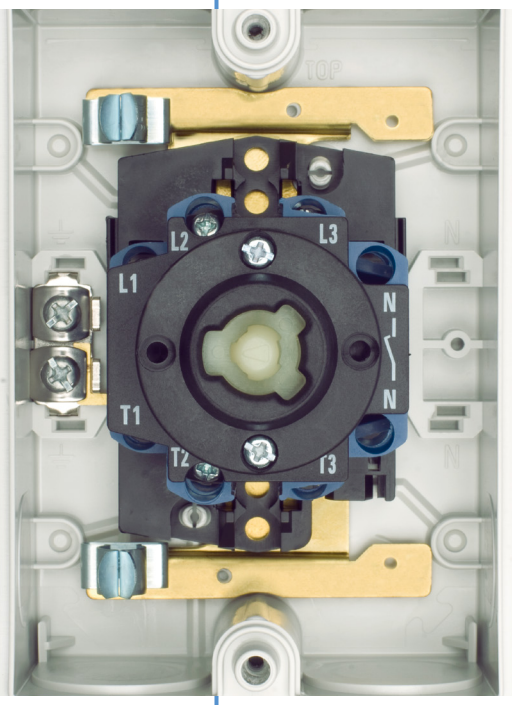
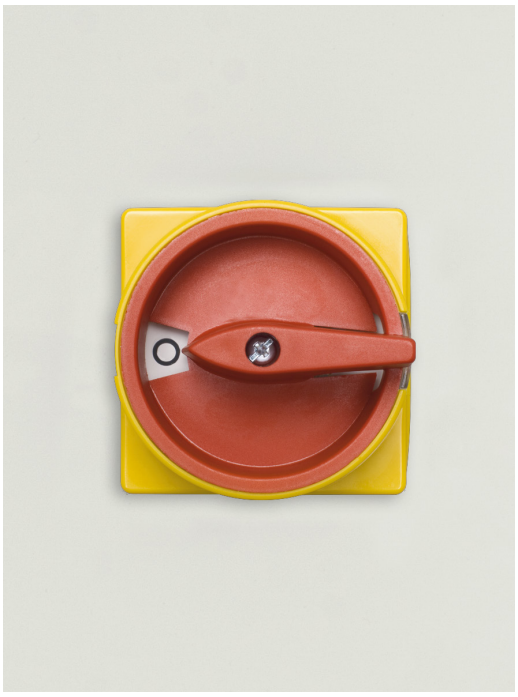
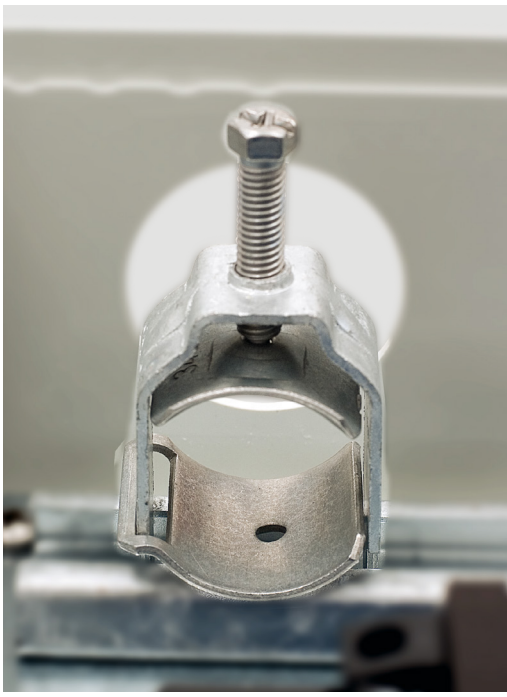
Kraus & Naimer







Maintenance Switches for
EMC-compliant Connection

IEC 60204 and VDE 0113 for EMC-compliant connection
of frequency-regulated motors

next ▶

Kraus & Naimer

Kraus & Naimer is a manufacturer of electrical switches, founded in 1907 and headquartered in Vienna, Austria. As a **specialist for low-voltage industrial switches,** we offer both standardized and customized switching solutions.

We can customize your switches by adding different **extras** such as padlock devices, key-lock devices, auxiliary contacts und much more.

As a manufacturer, supplier, and partner of choice for **main switches, control and repair switches, as well as switch disconnectors,** we will find the ideal solution for almost every application.

Our **main switches** ensure reliable switching for your system. Thanks to our robust **control switches,** your custom system will be efficiently managed, even in the most demanding applications and harshest environmental conditions. The compact **switch disconnectors** provide safe disconnection under load for all low-voltage applications. Our **repair and safety switches** are essential components for switching off machines before maintenance.

We are a trusted partner for customers from various sectors such as railways, vehicles, conveyor and lift systems as well as mechanical engineering, power generation and power distribution systems.

We maintain a **global production and distribution network** with around 900 employees in order to offer you the best service possible.

All products – both **standard** and **custom solutions** – comply with essential international regulations for safe switching and can therefore be used globally.

In this catalog you will find selected products from our portfolio. Our sales team is at your disposal for any individual product inquiries.

Table of Contents

Contact development: 3 pole with auxiliary contacts 1NC/1NO (leading off)

Contact development: 6 pole with auxiliary contacts 1NC/1NO (leading off)

EMC-compliant connection of frequency-controlled motors

Our maintenance switches according to **IEC 60204** and **VDE 0113** for EMC-compliant connection of frequency-regulated motors offer many advantages:

Preventing faults

Thanks to the **EMC-compliant add-ons**, the development and propagation of electro-magnetic disturbance is minimized. This is essential, when frequency converters (FC) are used, for example:

- To control the speed of motors employed in **production facilities**
- To regulate pump and fan speed in **building technology**
- To efficiently feed energy into the grid of **wind and solar power plants**

Easy and safe installation

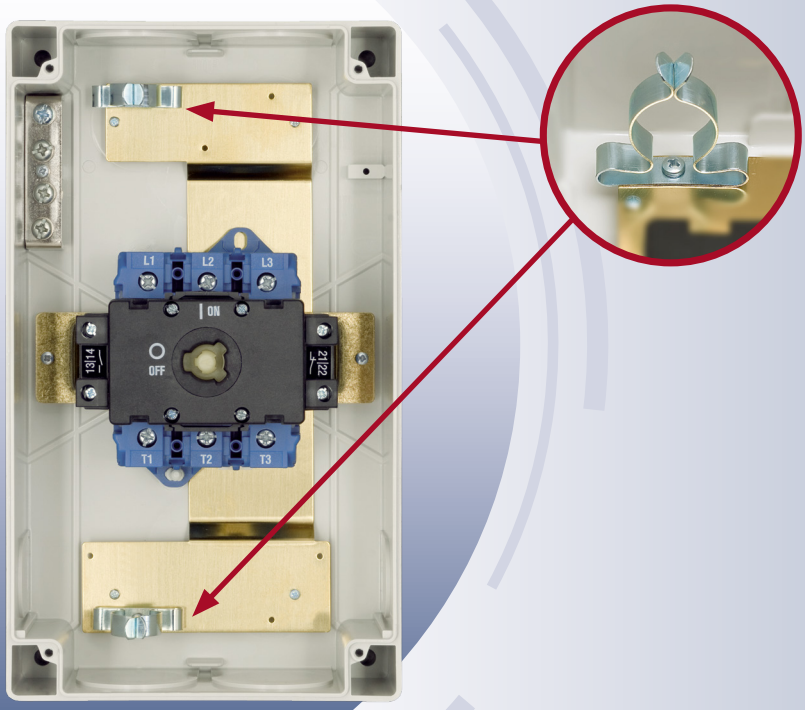
UOur switches are equipped with extensively connected **shield clamps** or with **bolt clamps,** which ensure **continuous shielding**.

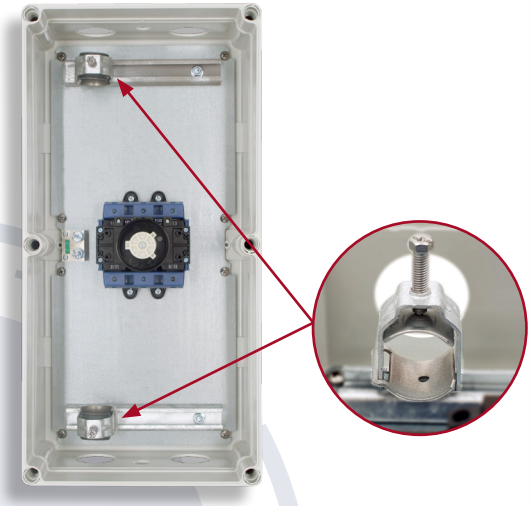
Our switch disconnectors are available in **robust plastic enclosures** (IP 66/67), ensuring an easy and safe installation.

Easy Retrofitting

Our shield clamps can be mounted on both sides. The scope of delivery includes shield feed-through, two shield clamps and corresponding screws. Our maintenance switches can be retrofitted with **shield feed-through kits**.

Contact our sales team to determine if retrofitting is possible for your switch.





FOR MORE SAFETY
AND **RELIABILITY**

Notes

Maintenance Switches for EMC-compliant connection of FU-regulated drives are available either with **shield clips** (KS- and KL-enclosure) or with **clips mounted on DIN-rails** (STM-enclosure). These clips are used to continue the cable shield circuit through the enclosure.

The configuration of the Maintenance Switch between FU and motor allows the use as Disconnector **up to 400 Hz** and as Load Switch at frequencies **from 40 Hz to 100 Hz.**

Each Maintenance Switch has as standard **2 auxiliary contacts,** 1 NC and 1 NO. Via the NO (20 ms leading) the FU can be switched off before the main contacts of the switch open.

For the rating of the switch please note that the motor may have approx. **10 % higher charging rate due** to the higher loss in **FU-operation** e.g. a motor with 7,5 kW rating the motor current has to be determined with 16,7 A instead of 15,2 A.

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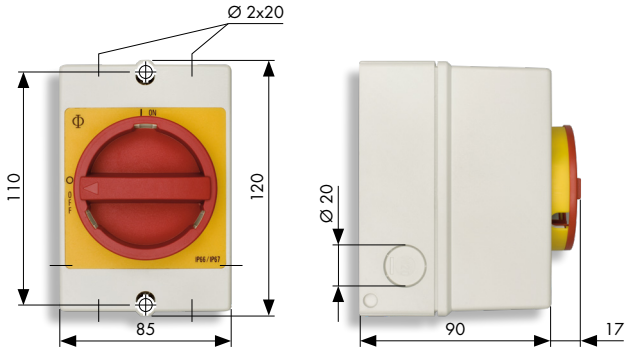
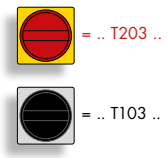
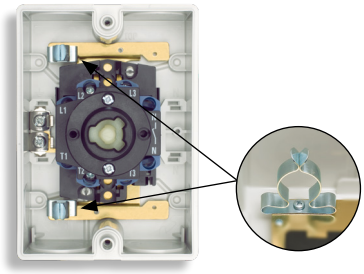
Dimensions in mm

Contact development: 3 pole with auxiliary contacts 1NC/1NO (leading off)

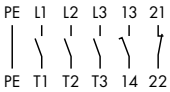
20 A / 5,5 kW ➡ *KG10*







Wiring diagram



External-Ø shield

9 – 11

General Data

Switch Disconnectors according to EN 60947-3 and VDE 0660 part 107

Ambient temperature (enclosed): 35 °C during 24 hours with peaks up to 40 °C

Equipment

Lastic enclosure, protection IP 66/67, knock-outs

Handle in the OFF-position lockable with padlocks, special safety interlocked covers with enclosure

With shield clips for use to continue the cable shield circuit through the enclosure

Rated Data / Order Number

Name	Art. No.	Thermal Current I_{the}	Utilization Category AC-23 B/A, 3x400 V	Utilization Category 3x400 V	Color Handle / Backing
KG10.T203/D-A076.KS51V	70008610	20 A	3,7 kW	5,5 kW	
KG10.T103/D-A050.KS51V	70000182	20 A	3,7 kW	5,5 kW	

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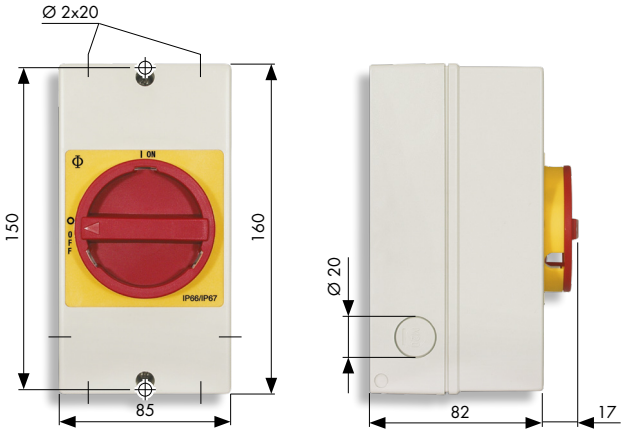
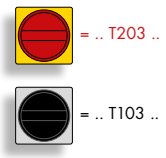
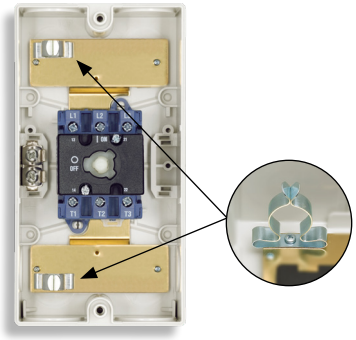
Dimensions in mm

Contact development: 3 pole with auxiliary contacts 1NC/1NO (leading off)

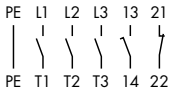
25 A / 7,5 kW ➡ *KG20*
32 A / 11 kW ➡ *KG32*







Wiring diagram



External-Ø shield

12 – 16

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General Data

Switch Disconnectors according to EN 60947-3 and VDE 0660 part 107

Ambient temperature (enclosed): 35 °C during 24 hours with peaks up to 40 °C

Equipment

Lastic enclosure, protection IP 66/67, knock-outs

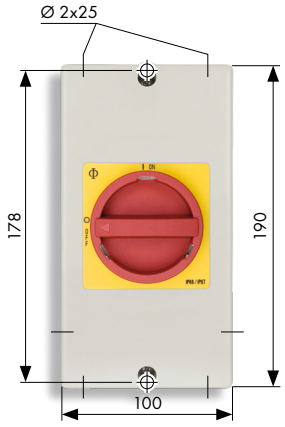
Handle in the OFF-position lockable with padlocks, special safety interlocked covers with enclosure

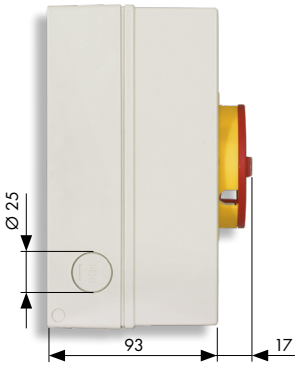
With shield clips for use to continue the cable shield circuit through the enclosure

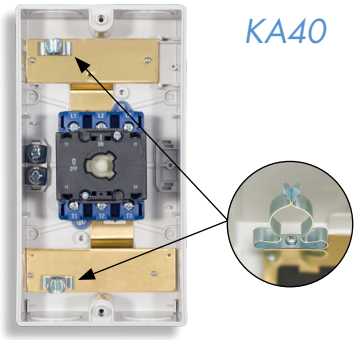
Name	Art. No.	I_{the}	AC-3 3x400V	AC-23A 3x400V	Handle / Color
KG20.T203/D-A159.KL51V	70011109	25 A	5,5 kW	7,5 kW	
KG20.T103/D-A126.KL51V	70011021	25 A	5,5 kW	7,5 kW	
KG32.T203/D-A117.KL51V	70010424	32 A	7,5 kW	11 kW	
KG32.T103/D-A061.KL51V	70016584	32 A	7,5 kW	11 kW	

Contact development: 3 pole with auxiliary contacts 1NC/1NO (leading off)

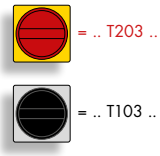
40 A / 20 kW ➡ *KA40*
63 A / 22 kW ➡ *KA63*

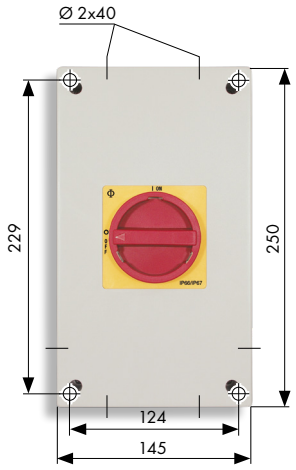


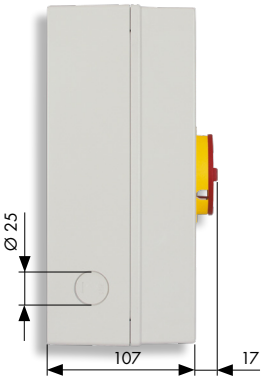


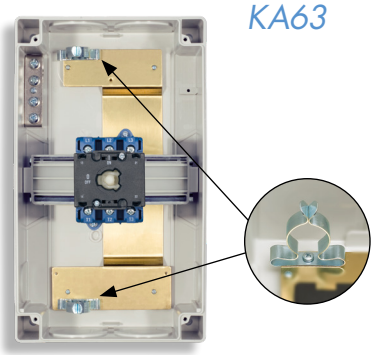


KA40



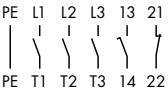






KA63

Wiring diagram



External-Ø shield

KA40 12 — 16
KA63 23 — 29

General Data
Switch Disconnectors according to EN 60947-3 and VDE 0660 part 107
Ambient temperature (enclosed): 35 °C during 24 hours with peaks up to 40 °C
Equipment
Lastic enclosure, protection IP 66/67, knock-outs
Handle in the OFF-position lockable with padlocks, special safety interlocked covers with enclosure
With shield clips for use to continue the cable shield circuit through the enclosure

Name	Art. No.	I_{the}	AC-3 3x400V	AC-23A 3x400V	Handle / Color
KA40.T203/E1.KL11V	70031247	40 A	15 kW	20 kW	
KA40.T103/E1.KL11V	70031241	40 A	15 kW	20 kW	
KA63.T203/E1.KL71V	70031244	63 A	18,5 kW	22 kW	
KA63.T103/E1.KL71V	70031252	63 A	18,5 kW	22 kW	

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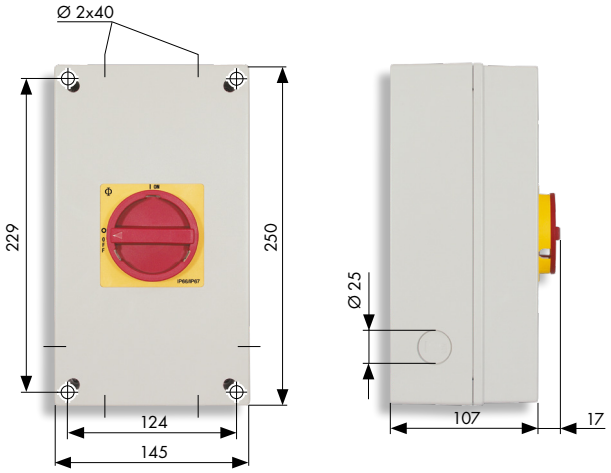
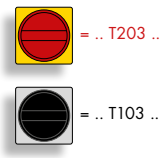
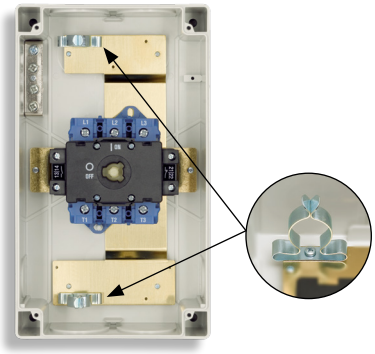
Dimensions in mm

Contact development: 3 pole with auxiliary contacts 1NC/1NO (leading off)

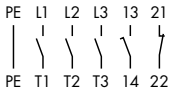
80 A / 30 kW ➡ *KG80*
100 A / 37 kW ➡ *KG100*







Wiring diagram



External-Ø shield

23 – 29

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General Data

Switch Disconnectors according to EN 60947-3 and VDE 0660 part 107

Ambient temperature (enclosed): 35 °C during 24 hours with peaks up to 40 °C

Equipment

Lastic enclosure, protection IP 66/67, knock-outs

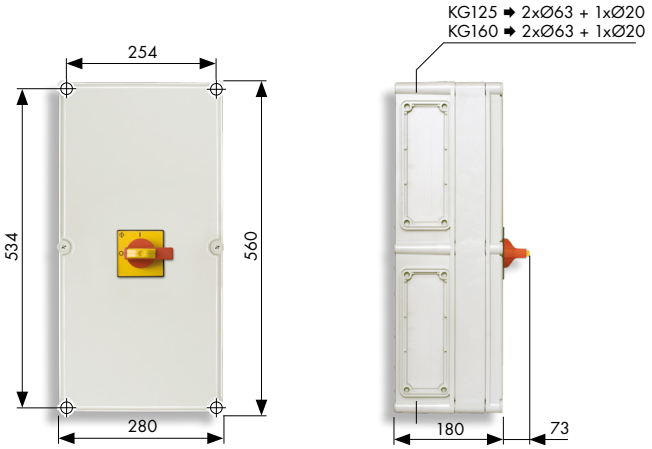
Handle inthe OFF-position lockable with padlocks, special safety interlocked covers withenclosure

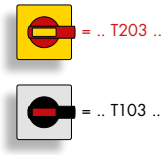
With shield clips for use to continue the cable shield circuit through the enclosure

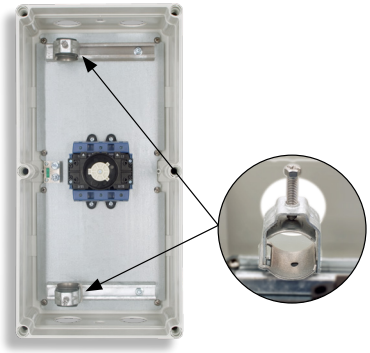
Name	Art. No.	I_{the}	AC-3 3x400V	AC-23A 3x400V	Handle / Color
KG80.T203/D-A108.KL71V	70010474	80 A	22 kW	30 kW	
KG80.T103/D-A061.KL71V	70011304	80 A	22 kW	30 kW	
KG100.T203/D-A120.KL71V	70011306	100 A	30 kW	37 kW	
KG100.T103/D-A068.KL71V	70022094	100 A	30 kW	37 kW	

Contact development: 3 pole with auxiliary contacts 1NC/1NO (leading off)

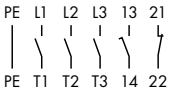
125 A / 45 kW ➡ *KG125*
160 A / 55 kW ➡ *KG160*







Wiring diagram



External-Ø shield

34 – 40

General Data

Switch Disconnectors according to EN 60947-3 and VDE 0660 part 107

Ambient temperature (enclosed): 35 °C during 24 hours with peaks up to 40 °C

Equipment

Plastic enclosure, protection IP 66/67

Handle in the OFF-position lockable with padlocks, special safety interlocked covers with enclosure

With on DIN-rails mounted clips for use to continue the cable shield circuit through the enclosure

Name	Art. No.	I_{the}	AC-3 3x400V	AC-23A 3x400V	Handle / Color
KG125.T203/D-A082.STM	70021607	125 A	37 kW	45 kW	
KG125.T103/D-A070.STM	70022095	125 A	37 kW	45 kW	
KG160.T203/D-A077.STM	70011325	160 A	45 kW	55 kW	
KG160.T103/D-A066.STM	70019588	160 A	45 kW	55 kW	

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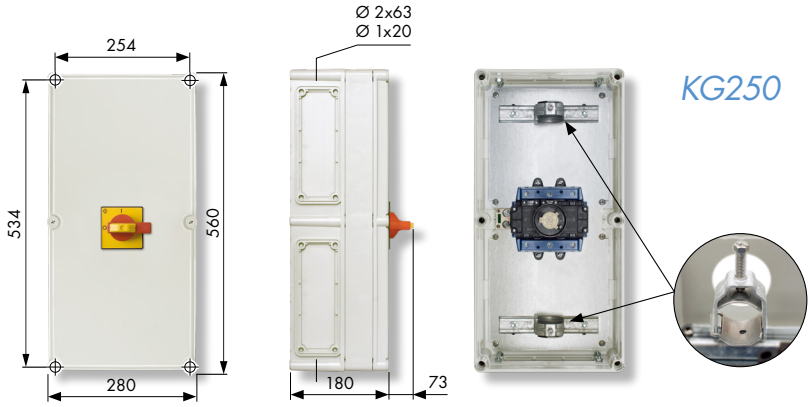
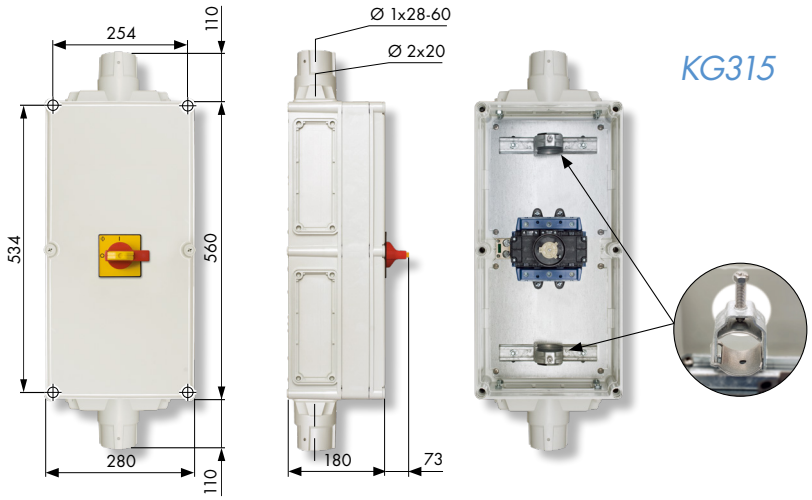
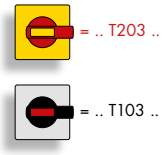
Dimensions in mm

Contact development: 3 pole with auxiliary contacts 1NC/1NO (leading off)

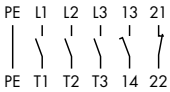
250 A / 90 kW ➡ *KG250*
315 A / 110 kW ➡ *KG315*







Wiring diagram



External-Ø shield

KG250	34 – 40
KG315	46 – 52

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General Data

Switch Disconnectors according to EN 60947-3 and VDE 0660 part 107

Ambient temperature (enclosed): 35 °C during 24 hours with peaks up to 40 °C

Equipment

Plastic enclosure, protection IP 66/67

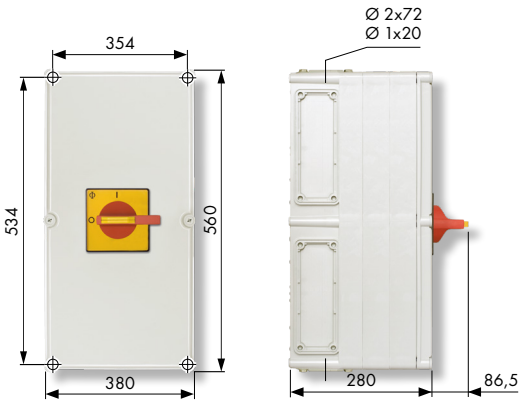
Handle in the OFF-position lockable with padlocks, special safety interlocked covers with enclosure

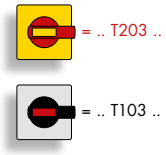
With on DIN-rails mounted clips for use to continue the cable shield circuit through the enclosure

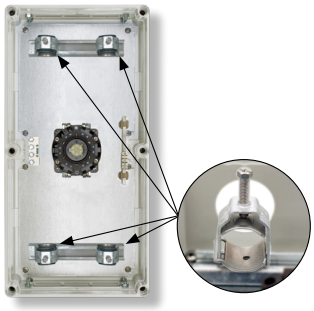
Name	Art. No.	I_{the}	AC-3 3x400V	AC-23A 3x400V	Handle / Color
KG250.T203/D-A075.STM	70015149	250 A	55 kW	90 kW	
KG250.T103/D-A073.STM	70021751	250 A	55 kW	90 kW	
KG315.T203/D-A034.STM	70010413	315 A	75 kW	110 kW	
KG315.T103/D-A043.STM	70022022	315 A	75 kW	110 kW	

Contact development: 3 pole with auxiliary contacts 1NC/1NO (leading off)

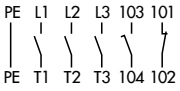
315 A / 132 kW ➡ *C316*







Wiring diagram



External-Ø shield

C316	46 – 52

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General Data

Switch Disconnectors according to EN 60947-3 and VDE 0660 part 107

Ambient temperature (enclosed): 35 °C during 24 hours with peaks up to 40 °C

Equipment

Plastic enclosure, protection IP 66/67

Handle in the OFF-position lockable with padlocks, special safety interlocked covers with enclosure

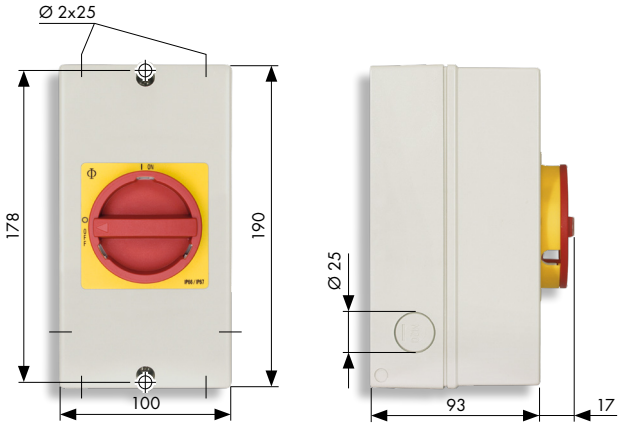
With on DIN-rails mounted clips for use to continue the cable shield circuit through the enclosure

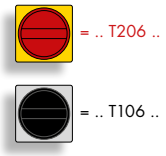
Name	Art. No.	I_{the}	AC-3 3x400V	AC-23A 3x400V	Handle / Color
C316.T203/D-A037.STM	70021610	315 A	55 kW	132 kW	
C316.T103/D-A025.STM	70021721	315 A	55 kW	132 kW	

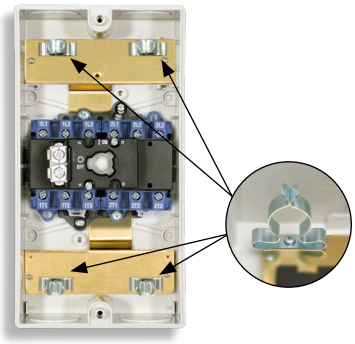
Dimensions in mm

Contact development: 6 pole with auxiliary contacts 1NC/1NO (leading off)

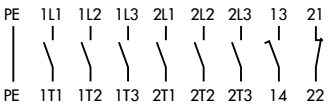
25 A / 7,5 kW ➡ *KG20B*
32 A / 11 kW ➡ *KG32B*







Wiring diagram



External-Ø shield

12 – 16

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General Data

Switch Disconnectors according to EN 60947-3 and VDE 0660 part 107

Ambient temperature (enclosed): 35 °C during 24 hours with peaks up to 40 °C

Equipment

Lastic enclosure, protection IP 66/67, knock-outs

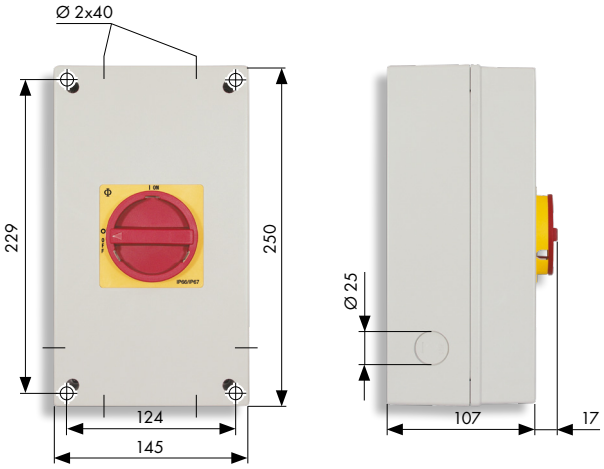
Handle inthe OFF-position lockable with padlocks, special safety interlocked covers withenclosure

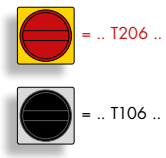
With shield clips for use to continue the cable shield circuit through the enclosure

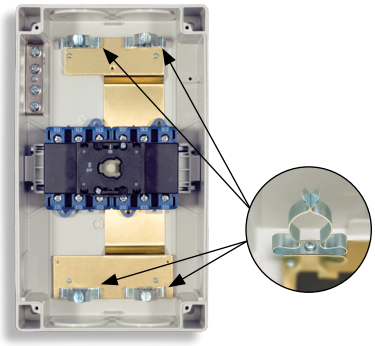
Name	Art. No.	I_{the}	AC-3 3x400V	AC-23A 3x400V	Handle / Color
KG20B.T206/D-A059.KL11V	70011049	25 A	5,5 kW	7,5 kW	
KG20B.T106/D-A046.KL11V	70011881	25 A	5,5 kW	7,5 kW	
KG32B.T206/D-A054.KL11V	70011051	32 A	7,5 kW	11 kW	
KG32B.T106/D-A040.KL11V	70033788	32 A	7,5 kW	11 kW	

Contact development: 6 pole with auxiliary contacts 1NC/1NO (leading off)

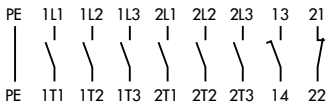
40 A / 20 kW ➡ *KA40B*
63 A / 22 kW ➡ *KA63B*







Wiring diagram



External-Ø shield

23 – 29

General Data

Switch Disconnectors according to EN 60947-3 and VDE 0660 part 107

Ambient temperature (enclosed): 35 °C during 24 hours with peaks up to 40 °C

Equipment

Lastic enclosure, protection IP 66/67, knock-outs

Handle inthe OFF-position lockable with padlocks, special safety interlocked covers withenclosure

With shield clips for use to continue the cable shield circuit through the enclosure

Name	Art. No.	I_{the}	AC-3 3x400V	AC-23A 3x400V	Handle / Color
KA40B.T206/E1.KL71V	70038156	40 A	15 kW	20 kW	
KA40B.T106/E1.KL71V	70037283	40 A	15 kW	20 kW	
KA63B.T206/E1.KL71V	70039502	63 A	18,5 kW	22 kW	
KA63B.T106/E1.KL71V	70037281	63 A	18,5 kW	22 kW	

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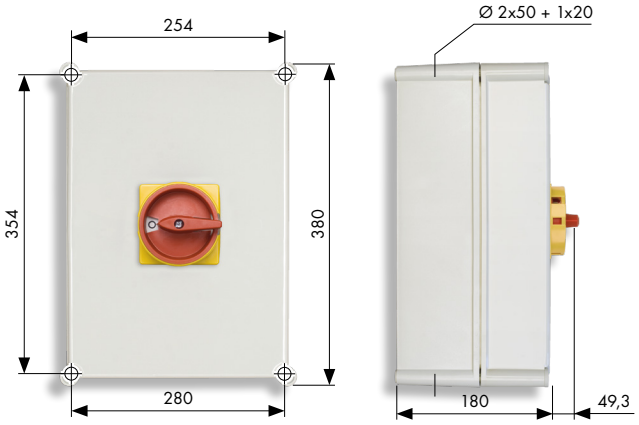
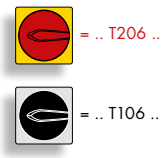
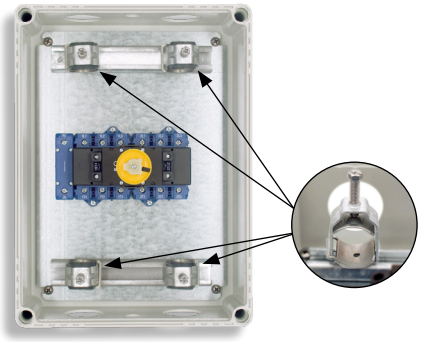
Dimensions in mm

Contact development: 6 pole with auxiliary contacts 1NC/1NO (leading off)

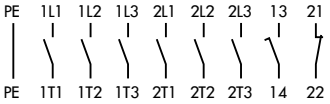
80 A / 30 kW ➡ *KG80C*
100 A / 37 kW ➡ *KG100C*







Wiring diagram



External-Ø shield

28 – 34

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General Data

Switch Disconnectors according to EN 60947-3 and VDE 0660 part 107

Ambient temperature (enclosed): 35 °C during 24 hours with peaks up to 40 °C

Equipment

Plastic enclosure, protection IP 66/67

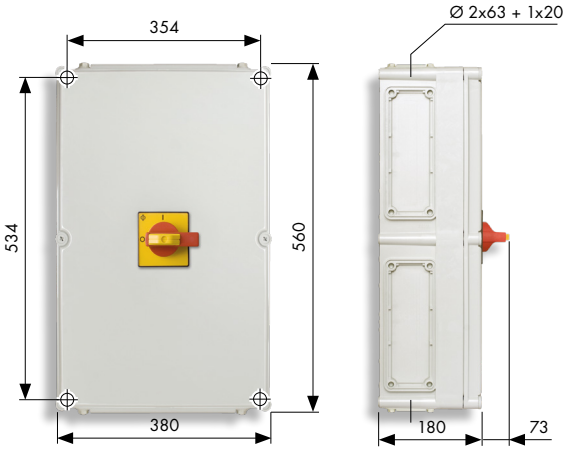
Handle in the OFF-position lockable with padlocks, special safety interlocked covers with enclosure

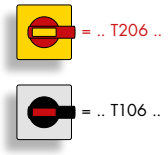
With on DIN-rails mounted clips for use to continue the cable shield circuit through the enclosure

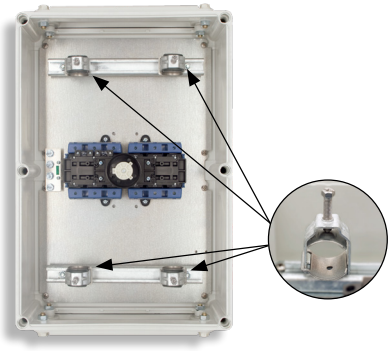
Name	Art. No.	I_{the}	AC-3 3x400V	AC-23A 3x400V	Handle / Color
KG80C.T206/D-A070.STM	70022583	80 A	22 kW	30 kW	
KG80C.T106/D-A055.STM	70020989	80 A	22 kW	30 kW	
KG100C.T206/D-A060.STM	70022584	100 A	30 kW	37 kW	
KG100C.T106/D-A049.STM	70022588	100 A	30 kW	37 kW	

Contact development: 6 pole with auxiliary contacts 1NC/1NO (leading off)

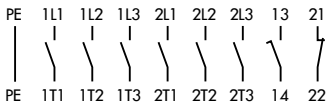
125 A / 45 kW ➡ *KG125*
160 A / 55 kW ➡ *KG160*







Wiring diagram



External-Ø shield

34 – 40

General Data

Switch Disconnectors according to EN 60947-3 and VDE 0660 part 107

Ambient temperature (enclosed): 35 °C during 24 hours with peaks up to 40 °C

Equipment

Plastic enclosure, protection IP 66/67

Handle in the OFF-position lockable with padlocks, special safety interlocked covers with enclosure

With on DIN-rails mounted clips for use to continue the cable shield circuit through the enclosure

Name	Art. No.	I_{the}	AC-3 3x400V	AC-23A 3x400V	Handle / Color
KG125.T206/D-A020.STM	70022585	125 A	37 kW	45 kW	
KG125.T106/D-A031.STM	70022589	125 A	37 kW	45 kW	
KG160.T206/D-A040.STM	70022587	160 A	45 kW	55 kW	
KG160.T106/D-A024.STM	70022590	160 A	45 kW	55 kW	

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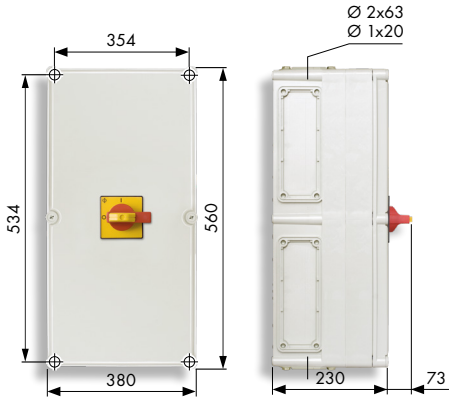
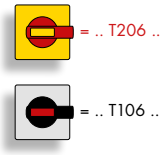
Dimensions in mm

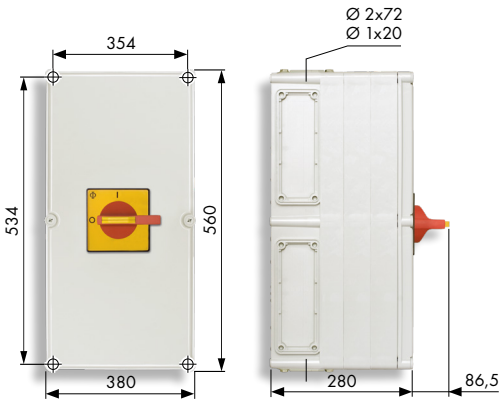
Contact development: 6 pole with auxiliary contacts 1NC/1NO (leading off)

200 A / 75 kW ➡ *C200-4*
315 A / 132 kW ➡ *C316*



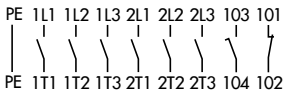
C200-4





C316

Wiring diagram



External-Ø shield

C200-4	34 – 40
C316	46 – 52

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General Data

Switch Disconnectors according to EN 60947-3 and VDE 0660 part 107

Ambient temperature (enclosed): 35 °C during 24 hours with peaks up to 40 °C

Equipment

Plastic enclosure, protection IP 66/67

Handle in the OFF-position lockable with padlocks, special safety interlocked covers with enclosure

With on DIN-rails mounted clips for use to continue the cable shield circuit through the enclosure

Name	Art. No.	I_{the}	AC-3 3x400V	AC-23A 3x400V	Handle / Color
C200-4.T206/D-A001.STM	70009765	200 A	37 kW	75 kW	
C200-4.T106/D-A001.STM	70023125	200 A	37 kW	75 kW	
C316.T206/D-A050.STM	70027327	315 A	55 kW	132 kW	
C316.T106/D-A033.STM	70026633	315 A	55 kW	132 kW	

UPGRADE KIT

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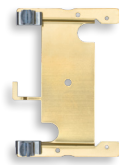
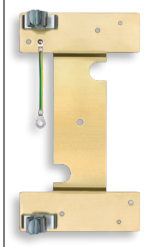
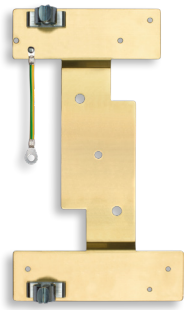
Shield wheeling kits


Standard KS- KL-Enclosure				
Dimensions enclosures	85 x 120	85 x 160	100 x 190	145 x 250
External-Ø shield	9 – 11	12 – 16	12 – 16	23 – 29
Name	*S0E.T400.MA*	*K0B.T400.MA*	*K1B.T400.MA*	*K2B.T400.MA*
Art. No.	2034380	2148422	2148858	2149381

Shielding clamp suitable for double side connecting. Scope of delivery: panel sheet, 2 shielding clamps, mounting screws

Shield wheeling kit available for 3 pole switches up to KG100.... And 6 pole switches up to KG64. All relevant catalogue listed repair switches can be upgraded with shield wheeling kits. The switch body has to be demounted first before mounting the shield wheeling.

Shielding clamp (separate)



External-Ø shield	9 – 11	12 – 16	23 – 29
Name	*K1B.T400.KB*	*K1B.T400.KC*	*K1B.T400.KE*
Art. No.	2148854	2138231	2148856

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