	K4DB/C	1	**1818053**
Door mounting, with cylinder lock	14 mm	Blue	K2DB/C	1	**1818059**
Door mounting, with cylinder lock	14 mm	Blue	K6DB/C	1	**1818065**
Door mounting, with cylinder lock	6 mm	Red/yellow	K2SDR/C	1	**1818039**
Door mounting, with cylinder lock	8 mm	Red/yellow	K2DR/C	1	**1818042**
Door mounting, with cylinder lock	10 mm	Red/yellow	K3KDR/C	1	**1818097**
Door mounting, with cylinder lock	12 mm	Red/yellow	K4DR/C	1	**1818054**
Door mounting, with cylinder lock	14 mm	Red/yellow	K5DR/C	1	**1818060**
Door mounting, with cylinder lock	14 mm	Red/yellow	K6DR/C	1	**1818066**
Door mounting, with cylinder lock	6 mm	Grey	K2SDG/C	1	**1818040**
Door mounting, with cylinder lock	8 mm	Grey	K2DG/C	1	**1818043**
Door mounting, with cylinder lock	10 mm	Grey	K3KDG/C	1	**1818070**
Door mounting, with cylinder lock	12 mm	Grey	K4DG/C	1	**1818055**
Door mounting, with cylinder lock	14 mm	Grey	K5DG/C	1	**1818061**
Door mounting, with cylinder lock	14 mm	Grey	K6DG/C	1	**1818067**

1818116

Knobs and handles for change-over mechanisms, D-type with integrated padlock

Description	For shaft (square)	Colour	Part no.	Std. pack	Article no.
Door mounting, with integrated padlock	6 mm	Blue	KO2SDB/P	1	**1818072**
Door mounting, with integrated padlock	10 mm	Blue	KO3KDB/P	1	**1818116**
Door mounting, with integrated padlock	14 mm	Blue	KO5DB/P	1	**1818076**
Door mounting, with integrated padlock	14 mm	Blue	KO6DB/P	1	**1818078**

1818105

Conversion kits for locking in On/Off position, padlock or cylinder lock

Description	Handle type	Std. pack	Article no.
Conversion 0 - 1 locking	K1	1	**1818103**
Conversion 0 - 1 locking	K2	1	**1818104**
Conversion 0 - 1 locking	K3	1	**1818105**
Conversion 0 - 1 locking	K4, K5, K6	1	**1818106**

1314691

Operating shafts for Dumeco type DMV 160N

Description	Shaft (square)	Height	For handle	Std. pack	Article no.
Operating shaft	6 mm	116 mm	K1, K2S	1	**1314996***
Operating shaft	6 mm	132 mm	K1, K2S	1	**1314751***
Operating shaft	6 mm	148 mm	K1, K2S	1	**1314752***
Operating shaft	6 mm	172 mm	K1, K2S	1	**1314691***
Operating shaft	6 mm	270 mm	K1, K2S	1	**1314692***
Operating shaft	6 mm	400 mm	K1, K2S	1	**1314693***

*) Height of switch, from bottom of the switch to top of shaft.

1050241

Operating shafts for Dumeco types DMVS 160N, DMV 250N and 400N

Description	Shaft (square)	Height	For handle	Std. pack	Article no.
Operating shaft	10 mm	135 mm	K3	1	**1050240***
Operating shaft	10 mm	185 mm	K3	1	**1050241***
Operating shaft	10 mm	245 mm	K3	1	**1050242***
Operating shaft	10 mm	400 mm	K3	1	**1050243***

*) Height of switch, from bottom of the switch to top of shaft.

1050245

Operating shafts for Dumeco types DMV 630N and 1000N

Description	Shaft (square)	Height	For handle	Std. pack	Article no.
Operating shaft	14 mm	200 mm	K5	1	**1050244***
Operating shaft	14 mm	235 mm	K5	1	**1050245***
Operating shaft	14 mm	300 mm	K5	1	**1050246***
Operating shaft	14 mm	400 mm	K5	1	**1050247***

*) Height of switch, from bottom of the switch to top of shaft.

1050248

Operating shafts for Dumeco types DMV 1250N, 1600N and 2000N

Description	Shaft (square)	Height	For handle	Std. pack	Article no.
Operating shaft	14 mm	200 mm	K6	1	**1050248***
Operating shaft	14 mm	280 mm	K6	1	**1050249***
Operating shaft	14 mm	400 mm	K6	1	**1050250***

*) Height of switch, from bottom of the switch to top of shaft.

1050251

Operating shafts for Dumeco types DMV 250N and 400N

- In combination with change-over mechanism.

Description	Shaft (square)	Height	For handle	Std. pack	Article no.
Operating shaft	10 mm	185 mm	K3	1	**1050251***
Operating shaft	10 mm	400 mm	K3	1	**1050252***

*) Height of switch, from bottom of the switch to top of shaft.

1050253

Operating shafts for Dumeco types DMV 630N and 1000N

- In combination with change-over mechanism.

Description	Shaft (square)	Height	For handle	Std. pack	Article no.
Operating shaft	14 mm	230 mm	K5	1	**1050253***
Operating shaft	14 mm	400 mm	K5	1	**1050254***

*) Height of switch, from bottom of the switch to top of shaft.

1050256

Extension shafts for Dumeco types DMV 1250N and 1600N

Description	Shaft (square)	Height	For handle	Std. pack	Article no.
Extension shaft	14 mm	100 mm	K6	1	**1050256**
Extension shaft	14 mm	200 mm	K6	1	**1050257**

1319830

Operating shafts, universally applicable (including types QSA and QM)

Description	Shaft (square)	Length	For handle	Std. pack	Article no.
Operating shaft	6 mm	180 mm	K1/K2S	1	**1319830***
Operating shaft	6 mm	300 mm	K1/K2S	1	**1319831***
Operating shaft	6 mm	600 mm	K1/K2S	1	**1319832***
Operating shaft	8 mm	115 mm	K2	1	**1319303***
Operating shaft	8 mm	140 mm	K2	1	**1319306***
Operating shaft	8 mm	180 mm	K2	1	**1319307***
Operating shaft	8 mm	300 mm	K2	1	**1319311***
Operating shaft	8 mm	600 mm	K2	1	**1319301***
Operating shaft	10 mm	135 mm	K3	1	**1319314***
Operating shaft	10 mm	180 mm	K3	1	**1319315***
Operating shaft	10 mm	300 mm	K3	1	**1319319***
Operating shaft	10 mm	600 mm	K3	1	**1319322***
Operating shaft	12 mm	300 mm	K4	1	**1319326***
Operating shaft, tempered steel	12 mm	300 mm	K4	1	**1319328***
Operating shaft	12 mm	600 mm	K4	1	**1319329***

*) Length = length of the shaft from top to bottom.

1319332

Coupling links for extension of universal shafts (including type QSA)

Description	For shaft (square)	Std. pack	Article no.
Coupling link for extension of universal shaft (including type QSA)	6 x 6 mm	1	**1319833**
Coupling link for extension of universal shaft (including type QSA)	8 x 8 mm	1	**1319332**
Coupling link for extension of universal shaft (including type QSA)	10 x 10 mm	1	**1319334**
Coupling link for extension of universal shaft (including type QSA)	12 x 12 mm	1	**1319336**

1319398

Couplings for universal shafts (including type QSA)

Description	For shaft (square)	Part no.	Std. pack	Article no.
Shaft reducing coupling for universal shaft (including type QSA)	From 8 x 8 mm to 12 x 12 mm	4K8/4K12	1	**1319397**
Shaft reducing coupling for universal shaft (including type QSA)	From 10 x 10 mm to 12 x 12 mm	4K10/K12	1	**1319398**
Shaft reducing coupling for universal shaft (including type QSA)	From 12 x 12 mm to 14 x 14 mm	4K12/4K14	1	**1318685**

K-line, application overview

Instructions on how to select a knob or handle to configure an Eaton switch with a handle or knob.
Other K-line types on request.

Step 1: Choose the application of the handle/shaft:
a) Type A: Direct mounting.
b) Type C: Cover mounting (handle mounted directly to the shaft).
c) Type D: Door mounting (handle complete with door coupling). Select padlock or cylinder lock facility.
Step 2: Select shaft square.
Step 3: Select colour.
Step 4: Select Article no. to order.

Switch			Direct mounting Type A		Mounting on cover Type C		Mounting on hinged cover Type D/P Padlock			For mounting on hinged door Type D/C Cylinder lock		
Switch for type	Handle type	Shaft	Blue	Red	Blue	Red	Blue	Red	Grey	Blue	Red	Grey
DCM 40	K1	6 x 6 mm	1818001	1818002	1818015	1818016	1818029	1818030	1818031			
DCM 63	K1	6 x 6 mm	1818001	1818002	1818015	1818016	1818029	1818030	1818031			
DMM 40	K1	6 x 6 mm	1818001	1818002	1818015	1818016	1818029	1818030	1818031			
DMM 63	K1	6 x 6 mm	1818001	1818002	1818015	1818016	1818029	1818030	1818031			
DMM 125	K2S	6 x 6 mm	1818003	1818004	1818017	1818018	1818032	1818033	1818034	1818038	1818039	1818040
DMV 40	K1	6 x 6 mm	1818001	1818002	1818015	1818016	1818029	1818 030	1818031			
DMV 63	K1	6 x 6 mm	1818001	1818002	1818015	1818016	1818029	1818 030	1818031			
DMV 160N	K2S	6 x 6 mm	1818003	1818004	1818017	1818018	1818032	1818 033	1818034	1818038	1818039	1818040
DMVS 160N	K3	10 x 10 mm	1818110	1818111	1818068	1818112	1818113	1818096	1818069	1818114	1818097	1818070
DMV 250N	K3	10 x 10 mm	1818110	1818111	1818068	1818112	1818113	1818096	1818069	1818114	1818097	1818070
DMV 400N	K3	10 x 10 mm	1818110	1818111	1818068	1818112	1818113	1818096	1818069	1818114	1818097	1818070
DMV 630N	K5	14 x 14 mm	1818011	1818012	1818025	1818026	1818056	1818057	1818058	1818059	1818060	1818061
DMV 1000N	K5	14 x 14 mm	1818011	1818012	1818025	1818026	1818056	1818057	1818058	1818059	1818060	1818061
DMV 1250N	K6	14 x 14 mm	1818013	1818014	1818027	1818028	1818062	1818063	1818064	1818065	1818066	1818067
DMV 1600N	K6	14 x 14 mm	1818013	1818014	1818027	1818028	1818062	1818063	1818064	1818065	1818066	1818067
DMV 2000N	K6	14 x 14 mm	1818013	1818014	1818027	1818028	1818062	1818063	1818064	1818065	1818066	1818067
DMS 2500	K6	14 x 14 mm	1818013	1818014	1818027	1818028	1818062	1818063	1818065	1818065	1818066	1818067
DMS 3150	K6	14 x 14 mm	1818013	1818014	1818027	1818028	1818062	1818063	1818065	1818065	1818066	1818067
QSA 40N0	K1	6 x 6 mm	1818001	1818002	1818015	1818016	1818029	1818030	1818031			
QSA 63N0	K1	6 x 6 mm	1818001	1818002	1818015	1818016	1818029	1818030	1818031			
QSA 63N1	K2	8 x 8 mm	1818005	1818006	1818019	1818020	1818035	1818036	1818037	1818041	1818042	1818043
QSA 100N1	K2	8 x 8 mm	1818005	1818006	1818019	1818020	1818035	1818036	1818037	1818041	1818042	1818043
QSA 125N1	K2	8 x 8 mm	1818005	1818006	1818019	1818020	1818035	1818036	1818037	1818041	1818042	1818043
QSA 160N1	K2	8 x 8 mm	1818005	1818006	1818019	1818020	1818035	1818036	1818037	1818041	1818042	1818043
QSA 160N	K3	10 x 10 mm	1818110	1818111	1818068	1818112	1818113	1818096	1818069	1818114	1818097	1818070
QSA 200N	K3	10 x 10 mm	1818110	1818111	1818068	1818112	1818113	1818096	1818069	1818114	1818097	1818070
QSA 250N	K3	10 x 10 mm	1818110	1818111	1818068	1818112	1818113	1818096	1818069	1818114	1818097	1818070
QSA 315N	K3	10 x 10 mm	1818110	1818111	1818068	1818112	1818113	1818096	1818069	1818114	1818097	1818070
QSA 400N	K3	10 x 10 mm	1818110	1818111	1818068	1818112	1818113	1818096	1818069	1818114	1818097	1818070
QSA 400	K4	12 x 12 mm	1818009	1818010	1818023	1818024	1818050	1818051	1818052	1818053	1818054	1818055
QSA 630	K4	12 x 12 mm	1818009	1818010	1818023	1818024	1818050	1818051	1818052	1818053	1818054	1818055
QSA 800	K4	12 x 12 mm	1818009	1818010	1818023	1818024	1818050	1818051	1818052	1818053	1818054	1818055
Handles for change-over mechanisms												
DMV 160N	K2S	6 x 6 mm					1818072					
DMV 250N	K3	10 x 10 mm					1818116					
DMV 400N	K3	10 x 10 mm					1818116					
DMV 630N	K5	14 x 14 mm					1818076					
DMV 1000N	K5	14 x 14 mm					1818076					
DMV 1250N	K6 (2x)	14 x 14 mm					1818062					
DMV 1600N	K6 (2x)	14 x 14 mm					1818062					

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Switch-disconnector-fuses, type QSA 40 - 63 A, BS or DIN fuse-link, frame size 0, technical details

Type		QSA 40N0		QSA 63N0	
Conventional free air thermal current	I_{th}	40 A		63 A	
Conventional enclosed thermal current	I_{the}	40 A		63 A	
Rated uninterrupted current	I_u	40 A		63 A	
Rated operational voltage	U_e	690 V		690 V	
Rated insulation voltage	U_i	800 V		800 V	
Rated impulse withstand voltage	U_{imp}	8 kV		8 kV	
Rated operational current					
At U_e = 415 V AC-21A	I_e	40 A		63 A	
At U_e = 415 V AC-22A	I_e	40 A		63 A	
At U_e = 415 V AC-23A	I_e	40 A		63 A	
At U_e = 500 V AC-21A	I_e	40 A		63 A	
At U_e = 500 V AC-22A	I_e	40 A		63 A	
At U_e = 500 V AC-23A	I_e	40 A		63 A	
At U_e = 690 V AC-21A	I_e	40 A		63 A	
At U_e = 690 V AC-22A	I_e	40 A		63 A	
At U_e = 690 V AC-23A	I_e	40 A		63 A	
Rated operational power					
At U_e = 415 V AC-23A		22 kW		30 kW	
At U_e = 500 V AC-23A		25 kW		45 kW	
At U_e = 690 V AC-23A		37 kW		59 kW	
Rated conditional short-circuit current					
fuse protected short-circuit withstand/making		50 kA	100 kA	50 kA	100 kA
Max. cut-off current		14.5 kA	11 kA	14.5 kA	11 kA
Max. joule integral		140 kA^2s	18.4 kA^2s	140 kA^2s	18.4 kA^2s
Fuse-link, max.	I_n	125 A	63 A	125 A	63 A
Suitable for fuse-link size		00/A3		00/A3	
Switched neutral					
Conventional enclosed thermal current	I_{the}	40 A		63 A	
Rated operational current					
At U_e = 500 V AC-22B	I_e	40 A		63 A	
Solid neutral					
Conventional enclosed thermal current	I_{the}	40 A		63 A	
Auxiliary switch					
Rated operational current					
At U_e = 400 V AC-15	I_e	4 A		4 A	
At U_e = 660 V AC-12	I_e	10 A		10 A	
Standards		EN-IEC 60947-3			
Approvals		KEMA-KEUR, Lloyd's (LR), Veritas			

Switch-disconnector-fuses, type QSA 63 - 160 A, BS or DIN fuse-link, frame size 1, technical details

Type		QSA 63N1		QSA100N1		QSA125N1		QSA160N1	
Conventional free air thermal current	I_{th}	63 A		100 A		125 A		160 A	
Conventional enclosed thermal current	I_{the}	63 A		100 A		125 A		160 A	
Rated uninterrupted current	I_u	63 A		100 A		125 A		160 A	
Rated operational voltage	U_e	690 V		690 V		690 V		690 V	
Rated insulation voltage	U_i	1000 V		1000 V		1000 V		1000 V	
Rated impulse withstand voltage	U_{imp}	8 kV		8 kV		8 kV		8 kV	
Rated operational current[1]									
At U_e = 415 V AC-21B	I_e	63 A		100 A		125 A		160 A	
At U_e = 415 V AC-22B	I_e	63 A		100 A		125 A		160 A	
At U_e = 415 V AC-23B	I_e	63 A		100 A		125 A		125 A	
At U_e = 500 V AC-21B	I_e	63 A		100 A		125 A		160 A	
At U_e = 500 V AC-22B	I_e	63 A		100 A		125 A		160 A	
At U_e = 500 V AC-23B	I_e	63 A		100 A		125 A		125 A	
At U_e = 690 V AC-21B	I_e	63 A		100 A		125 A		160 A	
At U_e = 690 V AC-22B	I_e	63 A		100 A		125 A		160 A	
At U_e = 690 V AC-23B	I_e	63 A		100 A		125 A		160 A	
Rated operational power[2]									
At U_e = 415 V AC-23B		30 kW		55 kW		59 kW		90 kW	
At U_e = 500 V AC-23B		45 kW		59 kW		80 kW		110 kW	
At U_e = 690 V AC-23B		59 kW		90 kW		110 kW		147 kW	
Rated conditional short-circuit current fuse protected short-circuit withstand/ making		50 kA	100 kA	50 kA	100 kA	50 kA	100 kA	50 kA	100 kA
Max. cut-off current		27 kA	23 kA	27 kA	23 kA	27 kA	23 kA	27 kA	23 kA
Max. joule integral		820 kA^2s	143 kA^2s	820 kA^2s	143 kA^2s	820 kA^2s	143 kA^2s	820 kA^2s	143 kA^2s
Fuse-link, max.	I_n	315 A	160 A	315 A	160 A	315 A	160 A	315 A	160 A
Suitable for fuse-link size		00/A3		00/A4 max. Ø 30		00/B1-B2		00/B1-B2	
Switched neutral									
Conventional enclosed thermal current	I_{the}	63 A		100 A		125 A		160 A	
Rated operational current									
At U_e = 500 V AC-22B	I_e	63 A		100 A		125 A		160 A	
Solid neutral									
Conventional enclosed thermal current	I_{the}	63 A		100 A		125 A		160 A	
Auxiliary switch									
Rated operational current									
At U_e = 400 V AC-15	I_e	4 A		4 A		4 A		4 A	
At U_e = 660 V AC-12	I_e	10 A		10 A		10 A		10 A	
Standards		EN-IEC 60947-3							
Approvals		KEMA-KEUR, Lloyd's (LR), Veritas							

[1] Rated operational current at 220 V_{dc} and 440 V_{dc} on request.
[2] Rated capacitor power on request.

Type		QSA 160N		QSA 200N		QSA 250N		QSA 315N		QSA 400N	
Conventional free air thermal current	I_{th}	160 A		200 A		250 A		315 A		400 A	
Conventional enclosed thermal current	I_{the}	160 A		200 A		250 A		315 A		355 A[1]	
Rated uninterrupted current	I_u	160 A		200 A		250 A		315 A		355/400 A	
Rated operational voltage	U_e	690 V		690 V		690 V		690 V		690 V	
Rated insulation voltage	U_i	1000 V		1000 V		1000 V		1000 V		1000 V	
Rated impulse withstand voltage	U_{imp}	12 kV		12 kV		12 kV		12 kV		12 kV	
Rated operational current[2]											
At U_e = 415 V AC-21B	I_e	160 A		200 A		250 A		315 A		400 A	
At U_e = 415 V AC-22B	I_e	160 A		200 A		250 A		315 A		400 A	
At U_e = 415 V AC-23B	I_e	160 A		200 A		250 A		315 A		400 A	
At U_e = 500 V AC-21B	I_e	160 A		200 A		250 A		315 A		400 A	
At U_e = 500 V AC-22B	I_e	160 A		200 A		250 A		315 A		400 A	
At U_e = 500 V AC-23B	I_e	160 A		200 A		250 A		315 A		400 A	
At U_e = 690 V AC-21B	I_e	160 A		200 A		250 A		315 A		400 A	
At U_e = 690 V AC-22B	I_e	160 A		200 A		250 A		315 A		400 A	
At U_e = 690 V AC-23B	I_e	160 A		200 A		250 A		315 A		400 A	
Rated operational power[3]											
At U_e = 415 V AC-23B		90 kW		110 kW		147 kW		184 kW		220 kW	
At U_e = 500 V AC-23B		110 kW		140 kW		160 kW		220 kW		257 kW	
At U_e = 690 V AC-23B		157 kW		184 kW		220 kW		295 kW		375 kW	
Rated making and breaking capacity in accordance with CSA											
At U_n = 600 V		-		200 hp		-		-		300 hp	
At U_n = 600 V	I_n	-		200 A		-		-		260 A	
Rated conditional short-circuit current fuse protected short-circuit withstand/making		50 kA	100 kA	50 kA	100 kA	50 kA	100 kA	50 kA	100 kA	50 kA	100 kA
Max. cut-off current		57 kA	43 kA	57 kA	43 kA	57 kA	43 kA	57 kA	43 kA	57 kA	43 kA
Max. joule integral		13,000 kA^2s	986 kA^2s	13,000 kA^2s	986 kA^2s	13,000 kA^2s	986 kA^2s	13,000 kA^2s	986 kA^2s	13,000 kA^2s	986 kA^2s
Fuse-link, max.	I_n	630 A	400 A	630 A	400 A	630 A	400 A	630 A	400 A	630 A	400 A
Suitable for fuse-link size		00/B1-B2		1-2/B1-B2		1-2/B1-B4		1-2/B1-B4		1-2/B1-B4	
Switched neutral Conventional enclosed thermal current	I_{the}	160 A		200 A		250 A		315 A		400 A	
Rated operational current At U_e = 500 V AC-22B	I_e	160 A		200 A		250 A		315 A		400 A	
Solid neutral Conventional enclosed thermal current	I_{the}	160 A		200 A		250 A		315 A		400 A	
Auxiliary switch Rated operational current											
At U_e = 400 V AC-15	I_e	4 A		4 A		4 A		4 A		4 A	
At U_e = 660 V AC-12	I_e	10 A		10 A		10 A		10 A		10 A	
Standards		EN-IEC 60947-3, CSA C22.2 no. 14									
Approvals		KEMA-KEUR, Lloyd's (LR), Veritas, CSA									

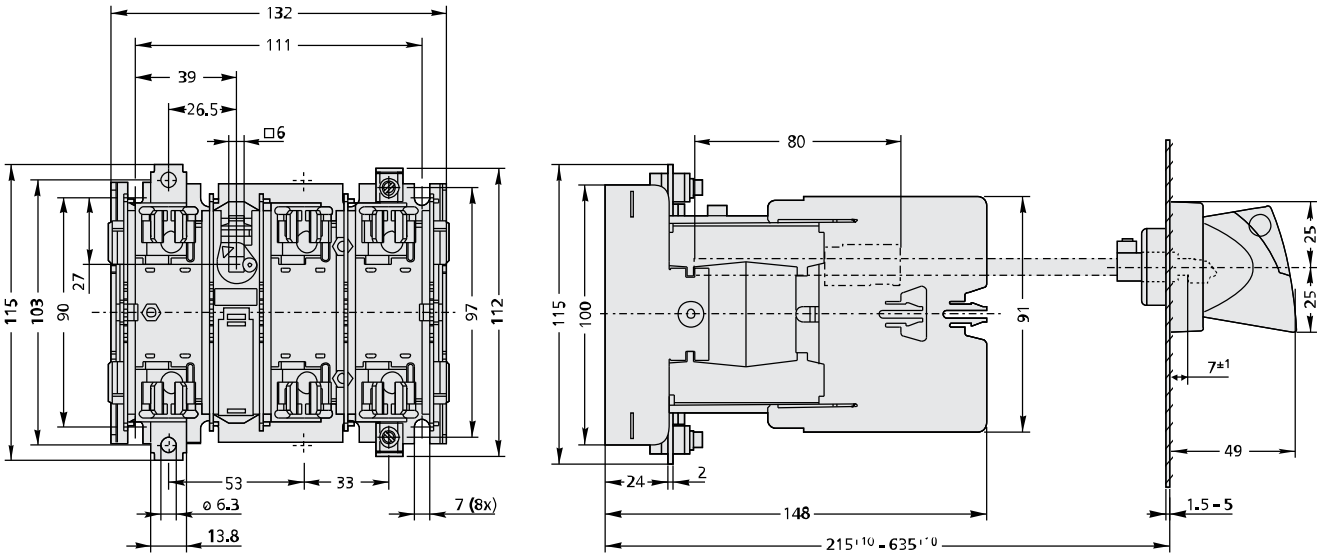
1) 400 A in ventilated enclosure.
2) Rated operational current at 220 V_{dc} and 440 V_{dc} on request.
3) Rated capacitor power on request.

Switch-disconnector-fuses, type QSA 400 - 800 A, BS or DIN fuse-link, frame size 3, technical details

Type		QSA 400		QSA 630		QSA 800	
Conventional free air thermal current	I_{th}	400 A		630 A		800 A	
Conventional enclosed thermal current	I_{the}	400 A		630 A		800 A	
Rated uninterrupted current	I_u	400 A		630 A		800 A	
Rated operational voltage	U_e	690 V		690 V		690 V	
Rated insulation voltage	U_i	1000 V		1000 V		1000 V	
Rated impulse withstand voltage	U_{imp}	12 kV		12 kV		12 kV	
Rated operational current[1]							
At U_e = 415 V AC-21B	I_e	400 A		630 A		800 A	
At U_e = 415 V AC-22B	I_e	400 A		630 A		800 A	
At U_e = 415 V AC-23B	I_e	400 A		630 A		800 A	
At U_e = 500 V AC-21B	I_e	400 A		630 A		800 A	
At U_e = 500 V AC-22B	I_e	400 A		630 A		800 A	
At U_e = 500 V AC-23B	I_e	400 A		630 A		800 A	
At U_e = 690 V AC-21B	I_e	400 A		630 A		800 A	
At U_e = 690 V AC-22B	I_e	400 A		630 A		800 A	
At U_e = 690 V AC-23B	I_e	400 A		630 A		800 A	
Rated operational power[2]							
At U_e = 415 V AC-23B		220 kW		375 kW		500 kW	
At U_e = 500 V AC-23B		257 kW		475 kW		560 kW	
At U_e = 690 V AC-23B		375 kW		630 kW		900 kW	
Rated making and breaking capacity in accordance with CSA							
At U_n = 600 V		-		400 hp		-	
At U_n = 600 V	I_n	-		400 A		-	
Rated conditional short-circuit current fuse protected short-circuit withstand/making		50 kA	100 kA	50 kA	100 kA	50 kA	100 kA
Max. cut-off current		64 kA	62.5 kA	64 kA	62.5 kA	65 kA	62.5 kA
Max. joule integral		13,000 kA^2s	3700 kA^2s	13,000 kA^2s	3700 kA^2s	15,000 kA^2s	3700 kA^2s
Fuse-link, max.	I_n	800 A	630 A	800 A	630 A	800 A	630 A
Suitable for fuse-link size		3/C1-C3		3/C1-C3		C1-C3	
Switched neutral Conventional enclosed thermal current	I_{the}	400 A		630 A		630 A	
Rated operational current							
At U_e = 500 V AC-22B	I_e	400 A		630 A		630 A	
Solid neutral Conventional enclosed thermal current	I_{the}	400 A		630 A		800 A	
Auxiliary switch							
Rated operational current							
At U_e = 400 V AC-15	I_e	4 A		4 A		4 A	
At U_e = 660 V AC-12	I_e	10 A		10 A		10 A	
Standards		EN-IEC 60947-3, CSA C22.2 no. 14					
Approvals		KEMA-KEUR, Lloyd's (LR), Veritas, CSA					

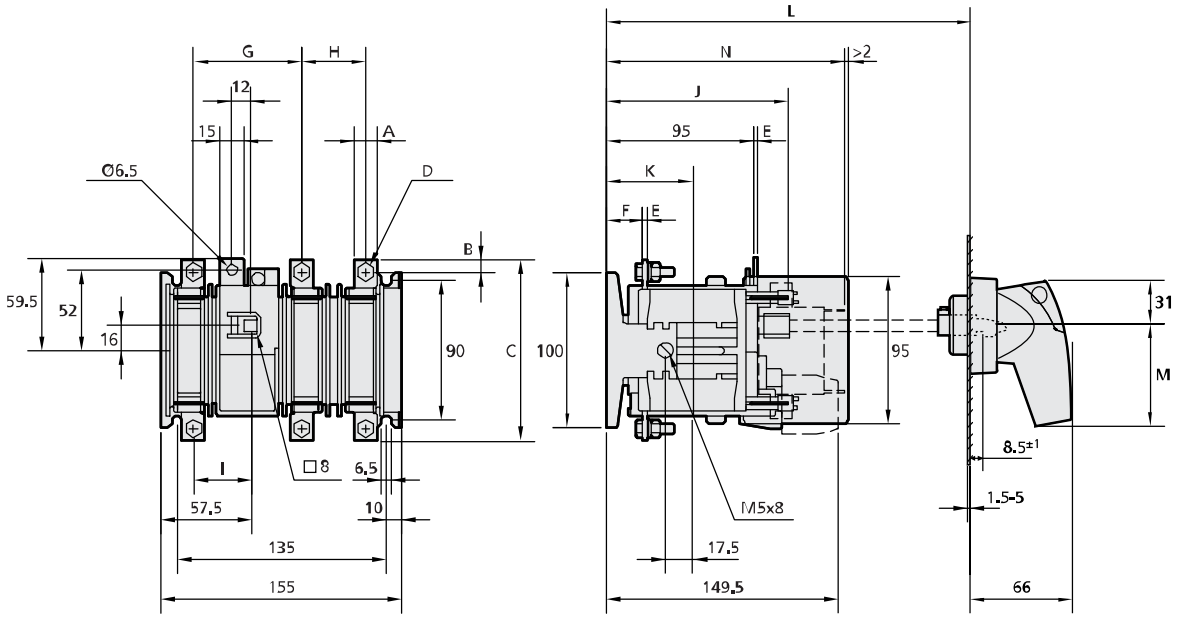
1) Rated operational current at 220 V_{dc} and 440 V_{dc} on request.
2) Rated capacitor power on request.

Switch-disconnector-fuses, type QSA 40 - 63 A, DIN fuse-link, frame size 0, dimensional drawings



Type QSA 40N0 - QSA 63N0 (DIN).

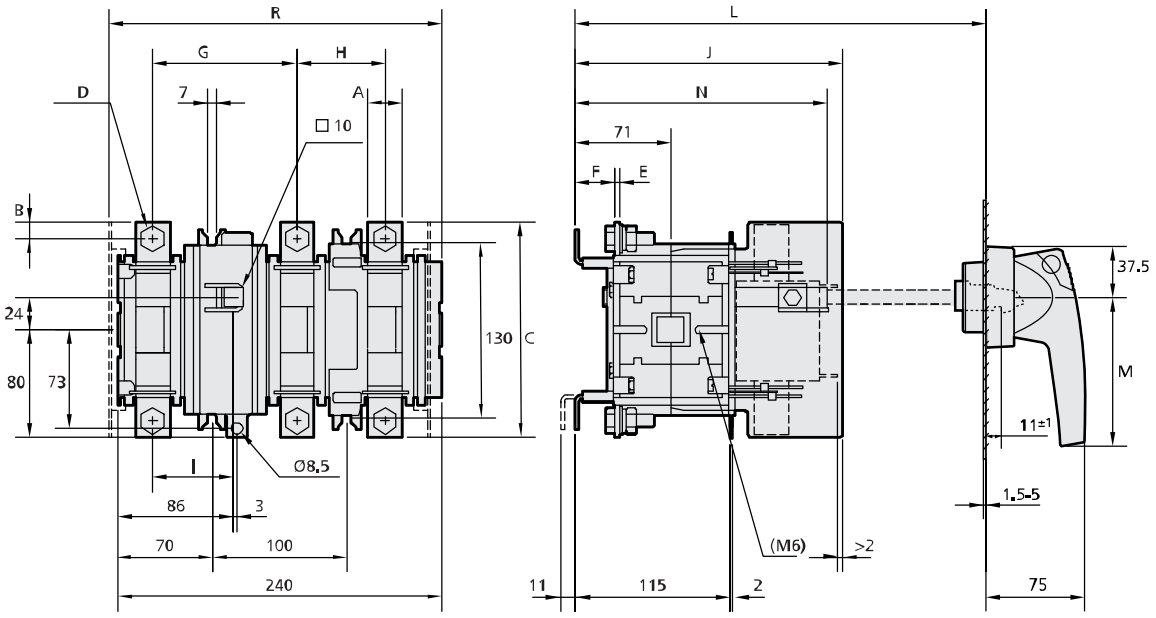
Switch-disconnector-fuses, type QSA 63 - 160 A, DIN fuse-link, frame size 1, dimensional drawings



Type QSA 63N1 - QSA 160N1 (DIN).

Type	A	B	C	D	E	F	G	H	I	J	K	L	M	N
QSA 63N1-00	12	6	100	M5	2	24	72	38.5	38	118	55.5	200^{+10} - 620^{+10}	62	155.5
QSA 100N1-00	15	7.5	116	M6	3	23	70	40.5	37	118	55.5	200^{+10} - 620^{+10}	62	155.5
QSA 125N1-00	15	7.5	116	M6	3	23	70	40.5	37	118	55.5	200^{+10} - 620^{+10}	62	155.5
QSA 160N1-00	20	10	127	M8	3	23	65	45.5	35	118	55.5	200^{+10} - 620^{+10}	62	163

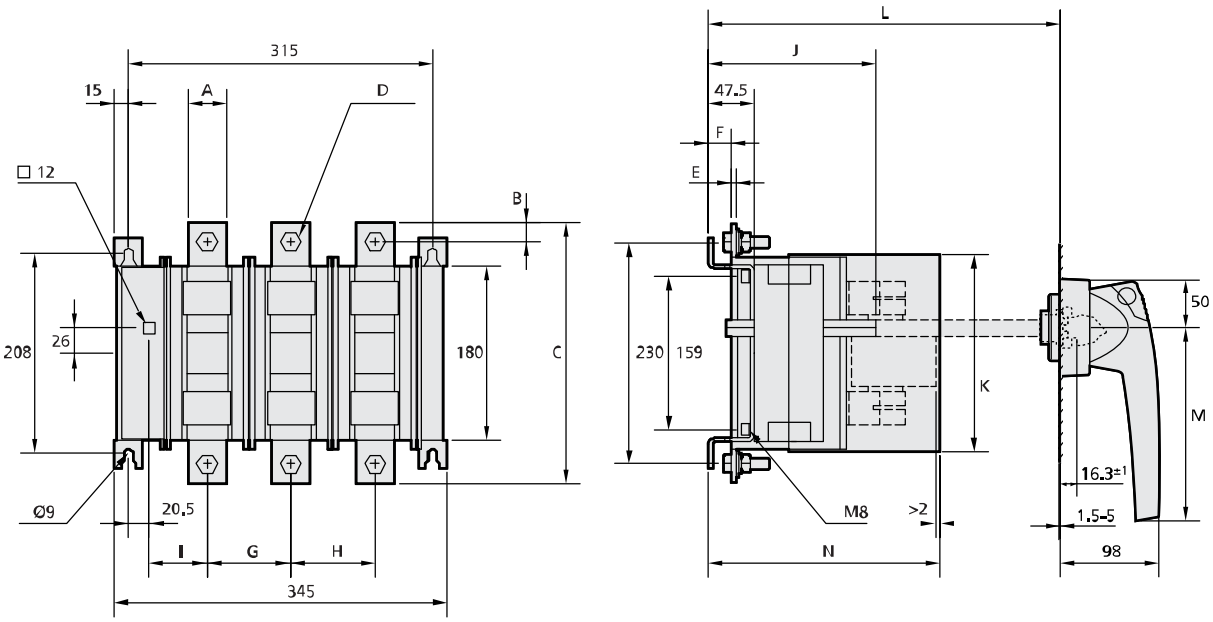
Switch-disconnector-fuses, type QSA 160 - 400 A, DIN fuse-link, frame size 2, dimensional drawings



Type QSA 160N - QSA 400N (DIN).

Type	A	B	C	D	E	F	G	H	I	J	K	L	M	N	R
QSA 160N-00	20	10	146	M8	4	33	107	65	62	188	150	205^{+10}-625^{+10}	140	178	-
QSA 200N-2	25	12.5	160	M10	4	29	107	65	59.5	198	160	205^{+10}-625^{+10}	140	188	246.5
QSA 250N-2	25	12.5	160	M10	4	29	107	65	59.5	198	160	205^{+10}-625^{+10}	140	188	246.5
QSA 315N-2	25	12.5	160	M10	6	27	107	65	59.5	198	160	205^{+10}-625^{+10}	140	188	246.5
QSA 400N-2	25	12.5	160	M10	6	27	107	65	59.5	198	160	205^{+10}-625^{+10}	140	188	246.5

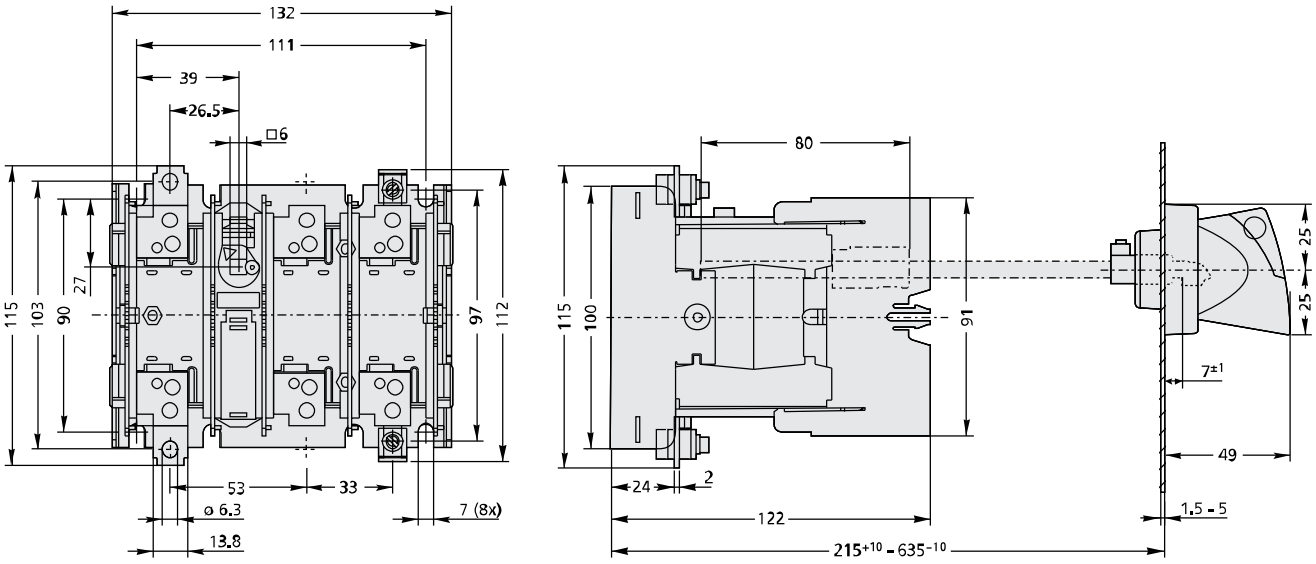
Switch-disconnector-fuses, type QSA 400 - 630 A, DIN fuse-link, frame size 3, dimensional drawings



Type QSA 400 - QSA 630 (DIN).

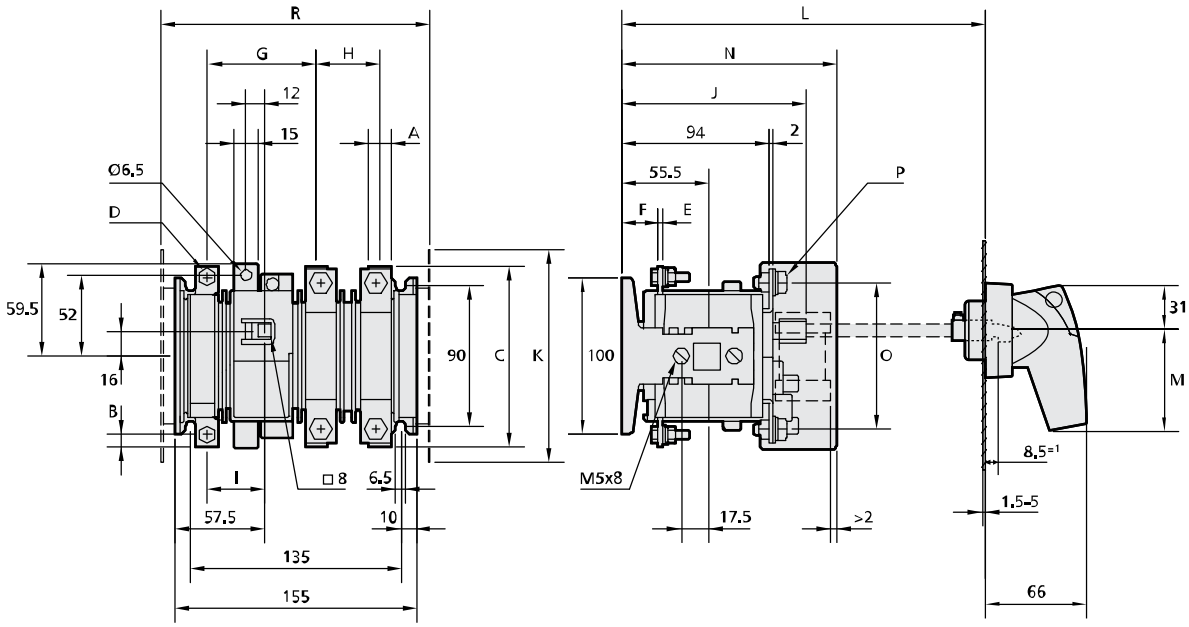
Type	A	B	C	D	E	F	G	H	I	J	K	L	M	N
QSA 400-3	40	20	270	M12	6	23	87	87	60	173	205	320^{+10}-620^{+10}	200	240
QSA 630-3	40	20	270	M12	6	23	87	87	60	173	205	320^{+10}-620^{+10}	200	240

Switch-disconnector-fuses, type QSA 40 - 63 A, BS fuse-link, frame size 0, dimensional drawings



Type QSA 40N0 - QSA 63N0 (BS).

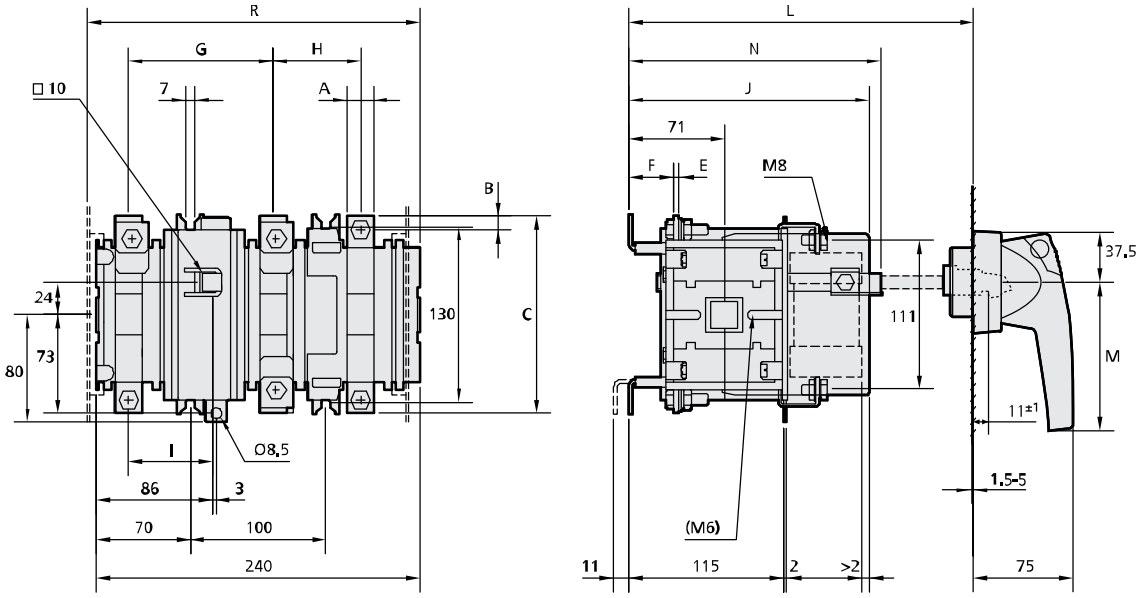
Switch-disconnector-fuses, type QSA 63 - 160 A, BS fuse-link, frame size 1, dimensional drawings



Type QSA 63N1 - QSA 160N1 (BS).

Type	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R
QSA 63N1-A3	12	6	100	M5	2	24	72	38.5	38	118	95	200^{+10}-620^{+10}	62	155.5	73	M5	-
QSA 100N1-A4	15	7.5	116	M6	3	23	70	40.5	37	118	120	200^{+10}-620^{+10}	62	137.5	94	M8	-
QSA 125N1-B2	15	7.5	116	M6	3	23	70	40.5	37	118	150	200^{+10}-620^{+10}	62	137.5	112	M8	184
QSA 160N1-B2	20	10	127	M8	3	23	65	45.5	35	118	150	200^{+10}-620^{+10}	62	137.5	112	M8	184

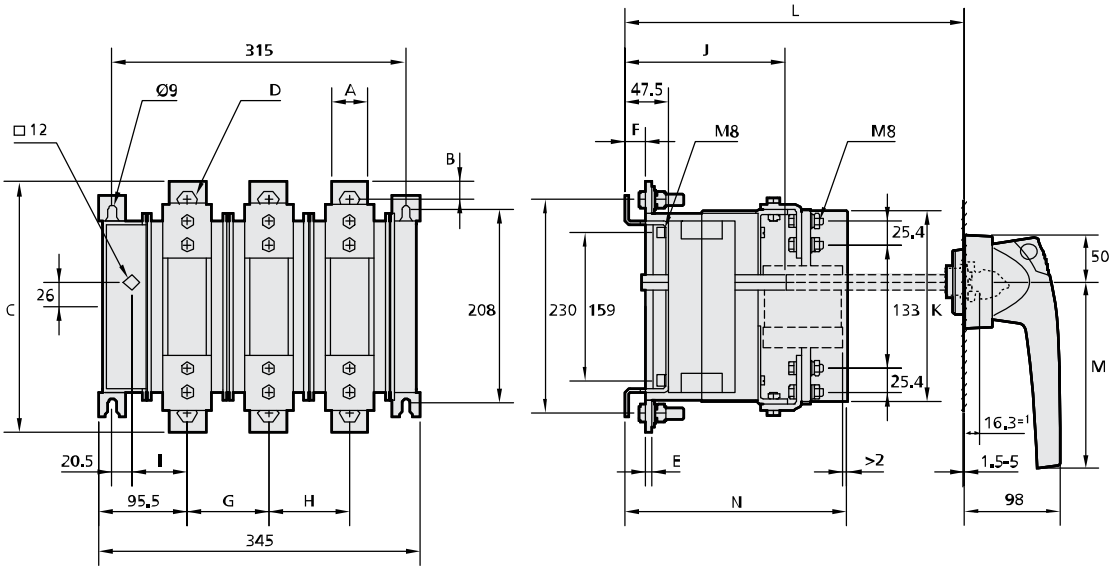
Switch-disconnector-fuses, type QSA 160 - 400 A, BS fuse-link, frame size 2, dimensional drawings



Type QSA 160N - QSA 400N (BS).

Type	A	B	C	D	E	F	G	H	I	J	K	L	M	N	R
QSA 160N-B2	20	10	146	M8	4	33	107	65	62	188	120	205^{+15}-625^{+15}	140	178	-
QSA 200N-B2	20	10	146	M8	4	33	107	65	62	188	120	205^{+15}-625^{+15}	140	178	-
QSA 250N-B4	25	12.5	160	M10	4	29	107	65	59.5	188	160	205^{+15}-625^{+15}	140	198	246.5
QSA 315N-B4	25	12.5	160	M10	6	27	107	65	59.5	188	160	205^{+15}-625^{+15}	140	198	246.5
QSA 400N-B4	25	12.5	160	M10	6	27	107	65	59.5	188	160	205^{+15}-625^{+15}	140	198	246.5

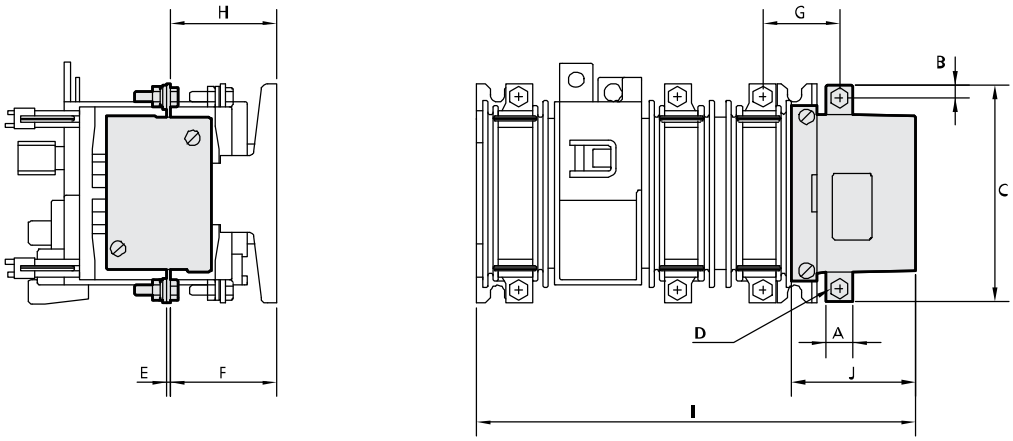
Switch-disconnector-fuses, type QSA 400 - 800 A, BS fuse-link, frame size 3, dimensional drawings



Type QSA 400 C3/3 - QSA 630 C3/3 - QSA 800 C3/3 (BS).

Type	A	B	C	D	E	F	G	H	I	J	K	L	M	N
QSA 400-C3/3	40	20	270	M12	6	23	87	87	60	173	205	320^{+10}-620^{+10}	200	240
QSA 630-C3/3	40	20	270	M12	6	23	87	87	60	173	205	320^{+10}-620^{+10}	200	240
QSA 800-C3/3	40	20	270	M12	6	23	87	87	60	173	205	320^{+10}-620^{+10}	200	240

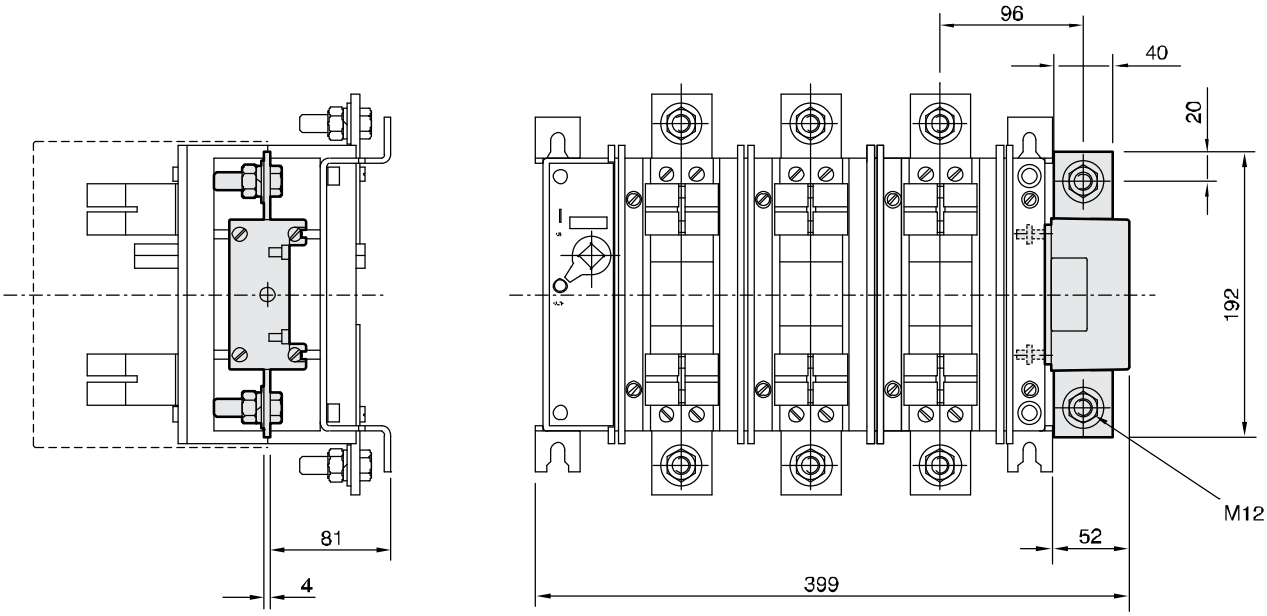
Switch-disconnector-fuses, type QSA 40 - 400 A with switched neutral, BS or DIN fuse-link, dimensional drawings



Type QSA 40N0 - QSA 400N.

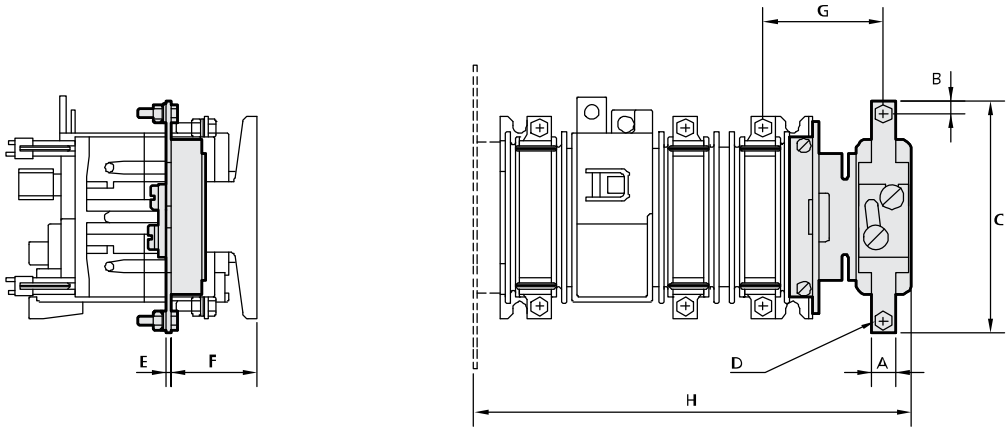
Type	A	B	C	D	E	F	G	H	I	J
QSA 40N0/QSA63NO	12	6	99	M5	4.5	48	35	45.5	177	45
QSA 63N1	12	6	99	M5	2	48.5	36	48.5	200	45
QSA 100N1	15	7.5	105	M6	4.5	48.5	33.5	46	200	45
QSA 125N1	15	7.5	105	M6	4.5	48.5	33.5	46	200	45
QSA 160N1	20	10	115	M8	4.5	48.5	32	46	200	45
QSA 160N	20	10	146	M8	4	69	53	69	299	53
QSA 200N	20	10	146	M8	4	69	53	69	299	53
QSA 250N	25	12.5	160	M10	4	69	55.5	69	299	53
QSA 315N	25	12.5	160	M10	4	69	55.5	69	299	53
QSA 400N	25	12.5	160	M10	4	69	55.5	69	299	53

Switch-disconnector-fuses, type QSA 400 - 800 A with switched neutral, BS or DIN fuse-link, dimensional drawings



Type QSA 400 - QSA 630 (DIN) and QSA 400 - QSA 800 (BS).

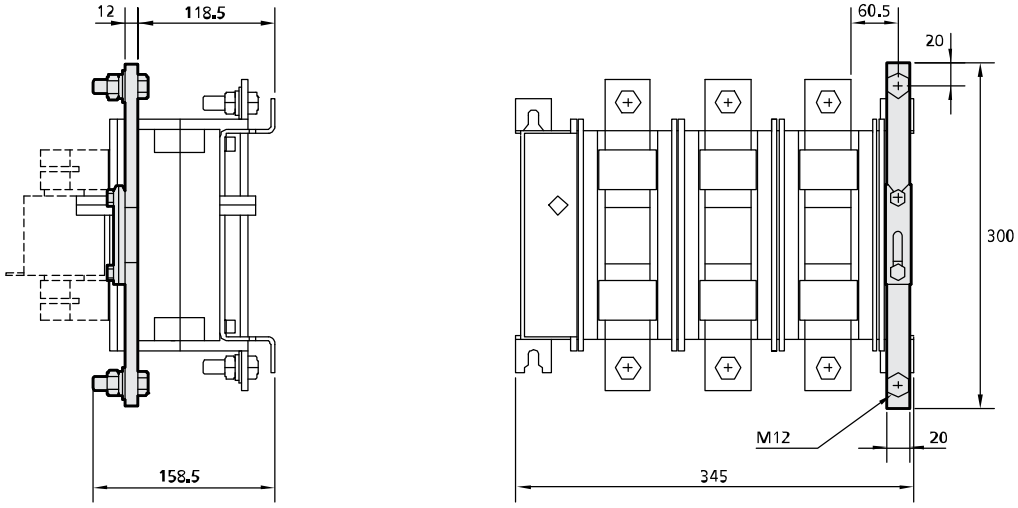
Switch-disconnector-fuses, type QSA 40 - 400 A with solid neutral, BS or DIN fuse-link, dimensional drawings



Type QSA 40N0 - QSA 400N.

Type	A	B	C	D	E	F	G	H
QSA 40N0/QSA63N0	12	6	114	M5	2.5	44	55	177
QSA 63N1	12	6	114	M5	2.5	41.5	57	203
QSA 100N1	15	7.5	116.5	M6	3	41.5	56	203
QSA 125N1	15	7.5	116.5	M6	3	41.5	56	216
QSA 160N1	20	10	127	M8	3	41.5	54	216
QSA 160N	20	10	146	M8	4	70	79	296.5
QSA 200N	20	10	146	M8	4	70	79	296.5
QSA 250N	25	12.5	160	M10	4	70	76.5	296.5
QSA 315N	25	12.5	160	M10	4	70	76.5	296.5
QSA 400N	25	12.5	160	M10	4	70	76.5	296.5

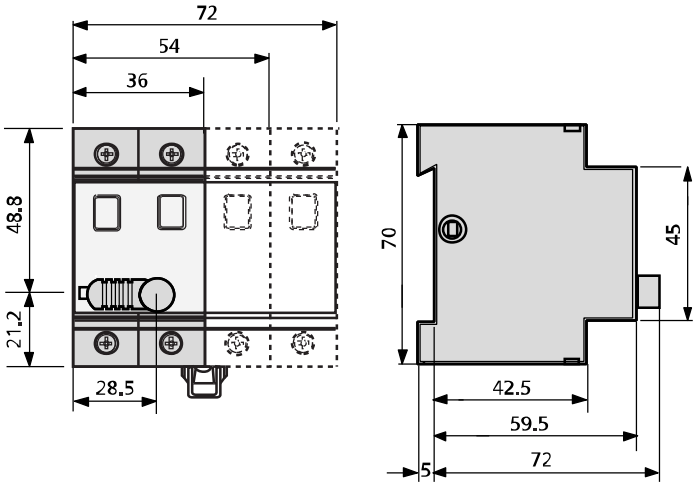
Switch-disconnector-fuses, type QSA 400 - 800 A with solid neutral, BS or DIN fuse-link, dimensional drawings



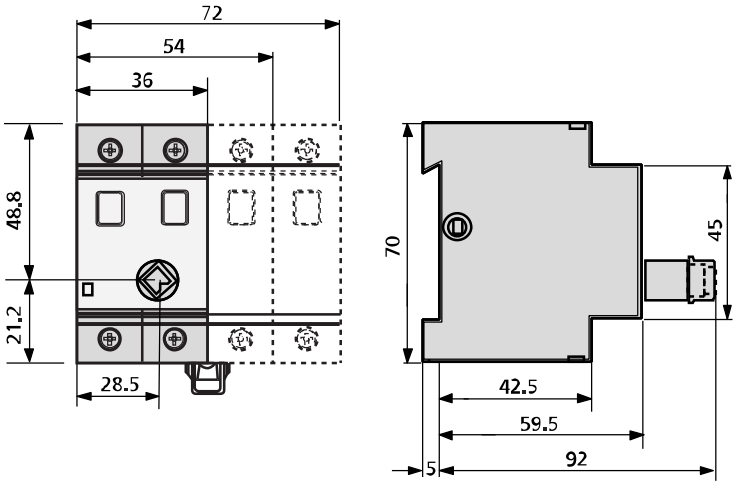
Type QSA 400 - QSA 630 (DIN) and QSA 400 - QSA 800 (BS).

Type	A	B	C	D	E	F	G	H	I
QSA 400	20	20	300	M12	12	118.5	60.5	158.5	345
QSA 630	20	20	300	M12	12	118.5	60.5	158.5	345
QSA 800	20	20	300	M12	12	118.5	60.5	158.5	345

Switch-disconnectors Duco, type DMV, dimensional drawings



Duco, type DMV 40 - DMV 63, with fixed knob.



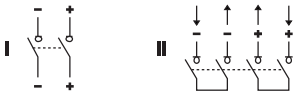
Duco, type DMV 40 - DMV 63, without knob.

Switch-disconnectors Duco, type DMV, technical details

Type		DMV 40	DMV 63
Conventional free air thermal current	I_{th}	40 A	63 A
Conventional enclosed thermal current	I_{the}	40 A	63 A
Rated uninterrupted current	I_u	40 A	63 A
Rated operational voltage	U_e	690 V	690 V
Rated insulation voltage	U_i	690 V	690 V
Rated impuls withstand voltage	U_{imp}	6 kV	6 kV
Rated operational current			
At U_e = 230 V[1] AC-21A	I_e	40 A	63 A
At U_e = 400 V[1] AC-21A	I_e	40 A	63 A
At U_e = 415 V AC-21A	I_e	40 A	63 A
At U_e = 500 V AC-21A	I_e	40 A	63 A
At U_e = 690 V AC-21A	I_e	40 A	63 A
At U_e = 230 V[1] AC-22A	I_e	40 A	63 A
At U_e = 400 V[1] AC-22A	I_e	40 A	63 A
At U_e = 415 V AC-22A	I_e	40 A	63 A
At U_e = 500 V AC-22A	I_e	40 A	63 A
At U_e = 690 V AC-22A	I_e	40 A	63 A
Rated operational power			
At U_e = 230 V[1] AC-23A		5.5 kW	7.5 kW
At U_e = 415 V AC-23A		22 kW	30 kW
At U_e = 500 V AC-23A		25 kW	40 kW
At U_e = 690 V AC-23A		37 kW	59 kW
Rated short-time withstand current	I_{cw}	756 A - 0.75 s	756 A - 0.75 s
Rated short-circuit making capacity	I_{cm}	2.2 kA	2.2 kA
Rated conditional short-circuit current fuse protected short-circuit withstand/making		100 kA	100 kA
Cut-off current	max.	13 kA	13 kA
Joule integral	max.	100 kA^2s	100 kA^2s
Fuse-link	I_n	80 A	80 A
Standards		IEC 60947-3	
Certification		KEMA-KEUR, Lloyd's (LR), Veritas	

[1] 2P version.

Switch-disconnectors Duco, type DMV, direct current details

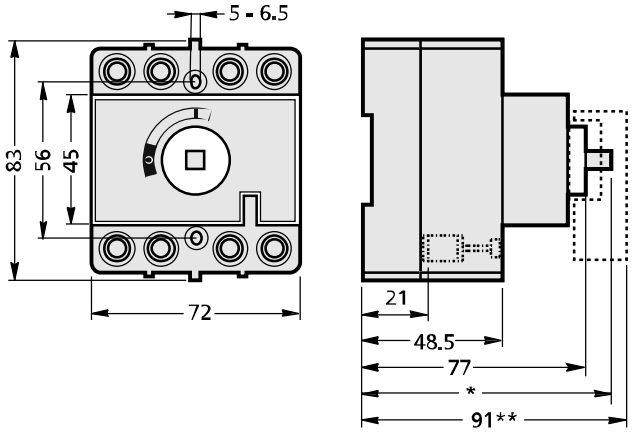
Type		DMV 40	DMV 63	Amount of poles
Rated operational current in acc. with IEC 60408 / IEC 60947-3				
At U_e = 110 V DC-21 (scheme I)	I_e	40 A	63 A	2
At U_e = 110 V DC-22 (scheme I)	I_e	40 A	63 A	2
At U_e = 110 V DC-23 (scheme I)	I_e	40 A	63 A	2
At U_e = 220 V DC-21 (scheme II)	I_e	40 A	63 A	4
At U_e = 220 V DC-22 (scheme II)	I_e	40 A	63 A	4
At U_e = 220 V DC-23 (scheme II)	I_e	40 A	63 A	4
Connection diagram DC application				
Standards		EN-IEC 60947-3		
Certification		KEMA-KEUR		

Switch-disconnectors Duco, type DMV, connection capacity

Type	DMV 40		DMV 63	
Copper connector	**Cross section**	**Tightening torque**	**Cross section**	**Tightening torque**
Solid	2.5 - 16 mm^2	2 Nm	2.5 - 16 mm^2	2 Nm
Stranded	2.5 - 25 mm^2	2 Nm	2.5 - 25 mm^2	2 Nm
Flexible	4 - 16 mm^2	2 Nm	4 - 16 mm^2	2 Nm

Switch-disconnectors Duco, type DCM, technical characteristics

Switch-disconnectors Duco, type DCM, dimensional drawings



Duco, types DCM 40 and DCM 63.

*) Dependant on the applied operating shaft.

**) Doesn't apply to switch-disconnectors with fixed shaft and knob.

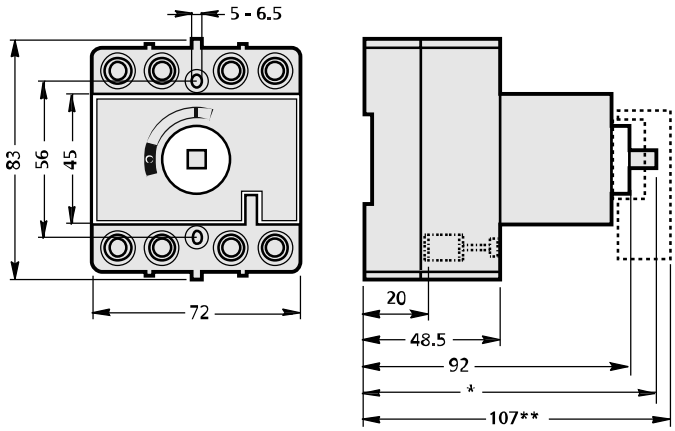
Switch-disconnectors Duco, type DCM, technical details

Type		DCM 40	DCM 63
Conventional free air thermal current	I_{th}	40 A	63 A
Conventional enclosed thermal current	I_{the}	40 A	63 A
Rated uninterrupted current	I_u	40 A	63 A
Rated operational voltage	U_e	415 V	415 V
Rated insulation voltage	U_i	690 V	690 V
Rated impulse withstand voltage	U_{imp}	6 kV	6 kV
Rated operational current			
At U_e = 415 V AC-21A	I_e	40 A	63 A
At U_e = 415 V AC-22A	I_e	40 A	63 A
Rated operational power			
At U_n = 300 V	I_n	40 A	63 A
Rated short-time withstand current	I_{cw}	1 kA-1 s	1.5 kA-1 s
Rated short-circuit withstand making	I_{cm}	1.4 kA	2.2 kA
Rated conditional short-circuit current fuse protected short circuit withstand/making		50 kA	50 kA
Cut-off current	max.	7 kA	7 kA
Joule integral	max.	12 kA^2s	12 kA^2s
Fuse-link	I_n	50 A	50 A
Auxiliary switch			
Rated operational current			
At U_e = 220 V AC-11	I_e	2 A	2 A
At U_e = 220 V DC-11	I_e	0.5 A	0.5 A
At U_e = 380 V AC-11	I_e	1.5 A	1.5 A
Standards		EN-IEC 60947-3	
Certification		KEMA-KEUR, Lloyd's (LR), Veritas, CSA	

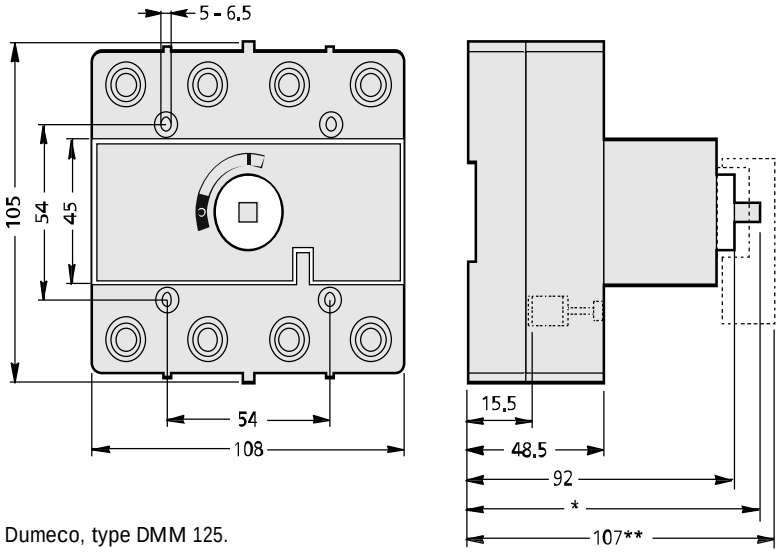
Switch-disconnectors Duco, type DCM, connection capacity

Type	DCM 40		DCM 63	
Coppor conductor	Cross section	Tightening torque	Cross section	Tightening torque
Solid	2.5 - 16 mm^2	3 Nm	2.5 - 16 mm^2	3 Nm
Stranded	1.5 - 25 mm^2	3 Nm	1.5 - 25 mm^2	3 Nm
Flexible	1.5 - 25 mm^2	3 Nm	1.5 - 25 mm^2	3 Nm

Switch-disconnectors Dumeco, type DMM, dimensional drawings



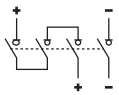
Dumeco, types DMM 40 and DMM 63.



Dumeco, type DMM 125.

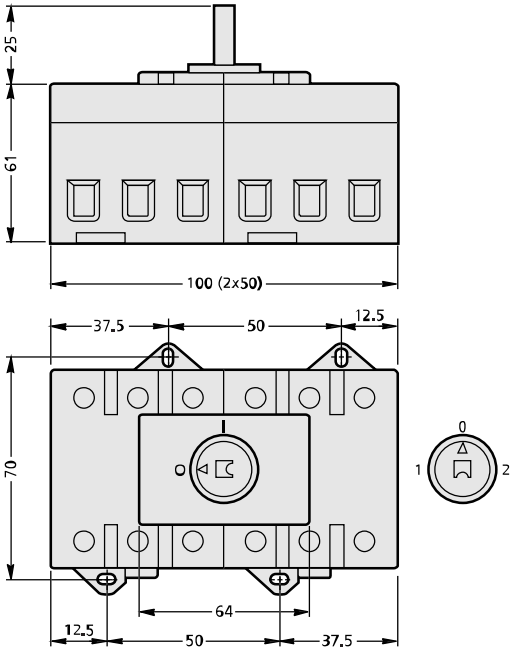
*) Dependant on the applied operating shaft.

**) Does not apply to switch-disconnectors with fixed shaft and knob.

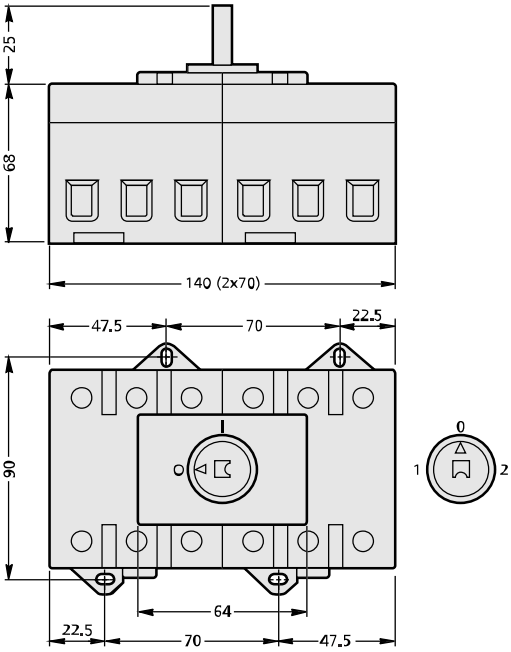
Type		DMM 40	DMM 63	DMM 125
Conventional free air terminal current	I_{th}	40 A	63 A	125 A
Conventional enclosed thermal current	I_{the}	40 A	63 A	125 A
Rated uninterrupted current	I_u	40 A	63 A	125 A
Rated operational voltage	U_e	220 V_{dc}	220 V_{dc}	220 V_{dc}
Rated operational voltage	U_e	690 V_{ac}	690 V_{ac}	690 V_{ac}
Rated insulation voltage	U_i	690 V	690 V	690 V
Rated impulse withstand voltage	U_{imp}	6 kV	6 kV	6 kV
Rated operational current				
At U_e = 415 V AC-21A	I_e	40 A	63 A	125 A
At U_e = 415 V AC-22A	I_e	40 A	63 A	125 A
At U_e = 500 V AC-21A	I_e	40 A	63 A	125 A
At U_e = 500 V AC-22A	I_e	40 A	63 A	125 A
At U_e = 690 V AC-21A	I_e	40 A	63 A	125 A
At U_e = 690 V AC-22A	I_e	40 A	63 A	125 A
Rated operational power				
At U_e = 415 V AC-23A		22 kW	30 kW	30 kW
At U_e = 500 V AC-23A		22 kW	22 kW	45 kW
At U_e = 690 V AC-23A		30 kW	30 kW	40 kW
Rated making/breaking capacity in accordance with CSA				
At U_e = 208/230 V		10 hp	15 hp	25 hp
At U_n = 300 V	I_n	40 A	63 A	125 A
Rated short-time withstand current	I_{cw}	1 kA-1 s	1.5 kA-1 s	2.5 kA-1 s
Rated short-circuit making capacity	I_{cm}	1.4 kA	2.2 kA	3.6 kA
Rated conditional short-circuit current fuse protected short-circuits withstand/making		50 kA / 100 kA	50 kA / 100 kA	50 kA
Cut-off current	max.	9.7 kA / 9.6 kA	9.7 kA / 9.6 kA	14.5 kA
Joule integral	max.	44 kA^2s / 9.5 kA^2s	44 kA^2s / 9.5 kA^2s	140 kA^2s
Fuse-link	I_n	80 A / 50 A	80 A / 50 A	125 A
Rated operational current in acc. with IEC 60408/ IEC 60947-3				
At U_e = 110 V DC-21	I_e	40 A	63 A	-
At U_e = 220 V DC-21	I_e	40 A	63 A	-
At U_e = 110 V DC-22	I_e	40 A	63 A	-
At U_e = 220 V DC-22	I_e	25 A	40 A	-
At U_e = 110 V DC-23	I_e	40 A	63 A	-
At U_e = 110 V DC-21B	I_e	-	-	125 A
At U_e = 220 V DC-21B	I_e	-	-	125 A
At U_e = 110 V DC-22B	I_e	-	-	125 A
At U_e = 220 V DC-22B	I_e	-	-	100 A
At U_e = 110 V DC-23B	I_e	-	-	125 A
Connection diagram DC application				
Auxiliary switch				
Rated operational current				
At U_e = 220 V AC-11	I_e	2 A	2 A	2 A
At U_e = 220 V DC-11	I_e	0.5 A	0.5 A	0.5 A
At U_e = 380 V AC-11	I_e	1.5 A	1.5 A	1.5 A
Standards		IEC 60947-3		
Certification		KEMA-KEUR, Lloyd's (LR), Veritas, CSA		

Type	DMM 40 and DMM 63		DMM 125	
Copper conductor	**Cross section**	**Tightening torque**	**Cross section**	**Tightening torque**
Solid	2.5 - 16 mm^2	3 Nm	-	-
Stranded	1.5 - 25 mm^2	3 Nm	6 - 70 mm^2	7 Nm
Flexible	1.5 - 25 mm^2	3 Nm	6 - 70 mm^2	7 Nm

Change-over and multipole switches, type QM, 6-pole, dimensional drawings

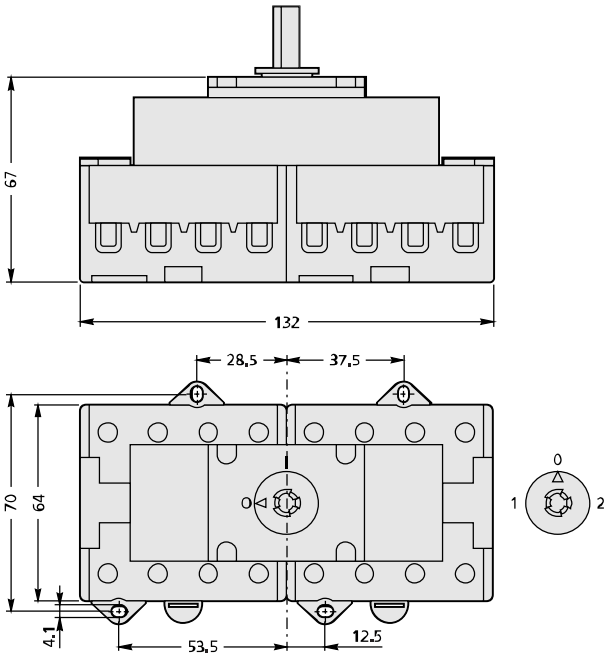


Type QM 63/6 version D, type QM 63/3 version E.

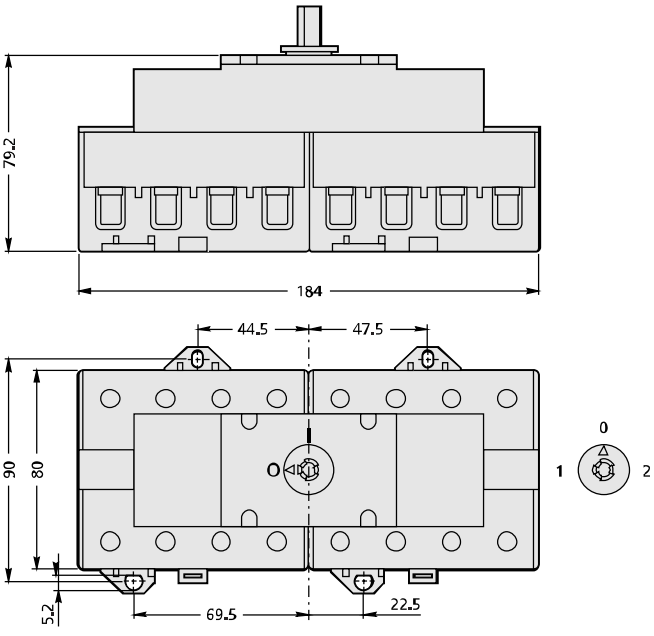


Type QM 100/6 version D, type QM 100/3 version E.

Change-over and multipole switches, type QM, 8-pole, dimensional drawings



Type QM 63/6N2 version D, type QM 40/3N, QM 63/3N version E.



Type QM 100/6N2 version D, type QM 100/3N version E.

Change-over and multipole switches, type QM, 8-pole, technical details

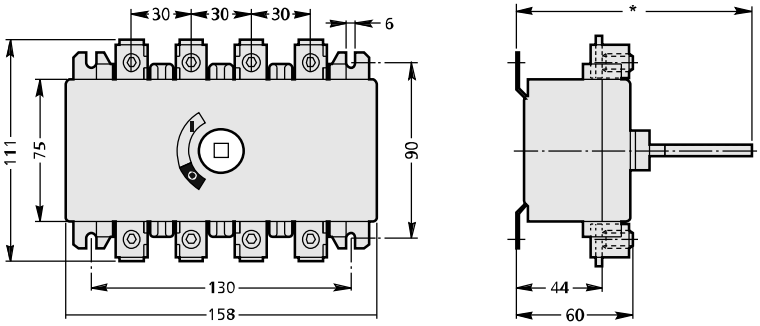
Type		QM 40	QM 63	QM 100
Conventional free air thermal current	I_{the}	40 A	63 A	100 A
Conventional thermal current in enclosure	I_{the}	40 A	55 A	100 A
Conventional thermal current in enclosure (multipole)	I_{the}	40 A	50 A	80 A
Rated uninterrupted current	I_u	40 A	63 A	100 A
Rated operational voltage	U_e	690 V	690 V	690 V
Rated insulation voltage	U_i	690 V	690 V	690 V
Rated impulse withstand voltage	U_{imp}	8 kV	8 kV	8 kV
Rated operational current				
At U_e = 415 V AC-21A	I_e	40 A	63 A	100 A
At U_e = 240 V AC-22A	I_e	40 A	63 A	100 A
At U_e = 440 V AC-21A	I_e	40 A	63 A	100 A
At U_e = 440 V AC-22A	I_e	40 A	63 A	100 A
At U_e = 500 V AC-21A	I_e	40 A	63 A	100 A
At U_e = 500 V AC-22A	I_e	40 A	63 A	100 A
At U_e = 690 V AC-21A	I_e	40 A	63 A	100 A
At U_e = 690 V AC-22A	I_e	40 A	55 A	85 A
Rated operational current / power				
At U_e = 240 V AC-23A		7.5 kW	11 kW	22 kW
At U_e = 440 V AC-23A		15 kW	22 kW	37 kW
At U_e = 500 V AC-23A		18.5 kW	30 kW	45 kW
At U_e = 690 V AC-23A		15 kW	18.5 kW	30 kW
At U_e = 240 V AC-3		7.5 kW	11 kW	18.5 kW
At U_e = 440 V AC-3		11 kW	18.5 kW	30 kW
At U_e = 500 V AC-3		15 kW	22 kW	37 kW
At U_e = 690 V AC-3		11 kW	15 kW	22 kW
Rated short-time withstand current	I_{cw}	0.5 kA-1 s	0.78 kA-1 s	1.85 kA-1 s
Rated short-circuit making capacity	I_{cm}	3 kA	3 kA	6 kA
Rated conditional fuse-protected short-circuit current withstand/making		15 kA	15 kA	15 kA
Fuse-link	I_n	50 A	63 A	100 A
Switched neutral				
Conventional free air thermal current	I_{the}	40 A	63 A	100 A
Rated operational current				
At U_e = 500 V AC-22A	I_e	40 A	63 A	100 A
Auxiliary switch				
Rated operational current				
At U_e = 380 V AC-11	I_e	3 A	3 A	3 A
At U_e = 660 V AC-1	I_e	10 A	10 A	10 A
Standards		EN-IEC 60947-3		

Change-over and multipole switches, type QM, 8-pole, connection capacity

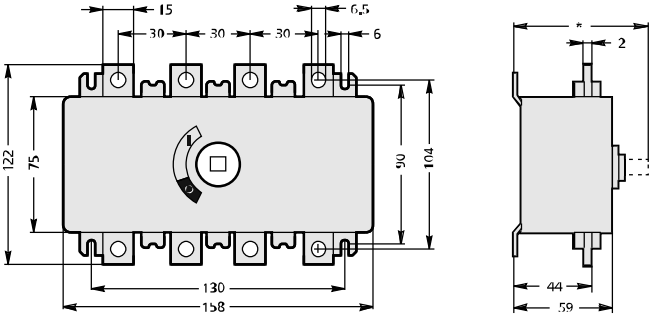
Type	QM 40/QM 63		QM 80/QM 100	
Copper conductor	**Cross section**	**Tightening torque**	**Cross section**	**Tightening torque**
Solid	2.5 - 16 mm^2	1.2 Nm	10 - 35 mm^2	2.5 Nm
Stranded	2.5 - 16 mm^2	1.2 Nm	10 - 35 mm^2	2.5 Nm
Flexible	2.5 - 10 mm^2	1.2 Nm	10 - 35 mm^2	2.5 Nm

Switch-disconnectors Dumeco, type DMV 160N, dimensional drawings

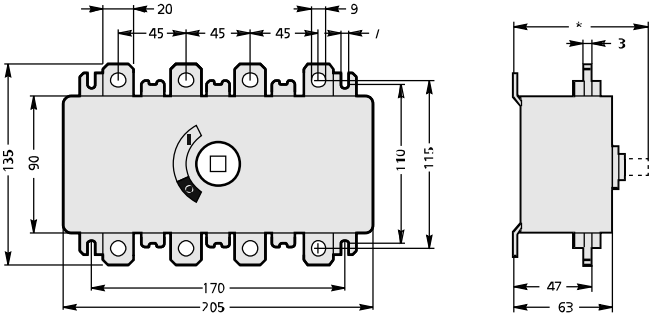
Dimensions apply to 3-pole as well as 4-pole switch-disconnectors.



Dumeco, type DMV 160N
(connecting contacts with pillar terminals).



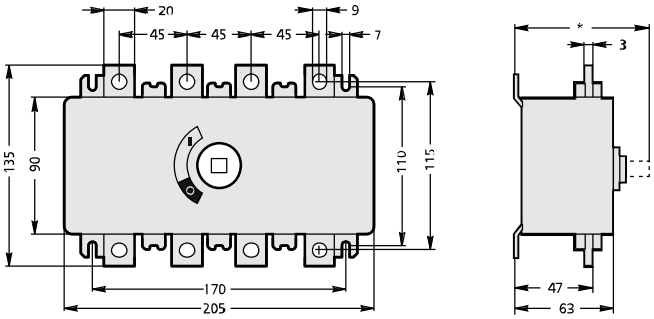
Dumeco, type DMV 160N.



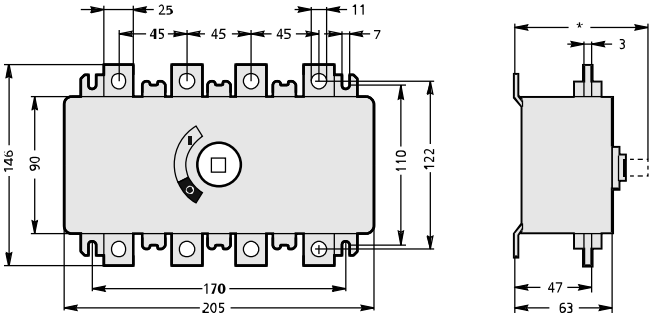
Dumeco, type DMVS 160N.

*) Depending on the applied operating shaft.

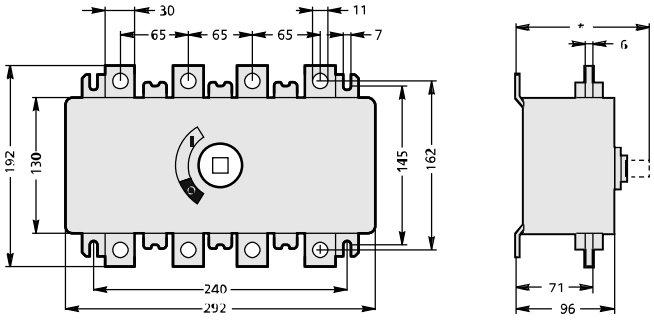
Dimensions apply to 3-pole as well as 4-pole switch-disconnectors.



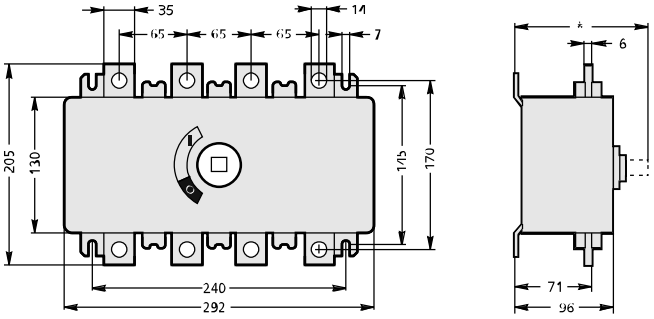
Dumeco, type DMV 250N.



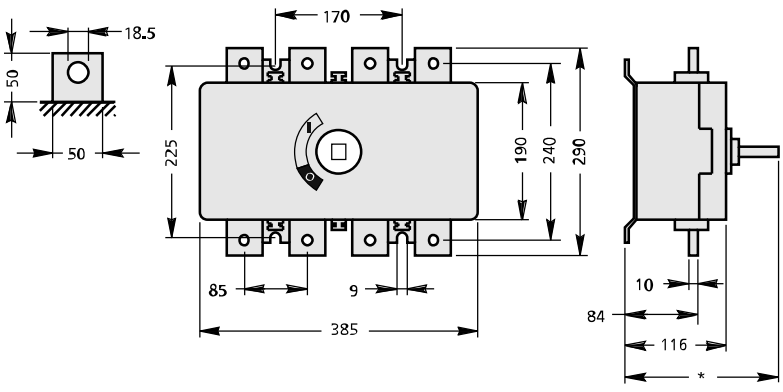
Dumeco, type DMV 400N.



Dumeco, type DMV 630N.



Dumeco, type DMV 1000N.

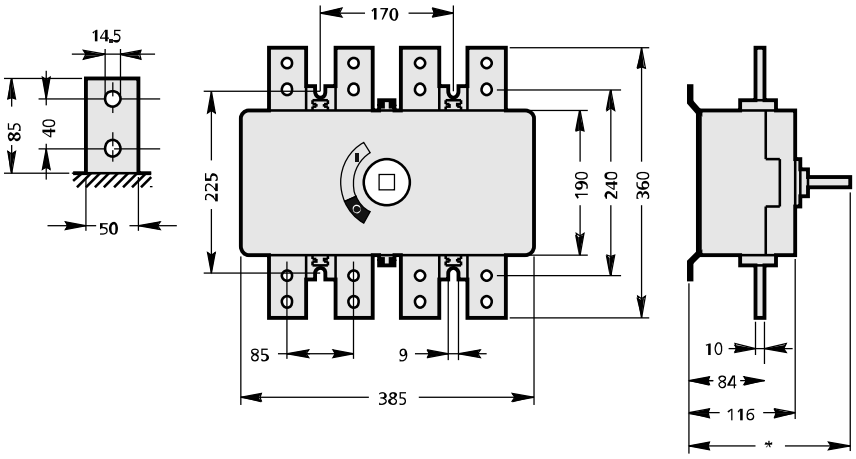


Dumeco, type DMV 1250N.

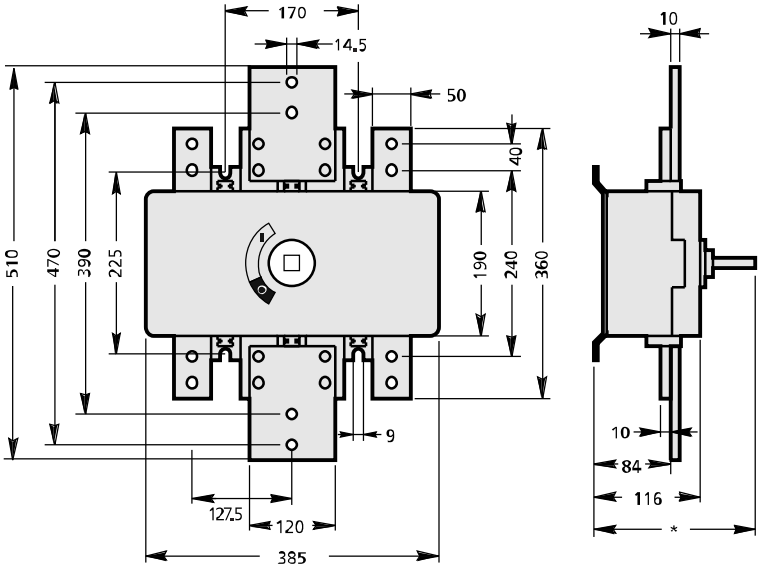
*) Depending on the applied operating shaft.

Switch-disconnectors Dumeco, type DMV 1600N - 2000N, dimensional drawings

Dimensions apply to 3-pole as well as 4-pole switch-disconnectors.



Dumeco, type DMV 1600N.

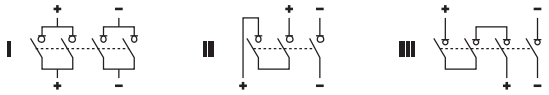


Dumeco, type DMV 2000N.

*) Depending on the applied operating shaft.

Type		DMV 160N	DMVS 160N	DMV 250N	DMV 400N	DMV 630N	DMV 1000N
Conventional free air thermal current	I_{th}	160 A	160 A	250 A	400 A	630 A	1000 A
Conventional enclosed thermal current	I_{the}	160 A	160 A	250 A	400 A	630 A	1000 A
Rated uninterrupted current	I_u	160 A	160 A	250 A	400 A	630 A	1000 A
Rated operational voltage	U_e	440 V_{dc}	440 V_{dc}	440 V_{dc}	440 V_{dc}	440 V_{dc}	440 V_{dc}
Rated operational voltage	U_e	690 V_{ac}	690 V_{ac}	690 V_{ac}	690 V_{ac}	690 V_{ac}	690 V_{ac}
Rated insulation voltage	U_i	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V
Rated impulse withstand voltage	U_{imp}	8 kV	8 kV	8 kV	8 kV	12 kV	12 kV
Rated operational current							
At U_e = 415 V AC-21A	I_e	160 A	160 A	250 A	400 A	-	-
At U_e = 415 V AC-22A	I_e	160 A	160 A	250 A	400 A	-	-
At U_e = 500 V AC-21A	I_e	160 A	160 A	250 A	400 A	-	-
At U_e = 500 V AC-22A	I_e	160 A	160 A	250 A	400 A	-	-
At U_e = 690 V AC-21A	I_e	125 A	160 A	250 A	400 A	-	-
At U_e = 690 V AC-22A	I_e	125 A	160 A	250 A	315 A	-	-
At U_e = 415 V AC-21B	I_e	-	-	-	-	630 A	1000 A
At U_e = 415 V AC-22B	I_e	-	-	-	-	630 A	1000 A
At U_e = 500 V AC-21B	I_e	-	-	-	-	630 A	1000 A
At U_e = 500 V AC-22B	I_e	-	-	-	-	630 A	1000 A
At U_e = 690 V AC-21B	I_e	-	-	-	-	630 A	1000 A
At U_e = 690 V AC-22B	I_e	-	-	-	-	630 A	1000 A
Rated operational power							
At U_e = 415 V AC-23A		90 kW	90 kW	147 kW	180 kW	-	-
At U_e = 500 V AC-23A		75 kW	110 kW	160 kW	180 kW	-	-
At U_e = 690 V AC-23A		-	132 kW	132 kW	132 kW	-	-
At U_e = 415 V AC-23B		-	-	-	-	375 kW	425 kW
At U_e = 500 V AC-23B		-	-	-	-	425 kW	425 kW
At U_e = 690 V AC-23B		-	-	-	-	425 kW	425 kW
Rated making and breaking capacity in accordance with CSA							
At U_e = 460 V		-	50 hp	50 hp	60 hp	125 hp	150 hp
At U_e = 575 V		-	60 hp	60 hp	75 hp	150 hp	200 hp
At U_n = 600 V	I_n	-	160 A	160 A	250 A	400 A	630 A
Rated short-time withstand current	I_{cw}	8 kA-0.2 s	12 kA-0.3 s	12 kA-0.3 s	12 kA-0.3 s	36 kA-0.3 s	36 kA-0.3 s
Rated short-circuit making capacity	I_{cw}	17.6 kA	26.5 kA	26.5 kA	26.5 kA	76 kA	76 kA
Rated conditional short-circuit current fuse protected short-circuit withstand/making		50 / 100 kA	50 / 100 kA	50 / 100 kA	50 / 100 kA	50 / 100 kA	50 / 100 kA
Cut-off current	max.	17 / 14.5 kA	40 / 33 kA	40 / 33 kA	40 / 33 kA	70 / 65 kA	70 / 65kA
Joule integral	max.	600 / 67 kA^2s	1700 / 380 kA^2s	1700 / 380 kA^2s	1700 / 380 kA^2s	42000 / 3200 kA^2s	42000 / 3200 kA^2s
Fuse-link	I_n	160 / 100 A	500 / 250 A	500 / 250 A	500 / 250 A	1000 / 630 A	1000 / 630 A
Auxiliairy switch							
Rated operational current							
At U_e = 220 V AC-11	I_e	2 A	2 A	2 A	2 A	2 A	2 A
At U_e = 220 V DC-11	I_e	0.5 A	0.5 A	0.5 A	0.5 A	0.5 A	0.5 A
At U_e = 380 V AC-11	I_e	1.5 A	1.5 A	1.5 A	1.5 A	1.5 A	1.5 A

Switch-disconnectors Dumeco, type DMV 160N - 1000N, direct current, technical details

Type		DMV 160N	DMVS 160N	DMV 250N	DMV 400N	DMV 630N	DMV 1000N
Rated operational current in acc. with IEC 60408							
At U_e = 220 V DC-21 (scheme I)	I_e	160 A	160 A	250 A	400 A	630 A	1000 A
At U_e = 440 V DC-21 (scheme III)	I_e	125 A	160 A	200 A	315 A	500 A	800 A
At U_e = 250 V DC-21 (scheme II)	I_e	125 A	160 A	200 A	315 A	500 A	800 A
At U_e = 220 V DC-22 (scheme I)	I_e	160 A	160 A	250 A	315 A	630 A	-
At U_e = 440 V DC-22 (scheme III)	I_e	125 A	160 A	200 A	315 A	500 A	630 A
At U_e = 250 V DC-22 (scheme II)	I_e	125 A	160 A	200 A	315 A	500 A	800 A
At U_e = 440 V DC-23 (scheme III)	I_e	125 A	160 A	200 A	200 A	500 A	630 A
At U_e = 250 V DC-23 (scheme II)	I_e	125 A	160 A	200 A	200 A	500 A	800 A
Connection diagrams DC-application							
Standards		IEC 60947-3					
Certification		KEMA-KEUR, Lloyd's (LR), Veritas, CSA[1)]					

1) Exclusive type DMV 160N.

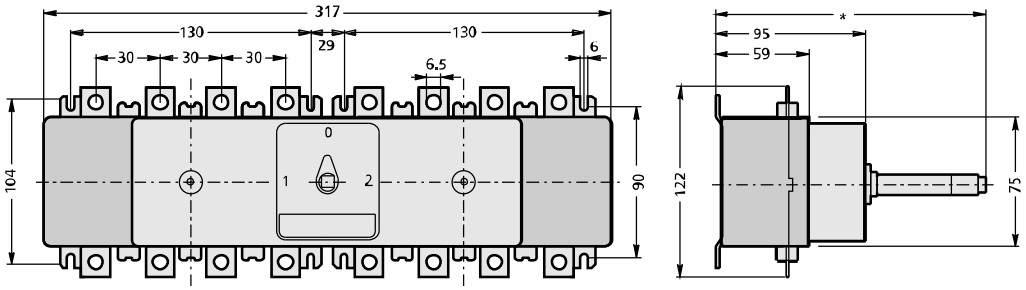
Switch-disconnectors Dumeco, type DMV 1250N - 2000N, technical details

Type		DMV 1250N	DMV 1600N	DMV 2000N
Conventional free-air thermal current	I_{th}	1250 A	1600 A	2000 A
Conventional enclosed thermal current	I_{the}	1250 A	1600 A	2000 A
Rated uninterrupted current	I_u	1250 A	1600 A	2000 A
Rated operational voltage	U_e	690 V	690 V	690 V
Rated insulation voltage	U_i	1000 V	1000 V	1000 V
Rated impulse withstand voltage	U_{imp}	12 kV	12 kV	12 kV
Rated operational current				
At U_e = 415 V AC-21A	I_e	1250 A	1600 A	-
At U_e = 415 V AC-21B		-	-	2000 A
At U_e = 415 V AC-22A	I_e	1250 A	1600 A	-
At U_e = 415 V AC-22B		-	-	2000 A
At U_e = 500 V AC-21A	I_e	1250 A	1600 A	-
At U_e = 500 V AC-21B		-	-	2000 A
At U_e = 500 V AC-22A	I_e	1250 A	1600 A	-
At U_e = 500 V AC-22B		-	-	2000 A
At U_e = 690 V AC-21A	I_e	1250 A	1600 A	-
At U_e = 690 V AC-21B		-	-	2000 A
At U_e = 690 V AC-22A	I_e	1250 A	1600 A	-
At U_e = 690 V AC-22B		-	-	1600 A
Rated operational power				
At U_e = 415 V AC-23A		750 kW	750 kW	750 kW
At U_e = 500 V AC-23A		630 kW	630 kW	630 kW
At U_e = 690 V AC-23A		630 kW	630 kW	630 kW
Rated short-time withstand current	I_{cw}	50 kA-1 s	50 kA-1 s	50 kA-1 s
Rated short-circuit making capacity	I_{cm}	110 kA	110 kA	110 kA
Auxiliary switch				
Rated operational current				
At U_e = 220 V AC-11	I_e	2 A	2 A	2 A
At U_e = 220 V DC-11	I_e	0.5 A	0.5 A	0.5 A
At U_e = 380 V AC-11	I_e	1.5 A	1.5 A	1.5 A
Standards		IEC 60947-3		
Certification		KEMA-KEUR, Lloyd's (LR), Veritas		

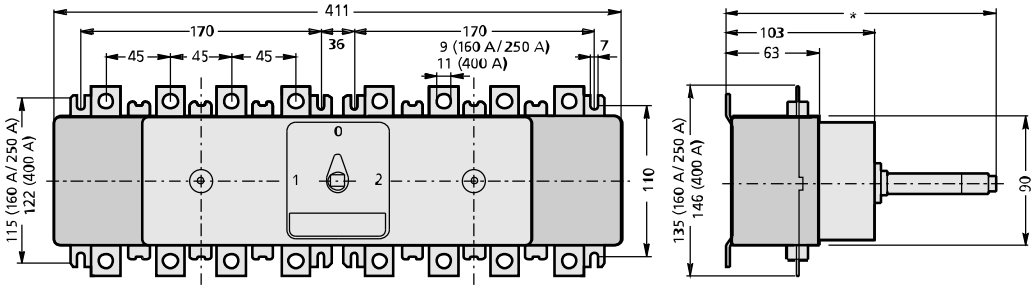
Switch-disconnectors Dumeco, type DMV 160N, clamp connection, connection capacity

Copper conductor	Cross section	Tightening torque
Stranded	6 - 70 mm^2	7 Nm
Flexible	6 - 70 mm^2	7 Nm

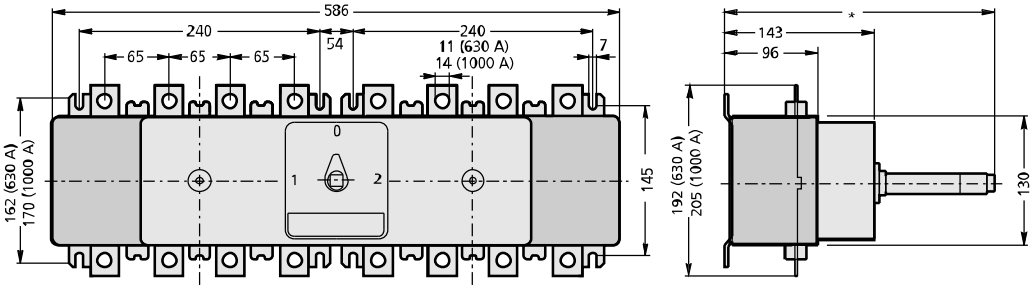
Change-over and multipole switches, type Dumeco, horizontal, dimensional drawings



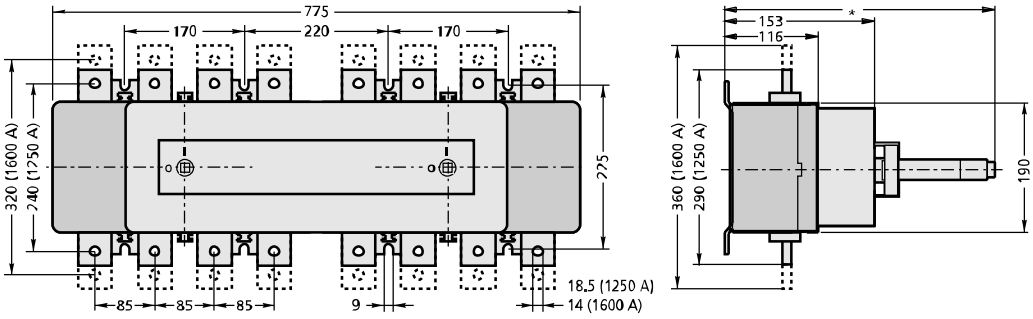
Change-over switches, Dumeco, type DMV 160N.



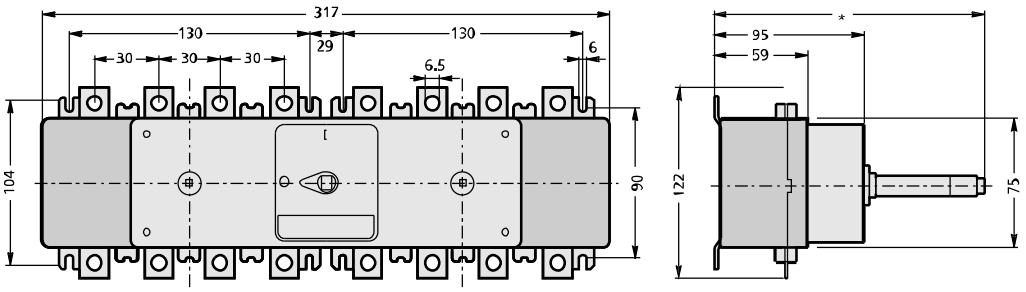
Change-over switches, Dumeco, types DMVS 160N, DMV 250N and DMV 400N.



Change-over switches, Dumeco, types DMV 630N and DMV 1000N.

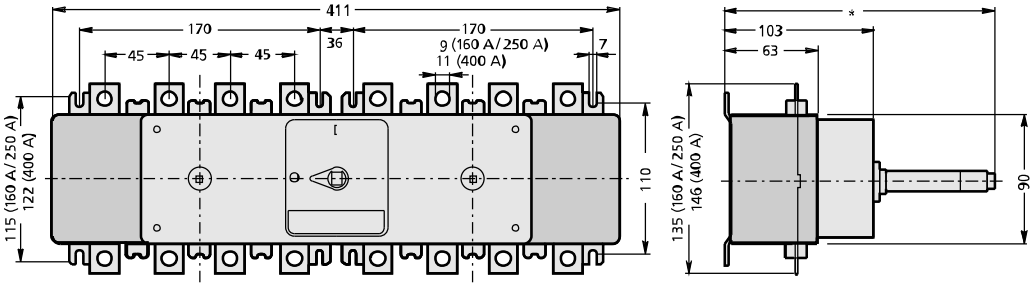


Change-over switches, Dumeco, types DMV 1250N and DMV 1600N.

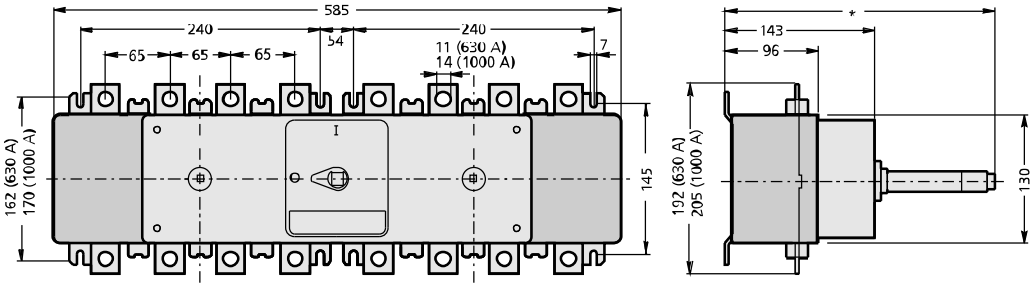


Multipole switches, Dumeco, type DMV 160N.

*) Dependant on the applied operating shaft.



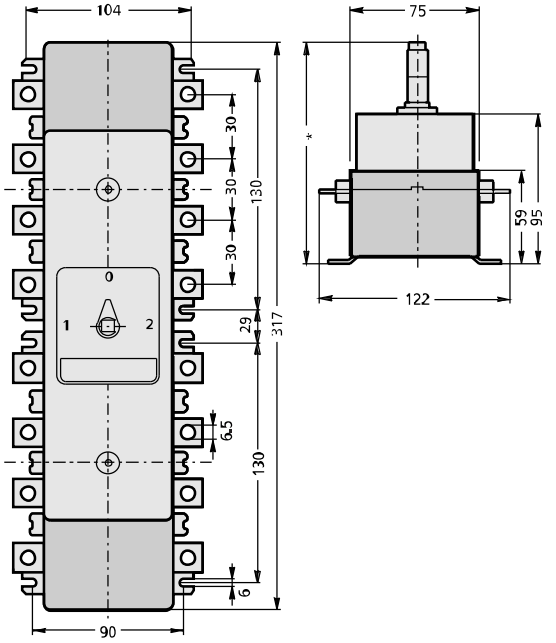
Multipole switches, Dumeco, types DMVS 160N, DMV 250N and DMV 400N.



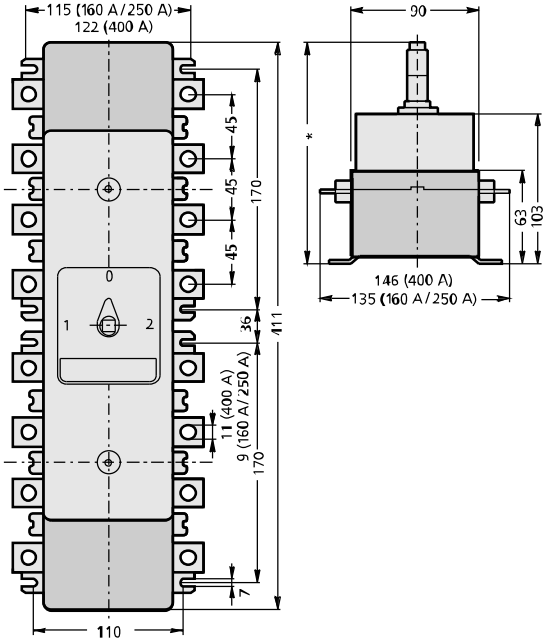
Multipole switches, Dumeco, types DMV 630N and DMV 1000N.

*) Dependant on the applied operating shaft.

Change-over and multipole switches, type Dumeco, vertical, dimensional drawings

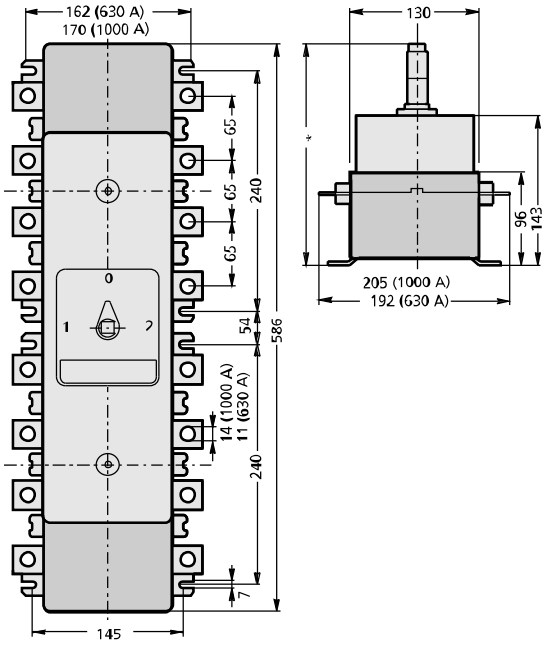


Change-over switches, Dumeco,
type DMV 160N.

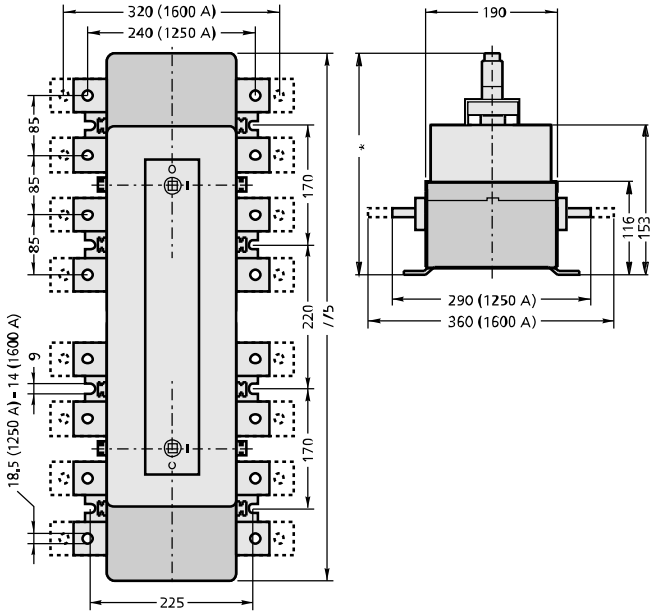


Change-over switches, Dumeco,
types DMVS 160N, DMV 250N and DMV 400N.

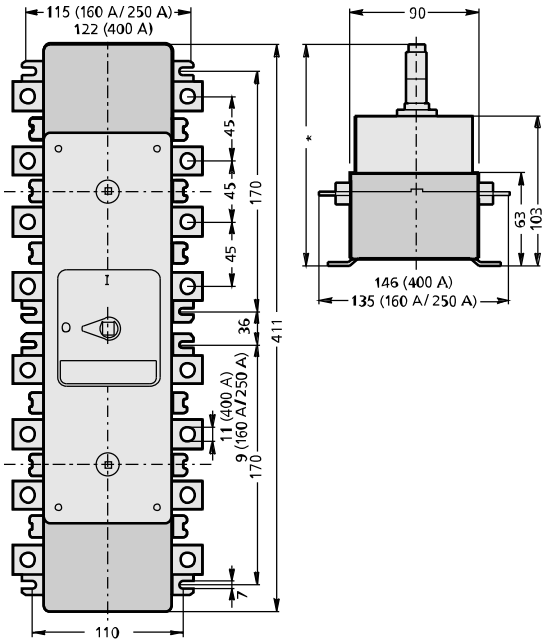
*) Dependant on the applied operating shaft.



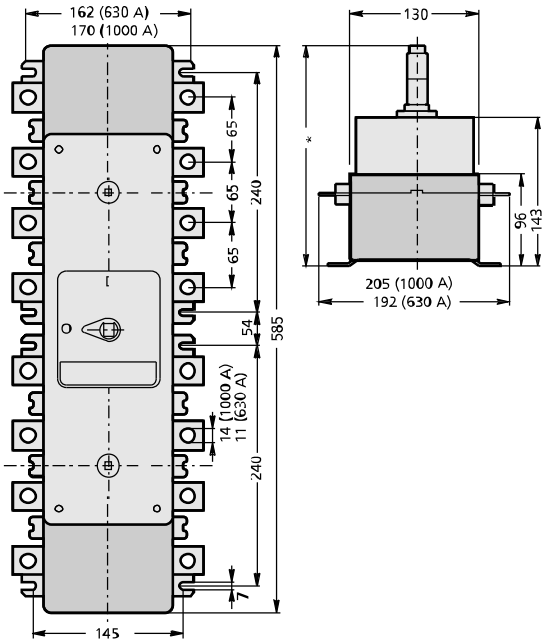
Change-over switches, Dumeco,
types DMV 630N and DMV 1000N.



Change-over switches, Dumeco,
types DMV 1250N and DMV 1600N.



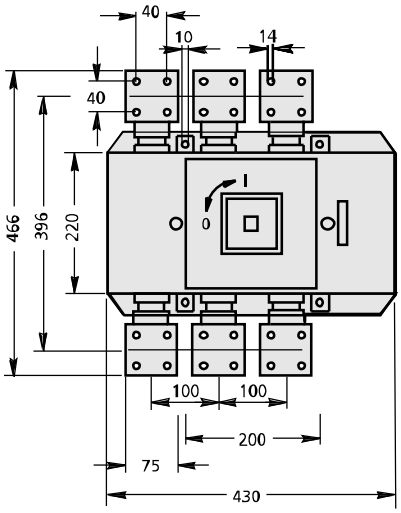
Multipole switches, Dumeco,
types DMVS 160N, DMV 250N and DMV 400N.

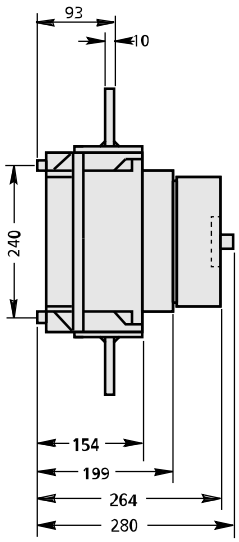


Multipole switches, Dumeco,
types DMV 630N and DMV 1000N.

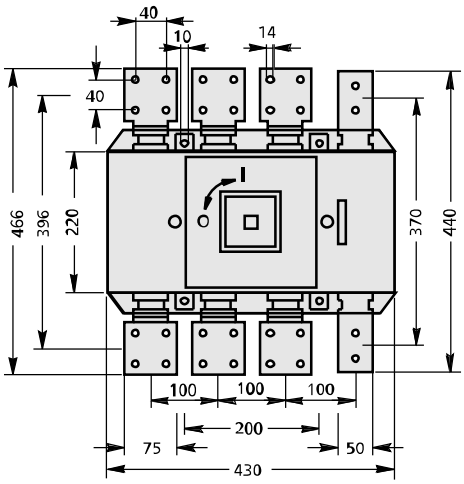
*) Dependant on the applied operating shaft.

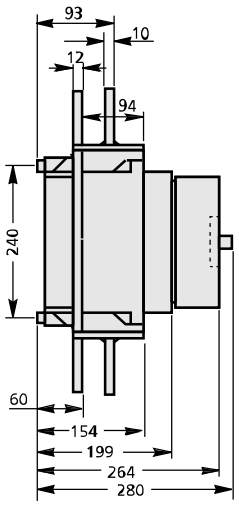
Switch-disconnectors Dumeco, type DMS, dimensions (mm)



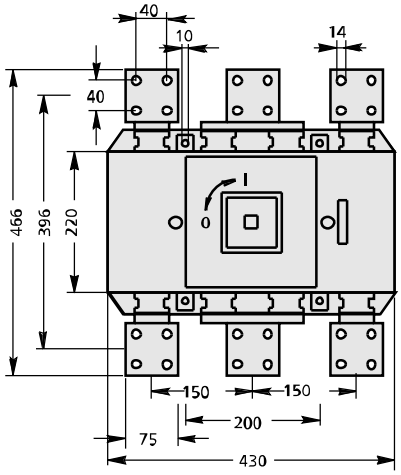


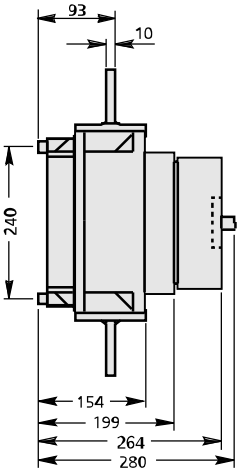
Dumeco, type DMS 2500/3.



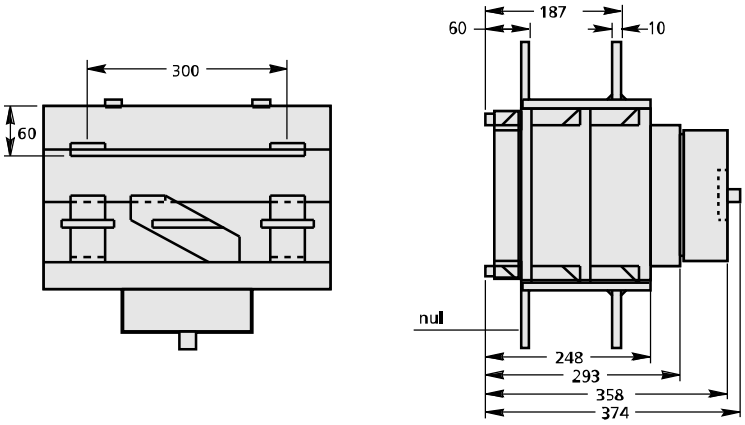


Dumeco, type DMS 2500/1 and DMS 2500/4.





Dumeco, type DMS 3150/3.

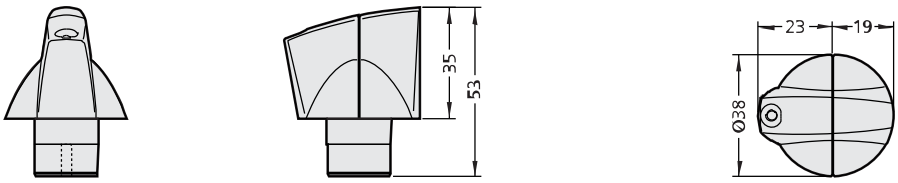


Dumeco, type DMS 3150/4.

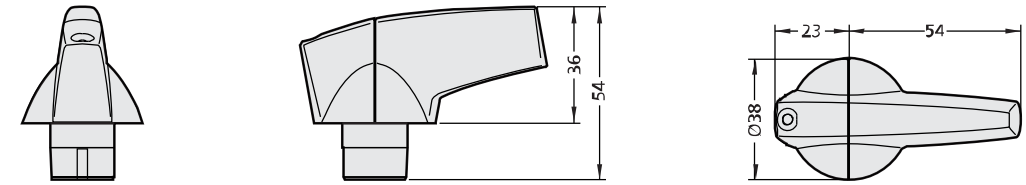
Switch-disconnectors Dumeco, type DMS, technical characteristics

Type		DMS 2500	DMS 3150
Conventional free-air thermal current	I_{th}	2500 A	3150 A
Conventional enclosed thermal current	I_{the}	2500 A	3150 A
Rated uninterrupted current	I_u	2500 A	3150 A
Rated operational voltage	U_e	690 V	690 V
Rated insulation voltage	U_i	1000 V	1000 V
Rated impulse withstand voltage	U_{imp}	12 kV	12 kV
Rated operational current			
with U_e = 415 V AC-21B	I_e	2500 A	3150 A
with U_e = 415 V AC-22B	I_e	1600 A	-
with U_e = 500 V AC-21B	I_e	2500 A	3150 A
with U_e = 500 V AC-22B	I_e	1600 A	-
with U_e = 690 V AC-21B	I_e	2500 A	3150 A
Rated operational power			
with U_e = 415 V AC-23B		355 kW	-
with U_e = 500 V AC-23B		425 kW	-
Rated short-time withstand current:	I_{cw}	50 kA-1 s	63 kA-1 s
Rated short-circuit making capacity	I_{cm}	110 kA	140 kA
Standards		EN-IEC 60947-3	

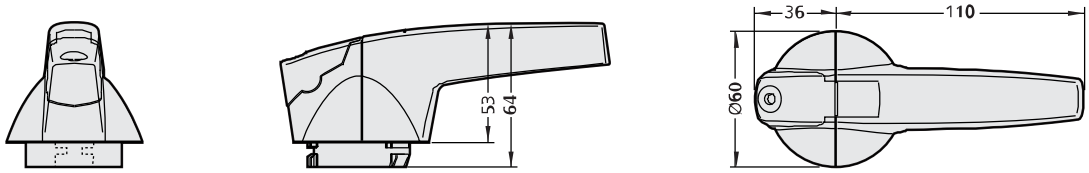
Handles K-line, type A, dimensional drawings



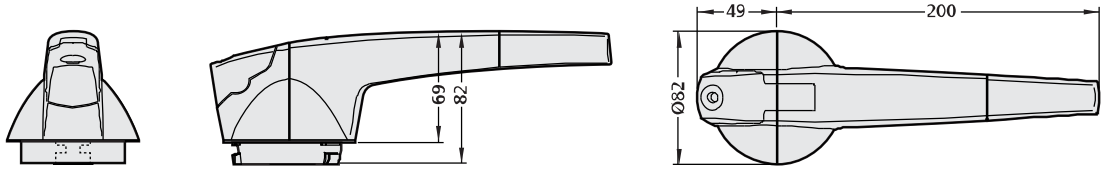
Type K1A.



Types K2A and K2SA.

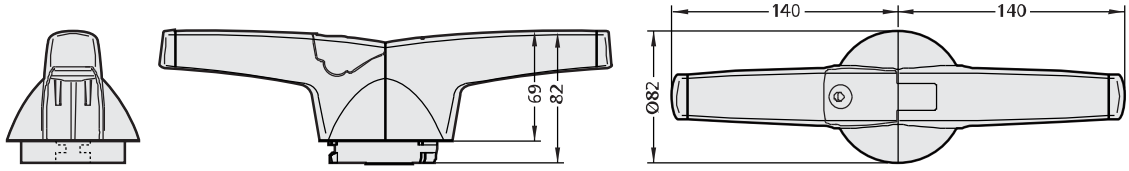


Type K3KA.

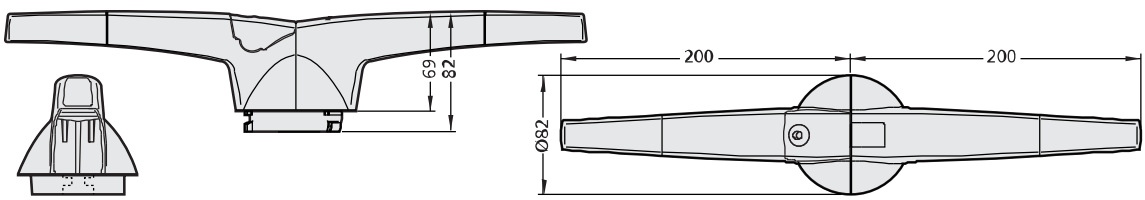


Type K4A.

Handles K-line, type A, T-handle, dimensional drawings

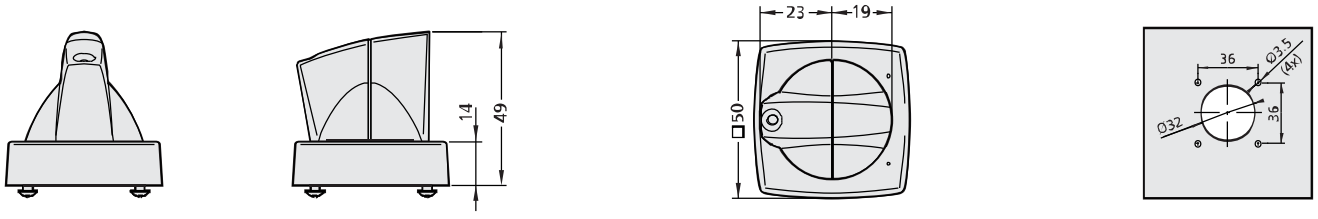


Type K5A.

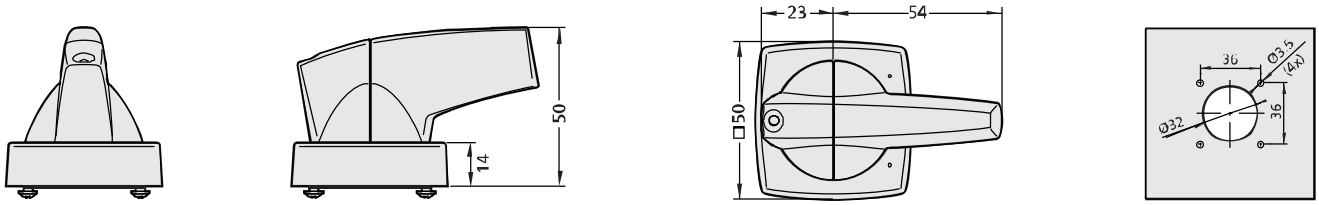


Type K6A.

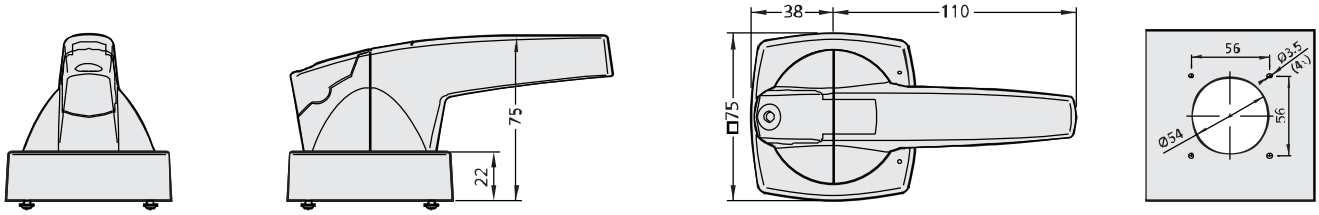
Handles K-line, type C, dimensional drawings



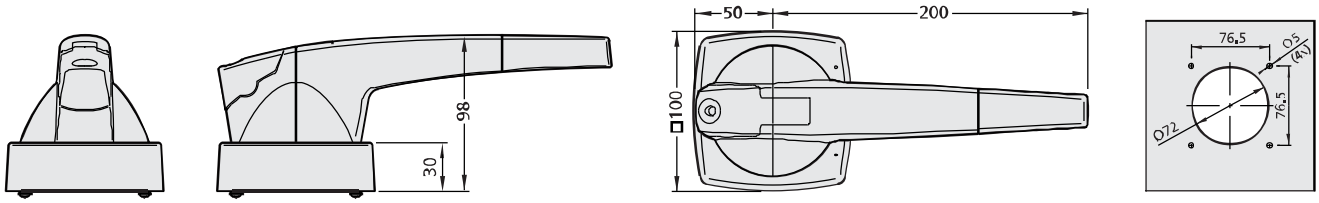
Type K1C.



Types K2C and K2SC.

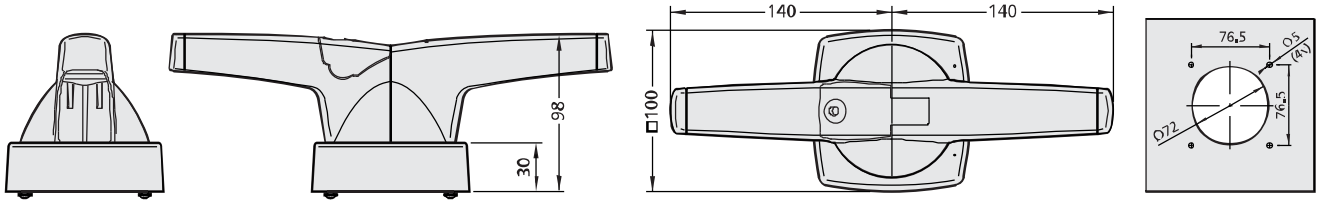


Type K3KC.

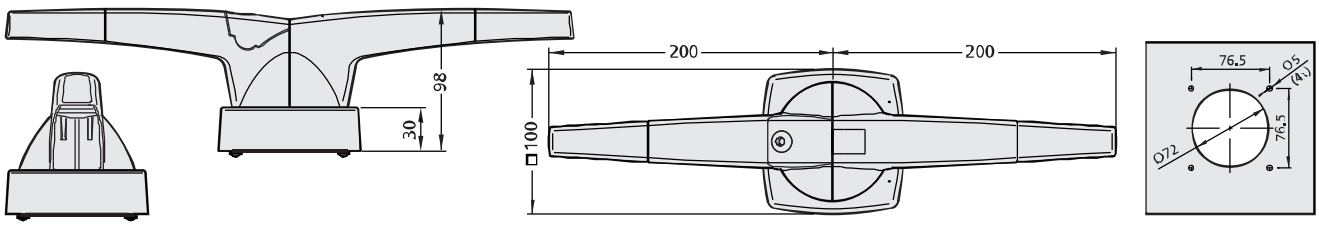


Type K4C.

Handles K-line, type C, T-handle, dimensional drawings

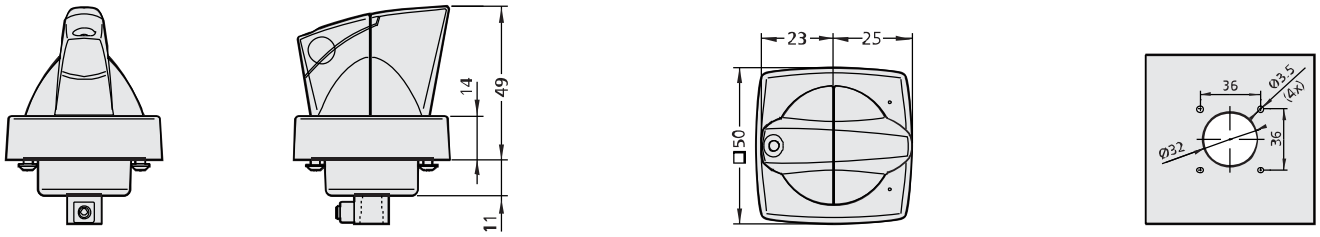


Type K5C.

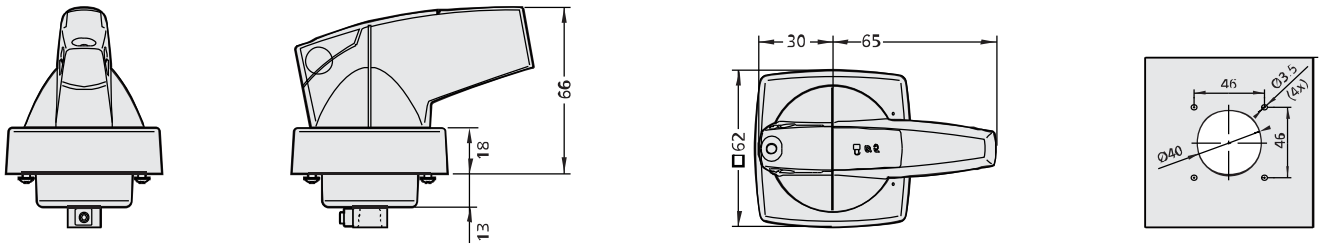


Type K6C.

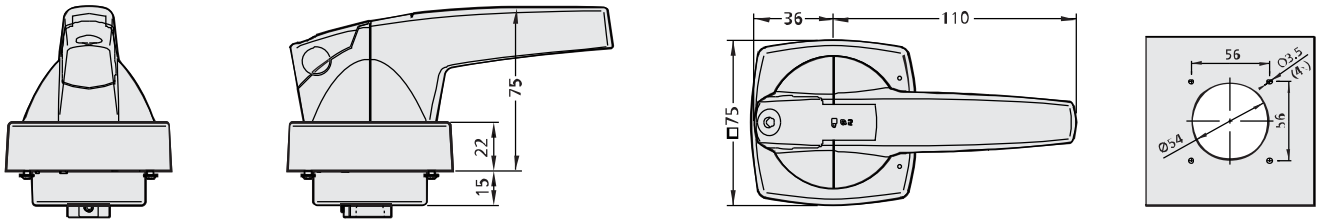
Handles K-line, type D, dimensional drawings



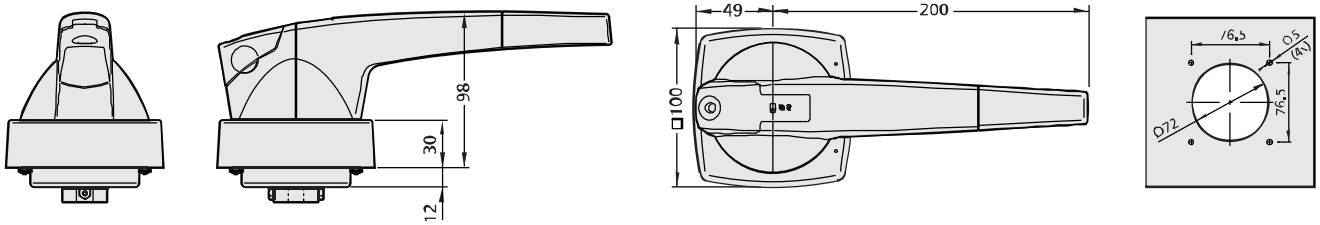
Type K1D.



Types K2D and K2SD.

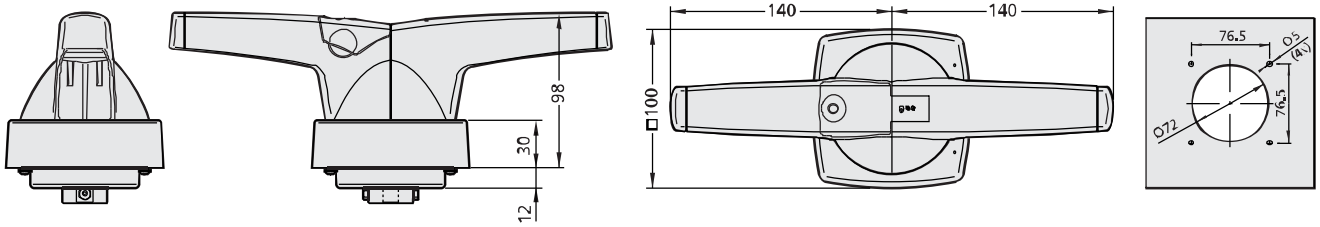


Type K3KD.

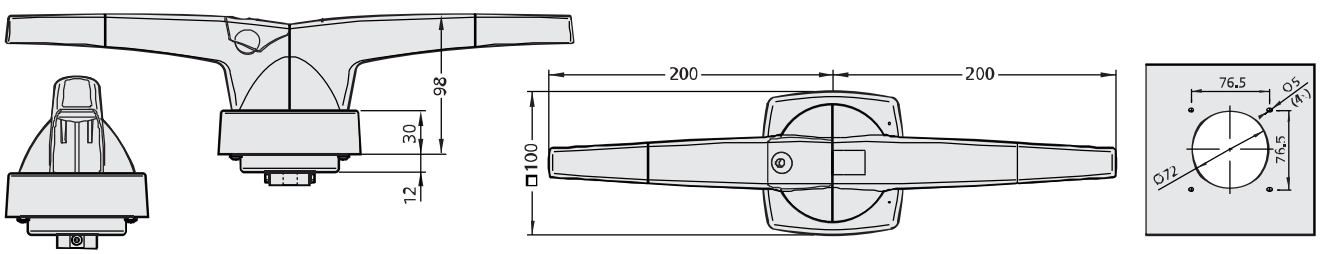


Type K4D.

Handles K-line, type D, T-handle, dimensional drawings



Type K5D.



Type K6D.

Excerpt from IEC 60947-3

Conventional enclosed thermal current (I_{the})
The conventional enclosed thermal current is the value of current stated by the manufacturer to be used for the temperature-rise tests of the equipment when mounted in a specified enclosure. The value of the conventional enclosed thermal current shall be at least equal to the maximum value of the rated operational current of the enclosed equipment in eight-hour duty.
If the equipment is normally intended for use in unspecified enclosures, the test is not mandatory if the test for conventional free air thermal current (I_{th}) has been made. In this case, the manufacturer shall be prepared to give guidance on the value of enclosed thermal current or the derating factor.

Conventional free air thermal current (I_{th})
The conventional free air thermal current is the maximum value of test current to be used for temperature-rise tests of unenclosed equipment in free air. The value of the conventional free air thermal current shall be at least equal to the maximum value of the rated operational current of the unenclosed equipment in eight-hour duty. Free air is understood to be air under normal indoor conditions reasonably free from draughts and external radiation.

Rated frequency
The supply frequency for which an equipment is designed and to which the other characteristic values correspond.

Rated impulse withstand voltage (U_{imp})
The peak value of an impulse voltage of prescribed form and polarity which the equipment is capable of withstanding without failure under specified conditions of test and to which the values of the clearances are referred. The rated impulse withstand voltage of an equipment shall be equal to or higher than the values stated for the transient overvoltages occurring in the circuit in which the equipment is fitted.

Rated insulation voltage (U_i)
The rated insulation voltage of an equipment is the value of voltage to which dielectric tests and creepage distances are referred. In no case shall the maximum value of the rated operational voltage exceed that of the rated insulation voltage.

Rated operational current (I_e) or rated operational power
A rated operational current of an equipment is stated by the manufacturer and takes into account the rated operational voltage, the rated frequency, the rated duty, the utilization category and the type of protective enclosure, if appropriate. In the case of equipment for direct switching of individual motors, the indication of a rated operational current may be replaced or supplemented by an indication of the maximum rated power output, at the rated operational voltage considered, of the motor for which the equipment is intended. The manufacturer shall be prepared to state the relationship assumed between the operational current and the operational power, if any.

Rated operational voltage (U_e)
A rated operational voltage of an equipment is a value of voltage which, combined with a rated operational current, determines the application of the equipment and to which the relevant tests and the utilization categories are referred. For single-pole equipment, the rated operational voltage is generally stated as the voltage across the pole.
For multipole equipment, it is generally stated as the voltage between phases.

Rated short-circuit making capacity (I_{cm})
The rated short-circuit making capacity of a switch or a switch-disconnector is the value of short-circuit making capacity assigned to the equipment by the manufacturer for the rated operational voltage, at rated frequency (if any) and at specified power-factor (or time-constant). It is expressed as the maximum prospective peak current.

Rated short-time withstand current (I_{cw})
The rated short-time withstand current of a switch, a disconnector or a switch-disconnector is the value of short-time withstand current, assigned by the manufacturer, that the equipment can carry without any damage under the relevant test conditions. The value of the rated short-time withstand current shall be not less than twelve times the maximum rated operational current and, unless otherwise stated by the manufacturer, the duration of the current shall be 1 s.

Rated uninterrupted current (I_u)
The rated uninterrupted current of an equipment is a value of current, stated by the manufacturer, which the equipment can carry in uninterrupted duty.

Rated conditional short-circuit current
The rated conditional short-circuit current of an equipment is the value of prospective current, stated by the manufacturer, which the equipment, protected by a short-circuit protective device specified by the manufacturer, can withstand satisfactorily for the operating time of this device under the specified test conditions. The details of the specified short-circuit protective device shall be stated by the manufacturer.

General remarks:
1. For a.c. the rated conditional short-circuit current is expressed by the r.m.s. value of the a.c. component.
2. The short-circuit protective device may either form an integral part of the equipment or be a separate unit.

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Excerpt from IEC 60947-3

Switch
A mechanical switching device capable of making, carrying and breaking currents under normal circuit conditions which may include specified operating overload conditions and also carrying for a specified time currents under specified abnormal circuit conditions such as those of short circuit.

Disconnector[1)]
A mechanical switching device which, in the open position, complies with the requirements specified for the isolating function.

Switch-disconnector
A switch which, in the open position, satisfies the isolating requirements specified for a disconnector.

Fuse-combination unit
(general term for fuse switching devices)
A combination of a mechanical switching device and one or more fuses in a composite unit, assembled by the manufacturer or in accordance with his instructions.

Switch-fuse
A switch in which one or more poles have a fuse in series in a composite unit.

Disconnector-fuse
A disconnector in which one or more poles have a fuse in series in a composite unit.

Switch-disconnector-fuse
A switch-disconnector in which one or more poles have a fuse in series in a composite unit.

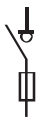
Fuse-switch
A switch in which a fuse-link or a fuse-carrier with fuse-link forms the moving contact.

Fuse-disconnector
A disconnector in which a fuse-link or fuse-carrier with fuse-link forms the moving contact.

Fuse-switch-disconnector
A switch-disconnector in which a fuse-link or a fuse-carrier with fuse-link forms the moving contact.

Making and breaking current	
Switch	
Switch-fuse	
Fuse-switch	

Isolating	
Disconnector	
Disconnector-fuse	
Fuse-disconnector	

Making, breaking and isolating	
Switch-disconnector	
Switch-disconnector-fuse	
Fuse-switch-disconnector	

[1)] A disconnector is capable of opening and closing a circuit when either a negligible current is broken or made, or when no significant change in the voltage across the terminals of each of the poles of the disconnector occurs. It is also capable of carrying currents under normal circuit conditions and carrying for a specified time currents under abnormal conditions such as those of short circuit.

Note: This definition differs from IEV 441-15-05 by referring to isolating function instead of isolating distance.

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