



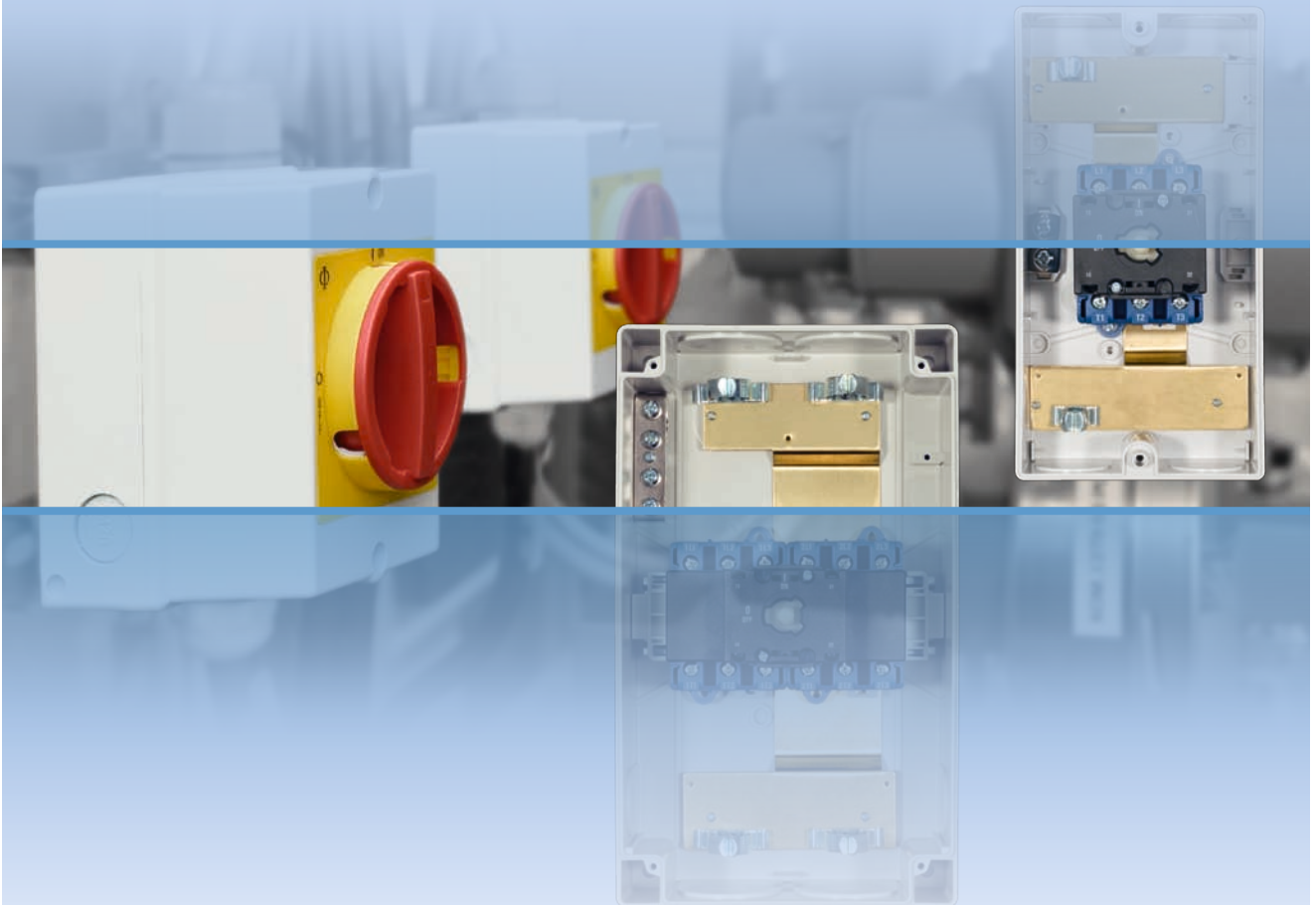
Kraus & Naimer

BLUE LINE switchgear

since 1907

Maintenance Switches for

EMC-compliant connection



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Maintenance Switches for

EMC-compliant connection



Content

Please choose the suitable Maintenance Switch due to the power data of your projected drive from the table below.

Maintenance Switches and Safety Switches according to IEC 60204 and VDE 0113 for EMC-compliant connection of frequency regulated motors

[< Click the page number to get there. >](#)

Thermal Current I_{the}	Nominal Rating:		3 pole Page	6 pole Page
	Motor Rating AC-23B/A, 3x400V			
20 A	5,5 kW		3	-
25 A	7,5 kW		4	9
32 A	11 kW		4	9
40 A	15 kW		5	10
63 A	22 kW		5	10
80 A	30 kW		6	11
100 A	37 kW		6	11
125 A	45 kW		7	12
160 A	55 kW		7	12
250 A	90 kW		8	-
315 A	110 kW		8	-
Sales Contact			13	

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Note:

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 unlimited and as Load Switch at frequencies from 30 Hz to 80 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.

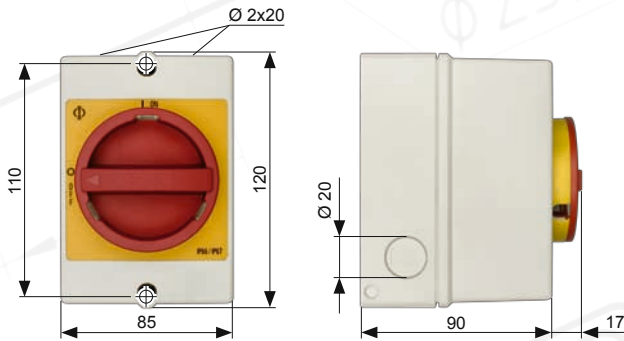


Maintenance Switches for

EMC-compliant connection

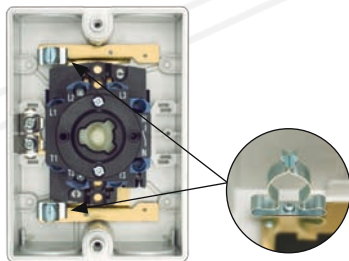


Maintenance Switches and Safety Switches according to IEC 60204 and VDE 0113 for EMC-compliant connection of frequency regulated motors



T203:
Handle red,
Backing yellow

T103:
Handle black,
Backing electro-gray



Connection diagram		Recommended tightening torque for terminal screws	
PE	L1 L2 L3 13 21	KG10	0,8 Nm
PE	T1 T2 T3 14 22		
External-Ø shield		Insulation stripping length	
9—11			

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

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, 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

Thermal Current I_{the}	Utilization Category AC-23 B/A, 3x400 V	Breaking Capacity 3x400 V	Color Handle / Backing	Order Number
20 A	5,5 kW	120 A	red / yellow black / electro-gray	KG10 T203/D-A076 KS51V KG10 T103/D-A050 KS51V

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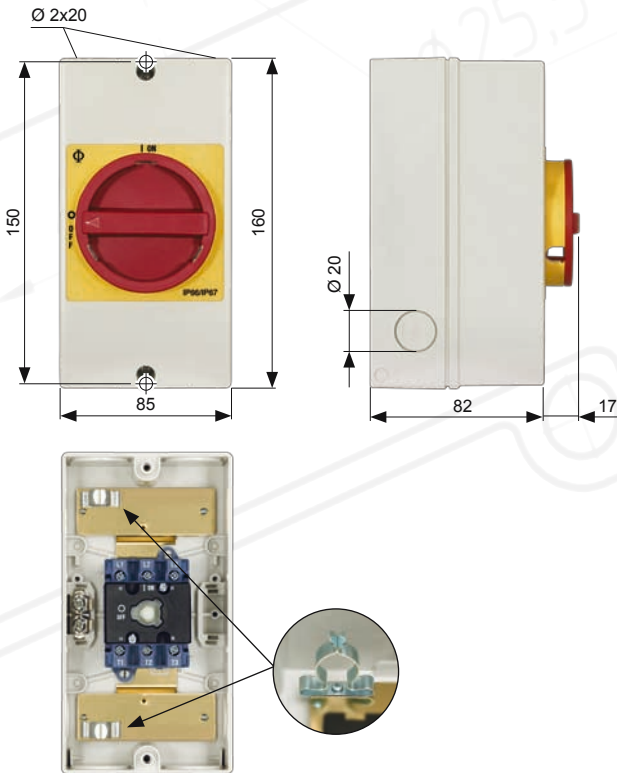


Maintenance Switches for

EMC-compliant connection



Maintenance Switches and Safety Switches according to IEC 60204 and VDE 0113 for EMC-compliant connection of frequency regulated motors



T203:
Handle red,
Backing yellow

T103:
Handle black,
Backing electro-gray

Connection diagram		Recommended tightening torque for terminal screws	
PE	L1 L2 L3 13 21	KG20	1,25 Nm
PE	T1 T2 T3 14 22	KG32	1,25 Nm
External-Ø shield		Insulation stripping length	
12—16			

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

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, 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

Thermal Current I_{the}	Utilization Category AC-23 B/A, 3x400 V	Breaking Capacity 3x400 V	Color Handle / Backing	Order Number
25 A	7,5 kW	180 A	red / yellow black / electro-gray	KG20 T203/D-A159 KL51V KG20 T103/D-A126 KL51V
32 A	11 kW	220 A	red / yellow black / electro-gray	KG32 T203/D-A117 KL51V KG32 T103/D-A061 KL51V

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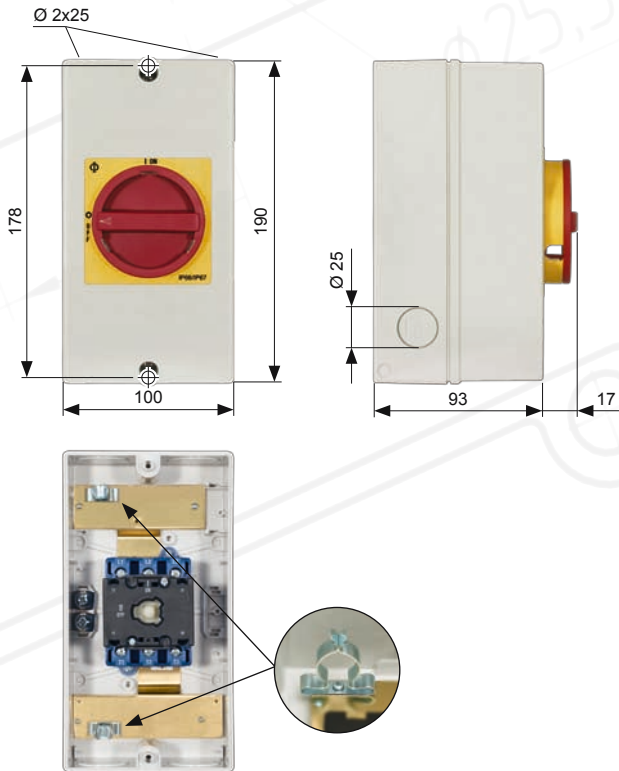


Maintenance Switches for

EMC-compliant connection



Maintenance Switches and Safety Switches according to IEC 60204 and VDE 0113 for EMC-compliant connection of frequency regulated motors



T203:
Handle red,
Backing yellow

T103:
Handle black,
Backing electro-gray

Connection diagram		Recommended tightening torque for terminal screws	
PE	L1 L2 L3 13 21	KG41 KG64	1,80 Nm 1,80 Nm
PE	T1 T2 T3 14 22		
External-Ø shield		Insulation stripping length	
12—16			

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

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, 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

Thermal Current I_{the}	Utilization Category AC-23 B/A, 3x400 V	Breaking Capacity 3x400 V	Color Handle / Backing	Order Number
40 A	15 kW	300 A	red / yellow black / electro-gray	KG41 T203/D-A145 KL11V KG41 T103/D-A087 KL11V
63 A	22 kW	350 A	red / yellow black / electro-gray	KG64 T203/D-A173 KL11V KG64 T103/D-A103 KL11V

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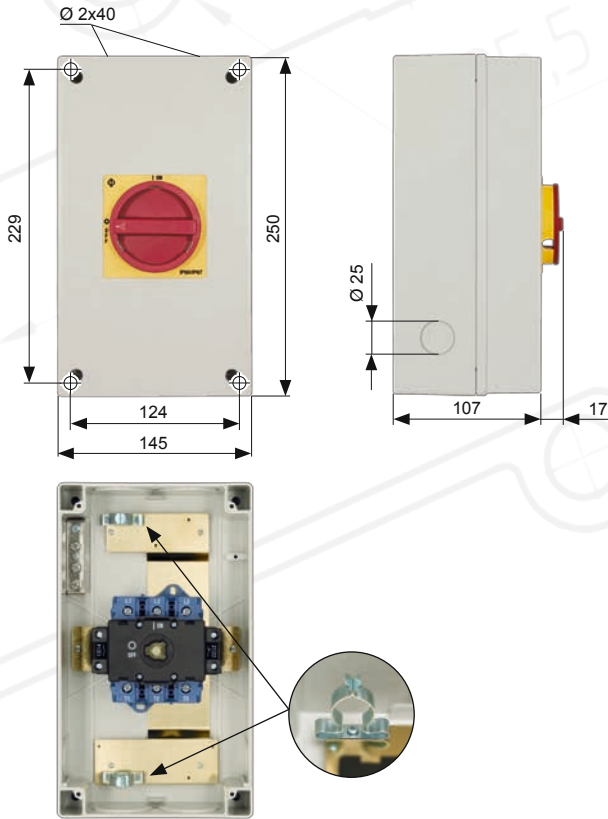


Maintenance Switches for

EMC-compliant connection





Maintenance Switches and Safety Switches according to IEC 60204 and VDE 0113 for EMC-compliant connection of frequency regulated motors



T203:
Handle red,
Backing yellow

T103:
Handle black,
Backing electro-gray

Connection diagram		Recommended tightening torque for terminal screws	
PE	L1 L2 L3 13 21	KG80 3,00 Nm KG100 3,00 Nm	
PE	T1 T2 T3 14 22		
External- \varnothing shield		Insulation stripping length	
23—29			

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

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, 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

Thermal Current I_{the}	Utilization Category AC-23 B/A, 3x400 V	Breaking Capacity 3x400 V	Color Handle / Backing	Order Number
80 A	30 kW	560 A	red / yellow black / electro-gray	KG80 T203/D-A108 KL71V KG80 T103/D-A061 KL71V
100 A	37 kW	650 A	red / yellow black / electro-gray	KG100 T203/D-A120 KL71V KG100 T103/D-A068 KL71V

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Maintenance Switches for

EMC-compliant connection



KG125 ➔ 2xØ50 + 1xØ20
KG160 ➔ 2xØ63 + 1xØ20

Maintenance Switches and Safety Switches according to IEC 60204 and VDE 0113 for EMC-compliant connection of frequency regulated motors

T203:
Handle red,
Backing yellow

T103:
Handle black,
Backing brushed alu

Connection diagram		Recommended tightening torque for terminal screws	
PE	L1 L2 L3 13 21	KG125 KG160	14 Nm 14 Nm
PE	T1 T2 T3 14 22		
External-Ø shield		Insulation stripping length	
34—40			

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

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

Rated Data / Order Number

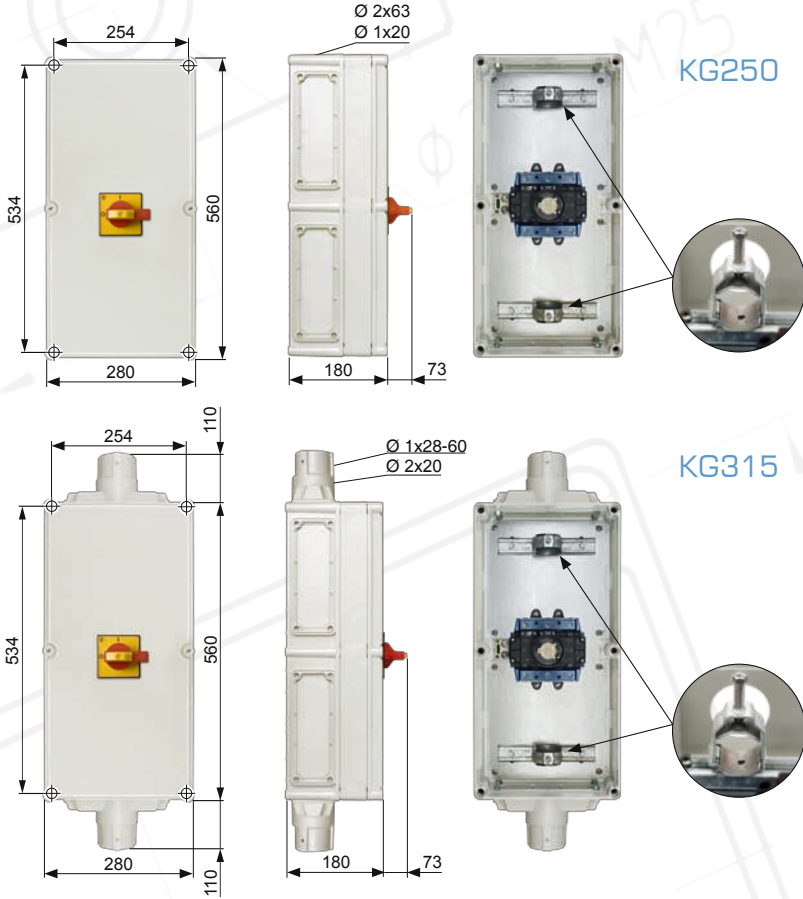
Thermal Current I_{the}	Utilization Category AC-23 B/A, 3x400 V	Breaking Capacity 3x400 V	Color Handle / Backing	Order Number
125 A	45 kW	750 A	red / yellow black / brushed alu	KG125 T203/D-A082 STM KG125 T103/D-A070 STM
160 A	55 kW	850 A	red / yellow black / brushed alu	KG160 T203/D-A077 STM KG160 T103/D-A066 STM

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Maintenance Switches for

EMC-compliant connection



KG250

KG315

Maintenance Switches and Safety Switches according to IEC 60204 and VDE 0113 for EMC-compliant connection of frequency regulated motors

T203:
Handle red,
Backing yellow

T103:
Handle black,
Backing brushed alu

Connection diagram		Recommended tightening torque for terminal screws	
PE	L1 L2 L3 13 21	KG250 KG315	16 Nm 16 Nm
PE	T1 T2 T3 14 22		
External-Ø shield		Insulation stripping length	
KG250	34—40		
KG315	46—52		

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

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

Rated Data / Order Number

Thermal Current I_{the}	Utilization Category AC-23 B/A, 3x400 V	Breaking Capacity 3x400 V	Color Handle / Backing	Order Number
250 A	90 kW	1380 A	red / yellow black / brushed alu	KG250 T203/D-A075 STM KG250 T103/D-A073 STM
315 A	110 kW	1650 A	red / yellow black / brushed alu	KG315 T203/D-A034 STM KG315 T103/D-W007 STM

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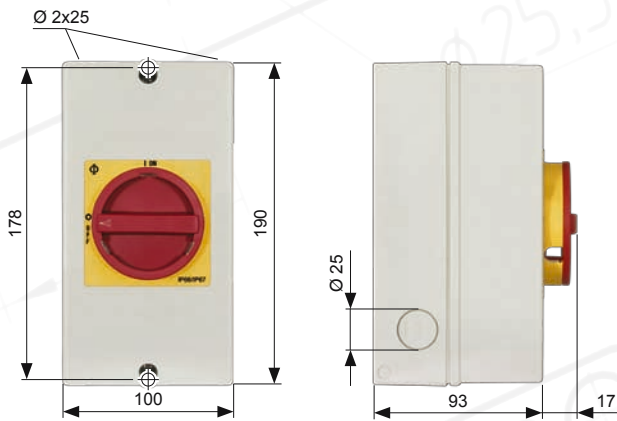


Maintenance Switches for

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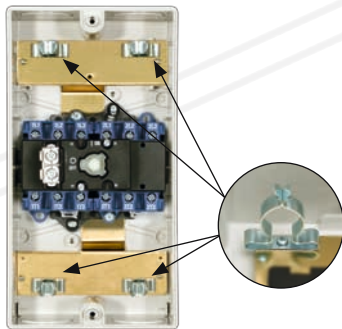


Maintenance Switches and Safety Switches according to IEC 60204 and VDE 0113 for EMC-compliant connection of frequency regulated motors



T203:
Handle red,
Backing yellow

T103:
Handle black,
Backing electro-gray



Connection diagram		Recommended tightening torque for terminal screws	
PE	1L1 1L2 1L3 2L1 2L2 2L3 13 21	KG20B	1,25 Nm
PE	1T1 1T2 1T3 2T1 2T2 2T3 14 22	KG32B	1,25 Nm
External-Ø shield		Insulation stripping length	
12—16			

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

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, 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

Thermal Current I_{the}	Utilization Category AC-23 B/A, 3x400 V	Breaking Capacity 3x400 V	Color Handle / Backing	Order Number
25 A	7,5 kW	180 A	red / yellow	KG20B T206/D-A059 KL11V
			black / electro-gray	KG20B T106/D-A046 KL11V
32 A	11 kW	220 A	red / yellow	KG32B T206/D-A054 KL11V
			black / electro-gray	KG32B T106/D-A040 KL11V

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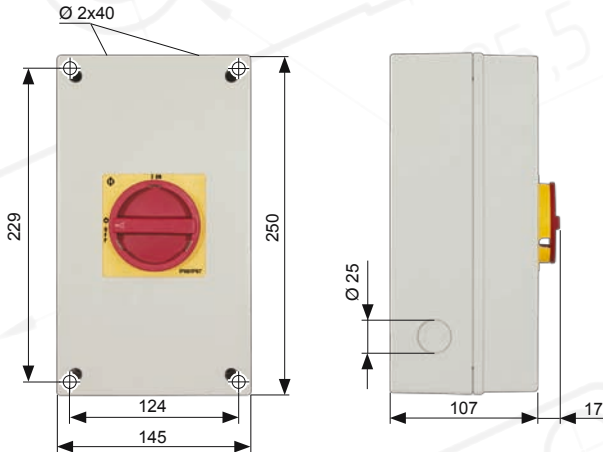


Maintenance Switches for

EMC-compliant connection

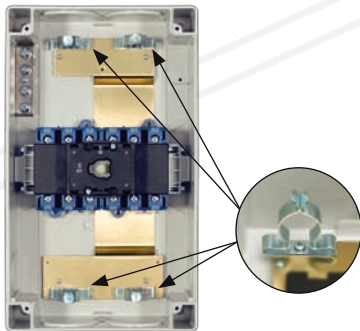


Maintenance Switches and Safety Switches according to IEC 60204 and VDE 0113 for EMC-compliant connection of frequency regulated motors



T203:
Handle red,
Backing yellow

T103:
Handle black,
Backing electro-gray



Connection diagram		Recommended tightening torque for terminal screws	
PE	1L1 1L2 1L3 2L1 2L2 2L3 13 21	KG41B	1,80 Nm
PE	1T1 1T2 1T3 2T1 2T2 2T3 14 22	KG64B	1,80 Nm
External-Ø shield		Insulation stripping length	
23—29			

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

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, 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

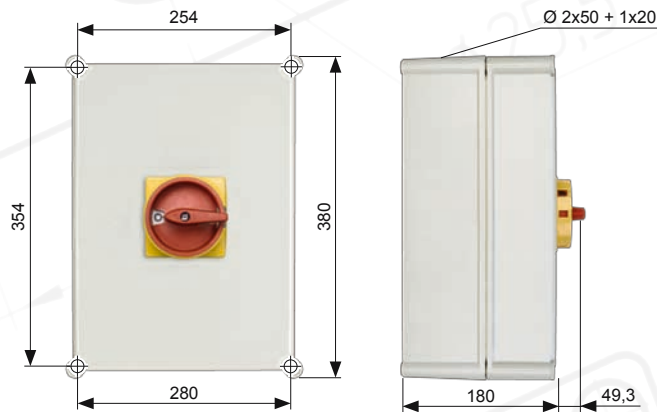
Thermal Current I_{the}	Utilization Category AC-23 B/A, 3x400 V	Breaking Capacity 3x400 V	Color Handle / Backing	Order Number
40 A	15 kW	300 A	red / yellow black / electro-gray	KG41B T206/D-A052 KL71V KG41B T106/D-A032 KL71V
63 A	22 kW	350 A	red / yellow black / electro-gray	KG64B T206/D-A066 KL71V KG64B T106/D-A038 KL71V

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Maintenance Switches for

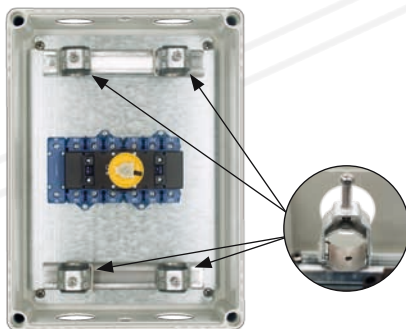
EMC-compliant connection



Maintenance Switches and Safety Switches according to IEC 60204 and VDE 0113 for EMC-compliant connection of frequency regulated motors

T203:
Handle red,
Backing yellow

T103:
Handle black,
Backing electro-gray



Connection diagram		Recommended tightening torque for terminal screws	
PE	1L1 1L2 1L3 2L1 2L2 2L3 13 21	KG80C KG100C	3 Nm 3 Nm
PE	1T1 1T2 1T3 2T1 2T2 2T3 14 22		
External-Ø shield		Insulation stripping length	
28—34			

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

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

Rated Data / Order Number

Thermal Current I_{the}	Utilization Category AC-23 B/A, 3x400 V	Breaking Capacity 3x400 V	Color Handle / Backing	Order Number
80 A	30 kW	560 A	red / yellow black / electro-gray	KG80C T206/D-A070 STM KG80C T106/D-A055 STM
100 A	37 kW	650 A	red / yellow black / electro-gray	KG100C T206/D-A060 STM KG100C T106/D-A049 STM

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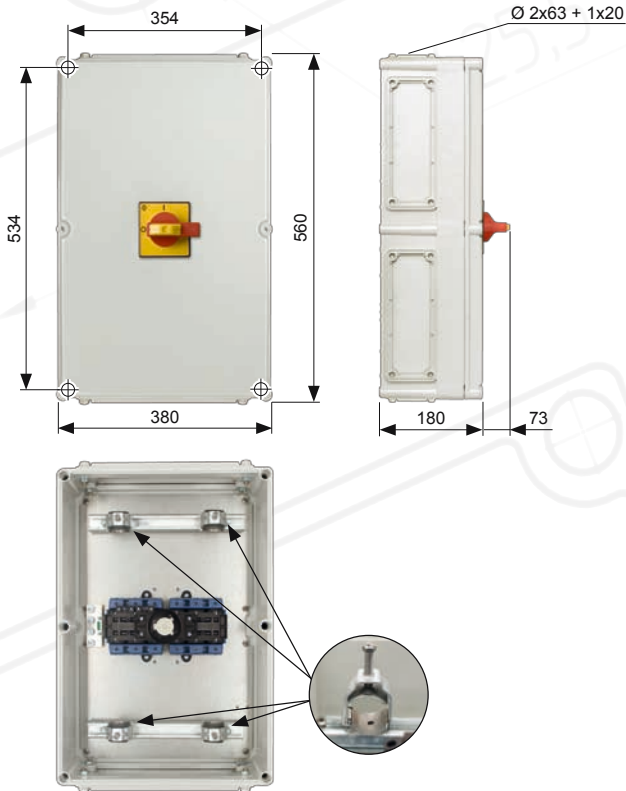


Maintenance Switches for

EMC-compliant connection




Maintenance Switches and Safety Switches according to IEC 60204 and VDE 0113 for EMC-compliant connection of frequency regulated motors



T203:
Handle red,
Backing yellow

T103:
Handle black,
Backing brushed alu

Connection diagram		Recommended tightening torque for terminal screws	
PE	1L1 1L2 1L3 2L1 2L2 2L3 13 21	KG125	14 Nm
PE	1T1 1T2 1T3 2T1 2T2 2T3 14 22	KG160	14 Nm
External-Ø shield		Insulation stripping length	
34—40			

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

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

Rated Data / Order Number

Thermal Current I_{the}	Utilization Category AC-23 B/A, 3x400 V	Breaking Capacity 3x400 V	Color Handle / Backing	Order Number
125 A	45 kW	750 A	red / yellow black / brushed alu	KG125 T206/D-A020 STM KG125 T106/D-A031 STM
160 A	55 kW	850 A	red / yellow black / brushed alu	KG160 T206/D-A040 STM KG160 T106/D-A024 STM

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Kraus & Naimer

BLUE LINE switchgear



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