

# Cam Switches Ex9ZE



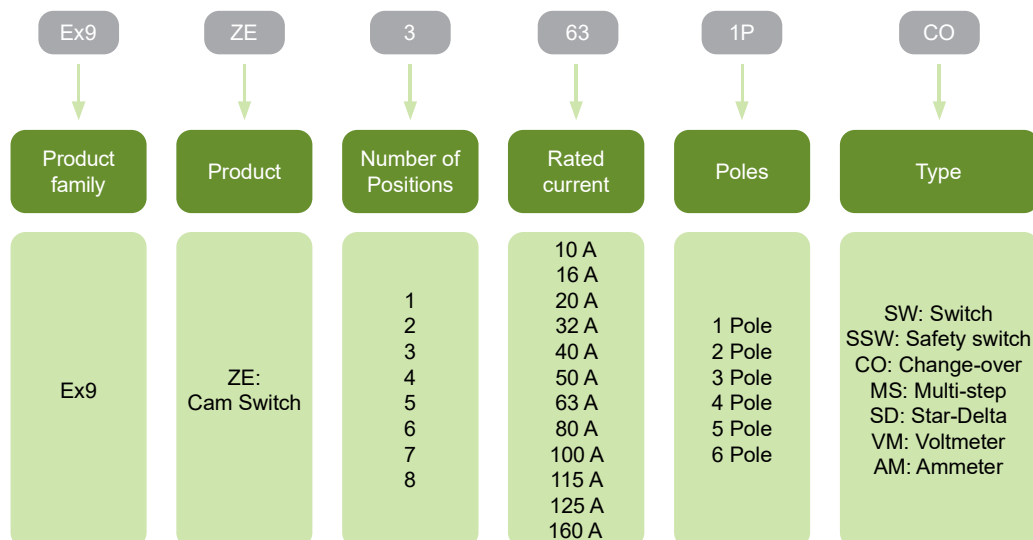
- Meet requirements of IEC/EN 60947-3 IEC/EN 60947-5-1
- Cam Switches are used in main and auxiliary circuits requiring frequent switching on-off:
  1. In switching on-off of single, two and three-phase electric circuits
  2. In controlling of devices measuring voltage-current values
  3. In processes of starting or stopping by switching on or off the supply circuits of motors
  4. As on-off switch, selector and step-alternator in transformers and welding machines
  5. As pole-alternator or grouping switch, in required places such as network-regulator
  6. As automatic, reversible switch with start
- Rated current 10A up to 160A
- Utilization Category AC-3, AC-4, AC-23
- Protection rating IP20 (Body/Poles)IP40 (From panel door installation)

Our cam switches are manufactured according to the highest engineering standards by benefiting from the modern technological developments in the range of switch devices by using the highest-quality isolation materials and silver compound riveted copper contact.

Each switch consists of various on-off elements that can be easily assembled-disassembled according to the switching program. The casing of the switching on-off elements are made of plastic material resistant to electric leakage and arc effects.

The body material is PBT which can resist and is non-flammable up to very high temperatures. Contact materials and terminals fully comply with **EN 60947-3**

## Type Key



## Certification marks



# Cam Switch Ex9ZE

## On-Off Switch

- Cam switch “On/Off” switches are common in various applications, from controlling lights and household appliances to operating industrial machinery. These switches provide a straightforward and effective way to turn electrical devices on and off and are easy to use. Furthermore, they are essential for safety and power control in numerous electrical systems and equipment.
- Cam Switch available in **1 — 6 Pole** version up to 160A
- Insulation Voltage (**Ui**) / **450V-10A, 500V-16A, 660V 20A** up to 160A
- Impulse Withstand Voltage (**Uimp**) **4kV** 10A up to 125A, **6kV-160A**
- Short Circuit Breaking Capacity **6 kA (10A up to 160A)**
- Utilization Category **AC3 ,AC4 , AC23**
- Turning angle **60°**



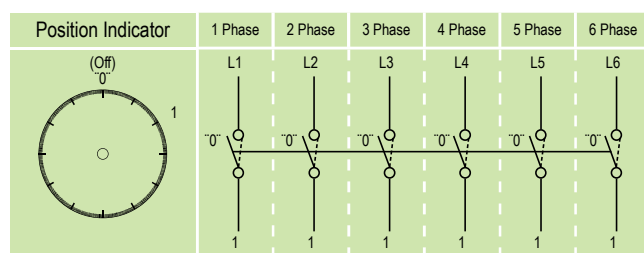
Control voltage	Number of poles	Rated current	Article No.	Type	Packing
220-400 V AC	1	10 A	114254	Ex9ZE2-10/1P SW	1/10/250
220-400 V AC	1	16 A	114255	Ex9ZE2-16/1P SW	1/10/250
220-400 V AC	1	20 A	114256	Ex9ZE2-20/1P SW	1/10/250
220-400 V AC	1	25 A	114257	Ex9ZE2-25/1P SW	1/10/250
220-400 V AC	1	32 A	114258	Ex9ZE2-32/1P SW	1/10/100
220-400 V AC	1	40 A	114259	Ex9ZE2-40/1P SW	1/10/100
220-400 V AC	1	50 A	114260	Ex9ZE2-50/1P SW	1/10/80
220-400 V AC	1	63 A	114261	Ex9ZE2-63/1P SW	1/10/80
220-400 V AC	1	80 A	114262	Ex9ZE2-80/1P SW	1/10/80
220-400 V AC	1	100 A	114263	Ex9ZE2-100/1P SW	1/6/30
220-400 V AC	1	115 A	114264	Ex9ZE2-115/1P SW	1/6/30
220-400 V AC	1	125 A	114265	Ex9ZE2-125/1P SW	1/6/30
220-400 V AC	1	160 A	114266	Ex9ZE2-160/1P SW	1/6/30

220-400 V AC	2	10 A	114267	Ex9ZE2-10/2P SW	1/10/250
220-400 V AC	2	16 A	114268	Ex9ZE2-16/2P SW	1/10/250
220-400 V AC	2	20 A	114269	Ex9ZE2-20/2P SW	1/10/250
220-400 V AC	2	25 A	114270	Ex9ZE2-25/2P SW	1/10/250
220-400 V AC	2	32 A	114271	Ex9ZE2-32/2P SW	1/10/100
220-400 V AC	2	40 A	114272	Ex9ZE2-40/2P SW	1/10/100
220-400 V AC	2	50 A	114273	Ex9ZE2-50/2P SW	1/10/80
220-400 V AC	2	63 A	114274	Ex9ZE2-63/2P SW	1/10/80
220-400 V AC	2	80 A	114275	Ex9ZE2-80/2P SW	1/10/80
220-400 V AC	2	100 A	114276	Ex9ZE2-100/2P SW	1/6/30
220-400 V AC	2	115 A	114277	Ex9ZE2-115/2P SW	1/6/30
220-400 V AC	2	125 A	114278	Ex9ZE2-125/2P SW	1/6/30
220-400 V AC	2	160 A	114279	Ex9ZE2-160/2P SW	1/6/30



220-400 V AC	3	10 A	114280	Ex9ZE2-10/3P SW	1/10/250
220-400 V AC	3	16 A	114281	Ex9ZE2-16/3P SW	1/10/250
220-400 V AC	3	20 A	114282	Ex9ZE2-20/3P SW	1/10/250
220-400 V AC	3	25 A	114283	Ex9ZE2-25/3P SW	1/10/250
220-400 V AC	3	32 A	114284	Ex9ZE2-32/3P SW	1/10/100
220-400 V AC	3	40 A	114285	Ex9ZE2-40/3P SW	1/10/100
220-400 V AC	3	50 A	114286	Ex9ZE2-50/3P SW	1/10/80
220-400 V AC	3	63 A	114287	Ex9ZE2-63/3P SW	1/10/80
220-400 V AC	3	80 A	114288	Ex9ZE2-80/3P SW	1/10/80
220-400 V AC	3	100 A	114289	Ex9ZE2-100/3P SW	1/6/30
220-400 V AC	3	115 A	114290	Ex9ZE2-115/3P SW	1/6/30
220-400 V AC	3	125 A	114291	Ex9ZE2-125/3P SW	1/6/30
220-400 V AC	3	160 A	114292	Ex9ZE2-160/3P SW	1/6/30

### Wiring diagrams



1 up to 3 Pole

# Cam Switch Ex9ZE

## On-Off Switch

- Cam switch “On/Off” switches are common in various applications, from controlling lights and household appliances to operating industrial machinery. These switches provide a straightforward and effective way to turn electrical devices on and off and are easy to use. Furthermore, they are essential for safety and power control in numerous electrical systems and equipment.
- Cam Switch available in **1 — 6 Pole** version up to 160A
- Insulation Voltage (**Ui**) / **450V-10A, 500V-16A, 660V 20A** up to 160A
- Impulse Withstand Voltage (**Uimp**) **4kV** 10A up to 125A, **6kV-160A**
- Short Circuit Breaking Capacity **6 kA (10A up to 160A)**
- Utilization Category **AC3 ,AC4 , AC23**
- Turning angle **60°**



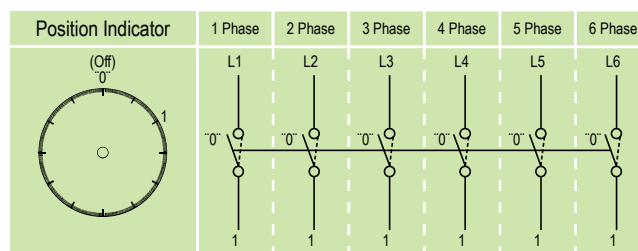
Control voltage	Number of poles	Rated Current	Article No.	Type	Packing
220-400 V AC	4	10 A	114293	Ex9ZE2-10/4P SW	1/10/250
220-400 V AC	4	16 A	114294	Ex9ZE2-16/4P SW	1/10/250
220-400 V AC	4	20 A	114295	Ex9ZE2-20/4P SW	1/10/250
220-400 V AC	4	25 A	114296	Ex9ZE2-25/4P SW	1/10/250
220-400 V AC	4	32 A	114297	Ex9ZE2-32/4P SW	1/10/100
220-400 V AC	4	40 A	114298	Ex9ZE2-40/4P SW	1/10/100
220-400 V AC	4	50 A	114299	Ex9ZE2-50/4P SW	1/10/80
220-400 V AC	4	63 A	114300	Ex9ZE2-63/4P SW	1/10/80
220-400 V AC	4	80 A	114301	Ex9ZE2-80/4P SW	1/10/80
220-400 V AC	4	100 A	114302	Ex9ZE2-100/4P SW	1/6/30
220-400 V AC	4	115 A	114303	Ex9ZE2-115/4P SW	1/6/30
220-400 V AC	4	125 A	114304	Ex9ZE2-125/4P SW	1/6/30
220-400 V AC	4	160 A	114305	Ex9ZE2-160/4P SW	1/6/30

220-400 V AC	5	10 A	114306	Ex9ZE2-10/5P SW	1/10/160
220-400 V AC	5	16 A	114307	Ex9ZE2-16/5P SW	1/10/160
220-400 V AC	5	20 A	114308	Ex9ZE2-20/5P SW	1/10/160
220-400 V AC	5	25 A	114309	Ex9ZE2-25/5P SW	1/10/160
220-400 V AC	5	32 A	114310	Ex9ZE2-32/5P SW	1/10/80
220-400 V AC	5	40 A	114311	Ex9ZE2-40/5P SW	1/10/80
220-400 V AC	5	50 A	114312	Ex9ZE2-50/5P SW	1/10/60
220-400 V AC	5	63 A	114313	Ex9ZE2-63/5P SW	1/10/60
220-400 V AC	5	80 A	114314	Ex9ZE2-80/5P SW	1/10/60
220-400 V AC	5	100 A	114315	Ex9ZE2-100/5P SW	1/6/24
220-400 V AC	5	115 A	114316	Ex9ZE2-115/5P SW	1/6/24
220-400 V AC	5	125 A	114317	Ex9ZE2-125/5P SW	1/6/24
220-400 V AC	5	160 A	114318	Ex9ZE2-160/5P SW	1/6/24



220-400 V AC	6	10 A	114319	Ex9ZE2-10/6P SW	1/10/160
220-400 V AC	6	16 A	114320	Ex9ZE2-16/6P SW	1/10/160
220-400 V AC	6	20 A	114321	Ex9ZE2-20/6P SW	1/10/160
220-400 V AC	6	25 A	114322	Ex9ZE2-25/6P SW	1/10/160
220-400 V AC	6	32 A	114323	Ex9ZE2-32/6P SW	1/10/80
220-400 V AC	6	40 A	114324	Ex9ZE2-40/6P SW	1/10/80
220-400 V AC	6	50 A	114325	Ex9ZE2-50/6P SW	1/10/60
220-400 V AC	6	63 A	114326	Ex9ZE2-63/6P SW	1/10/60
220-400 V AC	6	80 A	114327	Ex9ZE2-80/6P SW	1/10/60
220-400 V AC	6	100 A	114328	Ex9ZE2-100/6P SW	1/6/24
220-400 V AC	6	115 A	114329	Ex9ZE2-115/6P SW	1/6/24
220-400 V AC	6	125 A	114330	Ex9ZE2-125/6P SW	1/6/24
220-400 V AC	6	160 A	114331	Ex9ZE2-160/6P SW	1/6/24

### Wiring diagrams



3 up to 6 Pole

# Cam Switch Ex9ZE

## On-Off Safety Switch

- Cam switch “On/Off safety” switches are commonly used in applications where safety is of utmost importance, such as in industrial machinery, medical equipment, process control systems, and other situations where accidental or unauthorized manipulation could result in injuries or damage.
- Cam Switch available in **1 — 6 Pole** version up to 160A
- Insulation Voltage (**Ui**) / **450V-10A**, **500V-16A**, **660V 20A** up to 160A
- Impulse Withstand Voltage (**Uimp**) **4kV** 10A up to 125A, **6kV-160A**
- Short Circuit Breaking Capacity **6 kA (10A up to 160A)**
- Utilization Category **AC3 ,AC4 , AC23**
- Turning angle **60°**



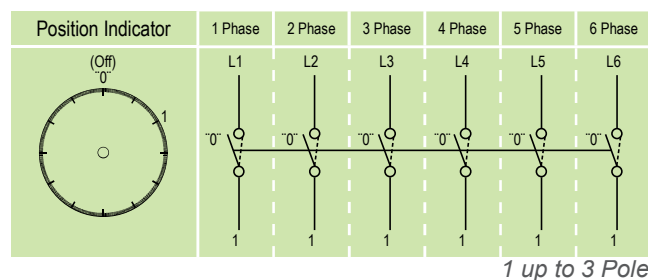
Control voltage	Number of poles	Rated current	Article No.	Type	Packing
220-400 V AC	1	10 A	114332	Ex9ZE2-10/1P SSW	1/10/250
220-400 V AC	1	16 A	114333	Ex9ZE2-16/1P SSW	1/10/250
220-400 V AC	1	20 A	114334	Ex9ZE2-20/1P SSW	1/10/250
220-400 V AC	1	25 A	114335	Ex9ZE2-25/1P SSW	1/10/250
220-400 V AC	1	32 A	114336	Ex9ZE2-32/1P SSW	1/10/100
220-400 V AC	1	40 A	114337	Ex9ZE2-40/1P SSW	1/10/100
220-400 V AC	1	50 A	114338	Ex9ZE2-50/1P SSW	1/10/80
220-400 V AC	1	63 A	114339	Ex9ZE2-63/1P SSW	1/10/80
220-400 V AC	1	80 A	114340	Ex9ZE2-80/1P SSW	1/10/80
220-400 V AC	1	100 A	114341	Ex9ZE2-100/1P SSW	1/6/30
220-400 V AC	1	115 A	114342	Ex9ZE2-115/1P SSW	1/6/30
220-400 V AC	1	125 A	114343	Ex9ZE2-125/1P SSW	1/6/30
220-400 V AC	1	160 A	114344	Ex9ZE2-160/1P SSW	1/6/30

220-400 V AC	2	10 A	114345	Ex9ZE2-10/2P SSW	1/10/250
220-400 V AC	2	16 A	114346	Ex9ZE2-16/2P SSW	1/10/250
220-400 V AC	2	20 A	114347	Ex9ZE2-20/2P SSW	1/10/250
220-400 V AC	2	25 A	114348	Ex9ZE2-25/2P SSW	1/10/250
220-400 V AC	2	32 A	114349	Ex9ZE2-32/2P SSW	1/10/100
220-400 V AC	2	40 A	114350	Ex9ZE2-40/2P SSW	1/10/100
220-400 V AC	2	50 A	114351	Ex9ZE2-50/2P SSW	1/10/80
220-400 V AC	2	63 A	114352	Ex9ZE2-63/2P SSW	1/10/80
220-400 V AC	2	80 A	114353	Ex9ZE2-80/2P SSW	1/10/80
220-400 V AC	2	100 A	114354	Ex9ZE2-100/2P SSW	1/6/30
220-400 V AC	2	115 A	114355	Ex9ZE2-115/2P SSW	1/6/30
220-400 V AC	2	125 A	114356	Ex9ZE2-125/2P SSW	1/6/30
220-400 V AC	2	160 A	114357	Ex9ZE2-160/2P SSW	1/6/30



220-400 V AC	3	10 A	114358	Ex9ZE2-10/3P SSW	1/10/200
220-400 V AC	3	16 A	114359	Ex9ZE2-16/3P SSW	1/10/200
220-400 V AC	3	20 A	114360	Ex9ZE2-20/3P SSW	1/10/200
220-400 V AC	3	25 A	114361	Ex9ZE2-25/3P SSW	1/10/200
220-400 V AC	3	32 A	114362	Ex9ZE2-32/3P SSW	1/10/100
220-400 V AC	3	40 A	114363	Ex9ZE2-40/3P SSW	1/10/100
220-400 V AC	3	50 A	114364	Ex9ZE2-50/3P SSW	1/10/80
220-400 V AC	3	63 A	114365	Ex9ZE2-63/3P SSW	1/10/80
220-400 V AC	3	80 A	114366	Ex9ZE2-80/3P SSW	1/10/80
220-400 V AC	3	100 A	114367	Ex9ZE2-100/3P SSW	1/6/30
220-400 V AC	3	115 A	114368	Ex9ZE2-115/3P SSW	1/6/30
220-400 V AC	3	125 A	114369	Ex9ZE2-125/3P SSW	1/6/30
220-400 V AC	3	160 A	114370	Ex9ZE2-160/3P SSW	1/6/30

### Wiring diagrams



# Cam Switch Ex9ZE

## On-Off Safety Switch

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- Utilization Category **AC3 ,AC4 , AC23**
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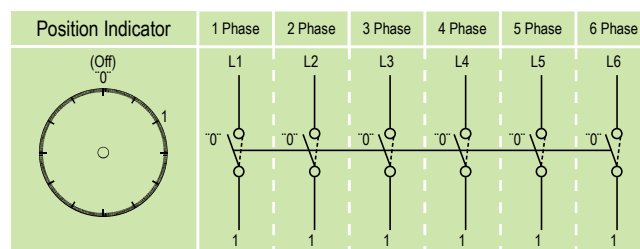
Control voltage	Number of poles	Rated current	Article No.	Type	Packing
220-400 V AC	4	10 A	114371	Ex9ZE2-10/4P SSW	1/10/200
220-400 V AC	4	16 A	114372	Ex9ZE2-16/4P SSW	1/10/200
220-400 V AC	4	20 A	114373	Ex9ZE2-20/4P SSW	1/10/200
220-400 V AC	4	25 A	114374	Ex9ZE2-25/4P SSW	1/10/200
220-400 V AC	4	32 A	114375	Ex9ZE2-32/4P SSW	1/10/100
220-400 V AC	4	40 A	114376	Ex9ZE2-40/4P SSW	1/10/100
220-400 V AC	4	50 A	114377	Ex9ZE2-50/4P SSW	1/10/80
220-400 V AC	4	63 A	114378	Ex9ZE2-63/4P SSW	1/10/80
220-400 V AC	4	80 A	114379	Ex9ZE2-80/4P SSW	1/10/80
220-400 V AC	4	100 A	114380	Ex9ZE2-100/4P SSW	1/6/30
220-400 V AC	4	115 A	114381	Ex9ZE2-115/4P SSW	1/6/30
220-400 V AC	4	125 A	114382	Ex9ZE2-125/4P SSW	1/6/30
220-400 V AC	4	160 A	114383	Ex9ZE2-160/4P SSW	1/6/30

220-400 V AC	5	10 A	114384	Ex9ZE2-10/5P SSW	1/10/160
220-400 V AC	5	16 A	114385	Ex9ZE2-16/5P SSW	1/10/160
220-400 V AC	5	20 A	114386	Ex9ZE2-20/5P SSW	1/10/160
220-400 V AC	5	25 A	114387	Ex9ZE2-25/5P SSW	1/10/160
220-400 V AC	5	32 A	114388	Ex9ZE2-32/5P SSW	1/10/80
220-400 V AC	5	40 A	114389	Ex9ZE2-40/5P SSW	1/10/80
220-400 V AC	5	50 A	114390	Ex9ZE2-50/5P SSW	1/10/60
220-400 V AC	5	63 A	114391	Ex9ZE2-63/5P SSW	1/10/60
220-400 V AC	5	80 A	114392	Ex9ZE2-80/5P SSW	1/10/60
220-400 V AC	5	100 A	114393	Ex9ZE2-100/5P SSW	1/6/24
220-400 V AC	5	115 A	114394	Ex9ZE2-115/5P SSW	1/6/24
220-400 V AC	5	125 A	114395	Ex9ZE2-125/5P SSW	1/6/24
220-400 V AC	5	160 A	114396	Ex9ZE2-160/5P SSW	1/6/24



220-400 V AC	6	10 A	114397	Ex9ZE2-10/6P SSW	1/10/160
220-400 V AC	6	16 A	114398	Ex9ZE2-16/6P SSW	1/10/160
220-400 V AC	6	20 A	114399	Ex9ZE2-20/6P SSW	1/10/160
220-400 V AC	6	25 A	114400	Ex9ZE2-25/6P SSW	1/10/160
220-400 V AC	6	32 A	114401	Ex9ZE2-32/6P SSW	1/10/80
220-400 V AC	6	40 A	114402	Ex9ZE2-40/6P SSW	1/10/80
220-400 V AC	6	50 A	114403	Ex9ZE2-50/6P SSW	1/10/60
220-400 V AC	6	63 A	114404	Ex9ZE2-63/6P SSW	1/10/60
220-400 V AC	6	80 A	114405	Ex9ZE2-80/6P SSW	1/10/60
220-400 V AC	6	100 A	114406	Ex9ZE2-100/6P SSW	1/6/24
220-400 V AC	6	115 A	114407	Ex9ZE2-115/6P SSW	1/6/24
220-400 V AC	6	125 A	114408	Ex9ZE2-125/6P SSW	1/6/24
220-400 V AC	6	160 A	114409	Ex9ZE2-160/6P SSW	1/6/24

### Wiring diagrams



3 up to 6 Pole

# Cam Switch Ex9ZE

## Change-Over "1-0-2"

- This type of cam switch is commonly used in applications where it's necessary to switch between two power sources or circuit configurations, such as more complex power transfer systems. For instance, in situations where there is a primary power source (circuit 1), a backup power source (circuit 2), and an off position (circuit 0)
- Cam Switch available in **1 — 4 Pole** version up to 160A, **5 — 6 Pole** version up to 100A
- Insulation Voltage (**Ui**) / **450V-10A**, **500V-16A**, **660V 20A** up to 160A
- Impulse Withstand Voltage (**Uimp**) **4kV** 10A up to 125A, **6kV-160A**
- Short Circuit Breaking Capacity **6 kA** ( **10A** up to **160A**)
- Utilization Category **AC3 ,AC4 , AC23**
- Turning angle **60°**



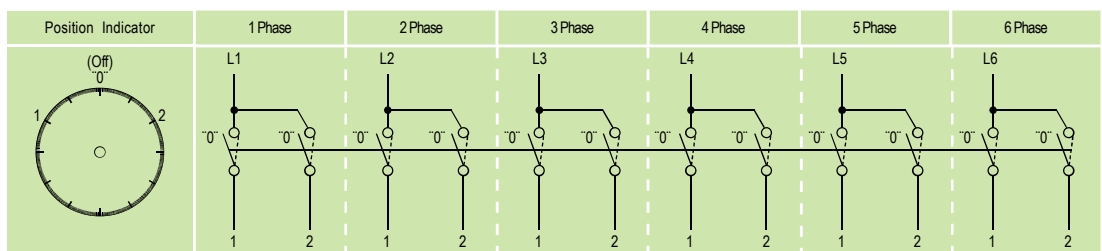
Control voltage	Number of poles	Rated current	Article No.	Type	Packing
220-400 V AC	1	10 A	114410	Ex9ZE3-10/1P CO 1-0-2	1/10/250
220-400 V AC	1	16 A	114411	Ex9ZE3-16/1P CO 1-0-2	1/10/250
220-400 V AC	1	20 A	114412	Ex9ZE3-20/1P CO 1-0-2	1/10/250
220-400 V AC	1	25 A	114413	Ex9ZE3-25/1P CO 1-0-2	1/10/250
220-400 V AC	1	32 A	114414	Ex9ZE3-32/1P CO 1-0-2	1/10/100
220-400 V AC	1	40 A	114415	Ex9ZE3-40/1P CO 1-0-2	1/10/100
220-400 V AC	1	50 A	114416	Ex9ZE3-50/1P CO 1-0-2	1/10/80
220-400 V AC	1	63 A	114417	Ex9ZE3-63/1P CO 1-0-2	1/10/80
220-400 V AC	1	80 A	114418	Ex9ZE3-80/1P CO 1-0-2	1/10/80
220-400 V AC	1	100 A	114419	Ex9ZE3-100/1P CO 1-0-2	1/6/30
220-400 V AC	1	115 A	114420	Ex9ZE3-115/1P CO 1-0-2	1/6/30
220-400 V AC	1	125 A	114421	Ex9ZE3-125/1P CO 1-0-2	1/6/30
220-400 V AC	1	160 A	114422	Ex9ZE3-160/1P CO 1-0-2	1/6/30

220-400 V AC	2	10 A	114423	Ex9ZE3-10/2P CO 1-0-2	1/10/200
220-400 V AC	2	16 A	114424	Ex9ZE3-16/2P CO 1-0-2	1/10/200
220-400 V AC	2	20 A	114425	Ex9ZE3-20/2P CO 1-0-2	1/10/200
220-400 V AC	2	25 A	114426	Ex9ZE3-25/2P CO 1-0-2	1/10/200
220-400 V AC	2	32 A	114427	Ex9ZE3-32/2P CO 1-0-2	1/10/100
220-400 V AC	2	40 A	114428	Ex9ZE3-40/2P CO 1-0-2	1/10/100
220-400 V AC	2	50 A	114429	Ex9ZE3-50/2P CO 1-0-2	1/10/80
220-400 V AC	2	63 A	114430	Ex9ZE3-63/2P CO 1-0-2	1/10/80
220-400 V AC	2	80 A	114431	Ex9ZE3-80/2P CO 1-0-2	1/10/80
220-400 V AC	2	100 A	114432	Ex9ZE3-100/2P CO 1-0-2	1/6/30
220-400 V AC	2	115 A	114433	Ex9ZE3-115/2P CO 1-0-2	1/6/30
220-400 V AC	2	125 A	114434	Ex9ZE3-125/2P CO 1-0-2	1/6/30
220-400 V AC	2	160 A	114435	Ex9ZE3-160/2P CO 1-0-2	1/6/30



220-400 V AC	3	10 A	114436	Ex9ZE3-10/3P CO 1-0-2	1/10/160
220-400 V AC	3	16 A	114437	Ex9ZE3-16/3P CO 1-0-2	1/10/160
220-400 V AC	3	20 A	114438	Ex9ZE3-20/3P CO 1-0-2	1/10/160
220-400 V AC	3	25 A	114439	Ex9ZE3-25/3P CO 1-0-2	1/10/160
220-400 V AC	3	32 A	114440	Ex9ZE3-32/3P CO 1-0-2	1/10/80
220-400 V AC	3	40 A	114441	Ex9ZE3-40/3P CO 1-0-2	1/10/80
220-400 V AC	3	50 A	114442	Ex9ZE3-50/3P CO 1-0-2	1/10/60
220-400 V AC	3	63 A	114443	Ex9ZE3-63/3P CO 1-0-2	1/10/60
220-400 V AC	3	80 A	114444	Ex9ZE3-80/3P CO 1-0-2	1/10/60
220-400 V AC	3	100 A	114445	Ex9ZE3-100/3P CO 1-0-2	1/6/18
220-400 V AC	3	115 A	114446	Ex9ZE3-115/3P CO 1-0-2	1/6/18
220-400 V AC	3	125 A	114447	Ex9ZE3-125/3P CO 1-0-2	1/6/18
220-400 V AC	3	160 A	114448	Ex9ZE3-160/3P CO 1-0-2	1/6/18

### Wiring diagrams



1 up to 3 Pole

# Cam Switch Ex9ZE

## Change-Over "1-0-2"

- This type of cam switch is commonly used in applications where it's necessary to switch between two power sources or circuit configurations, such as more complex power transfer systems. For instance, in situations where there is a primary power source (circuit 1), a backup power source (circuit 2), and an off position (circuit 0)
- Cam Switch available in **1 — 4 Pole** version up to 160A, **5 — 6 Pole** version up to 100A
- Insulation Voltage (Ui) / **450V-10A, 500V-16A, 660V 20A** up to 160A
- Impulse Withstand Voltage (Uimp) **4kV** 10A up to 125A, **6kV-160A**
- Short Circuit Breaking Capacity **6 kA ( 10A up to 160A)**
- Utilization Category **AC3 ,AC4 , AC23**
- Turning angle **60°**



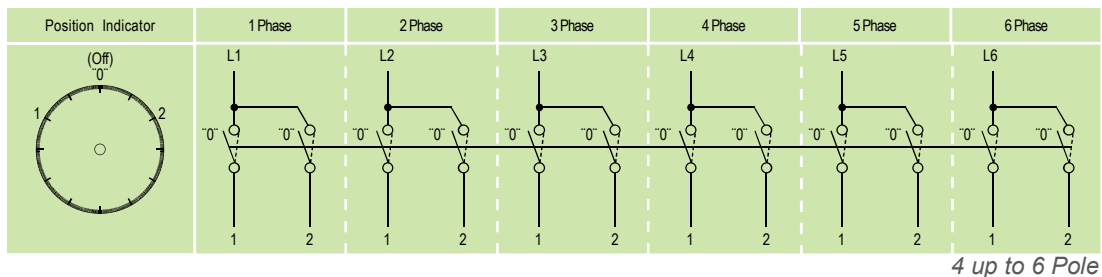
Control voltage	Number of poles	Rated current	Article No.	Type	Packing
220-400 V AC	4	10 A	114449	Ex9ZE3-10/4P CO 1-0-2	1/10/120
220-400 V AC	4	16 A	114450	Ex9ZE3-16/4P CO 1-0-2	1/10/120
220-400 V AC	4	20 A	114451	Ex9ZE3-20/4P CO 1-0-2	1/10/120
220-400 V AC	4	25 A	114452	Ex9ZE3-25/4P CO 1-0-2	1/10/120
220-400 V AC	4	32 A	114453	Ex9ZE3-32/4P CO 1-0-2	1/10/60
220-400 V AC	4	40 A	114454	Ex9ZE3-40/4P CO 1-0-2	1/10/60
220-400 V AC	4	50 A	114455	Ex9ZE3-50/4P CO 1-0-2	1/10/60
220-400 V AC	4	63 A	114456	Ex9ZE3-63/4P CO 1-0-2	1/10/60
220-400 V AC	4	80 A	114457	Ex9ZE3-80/4P CO 1-0-2	1/10/60
220-400 V AC	4	100 A	114458	Ex9ZE3-100/4P CO 1-0-2	1/6/18
220-400 V AC	4	115 A	114459	Ex9ZE3-115/4P CO 1-0-2	1/6/18
220-400 V AC	4	125 A	114460	Ex9ZE3-125/4P CO 1-0-2	1/6/18
220-400 V AC	4	160 A	114461	Ex9ZE3-160/4P CO 1-0-2	1/6/18

220-400 V AC	5	10 A	114462	Ex9ZE3-10/5P CO 1-0-2	1/10/100
220-400 V AC	5	16 A	114463	Ex9ZE3-16/5P CO 1-0-2	1/10/100
220-400 V AC	5	20 A	114464	Ex9ZE3-20/5P CO 1-0-2	1/10/100
220-400 V AC	5	25 A	114465	Ex9ZE3-25/5P CO 1-0-2	1/10/100
220-400 V AC	5	32 A	114466	Ex9ZE3-32/5P CO 1-0-2	1/10/36
220-400 V AC	5	40 A	114467	Ex9ZE3-40/5P CO 1-0-2	1/10/36
220-400 V AC	5	50 A	114468	Ex9ZE3-50/5P CO 1-0-2	1/10/36
220-400 V AC	5	63 A	114469	Ex9ZE3-63/5P CO 1-0-2	1/10/36
220-400 V AC	5	80 A	114470	Ex9ZE3-80/5P CO 1-0-2	1/10/36
220-400 V AC	5	100 A	114471	Ex9ZE3-100/5P CO 1-0-2	1/1/24



220-400 V AC	6	10 A	114472	Ex9ZE3-10/6P CO 1-0-2	1/10/80
220-400 V AC	6	16 A	114473	Ex9ZE3-16/6P CO 1-0-2	1/10/80
220-400 V AC	6	20 A	114474	Ex9ZE3-20/6P CO 1-0-2	1/10/80
220-400 V AC	6	25 A	114475	Ex9ZE3-25/6P CO 1-0-2	1/10/80
220-400 V AC	6	32 A	114476	Ex9ZE3-32/6P CO 1-0-2	1/10/20
220-400 V AC	6	40 A	114477	Ex9ZE3-40/6P CO 1-0-2	1/10/20
220-400 V AC	6	50 A	114478	Ex9ZE3-50/6P CO 1-0-2	1/10/20
220-400 V AC	6	63 A	114479	Ex9ZE3-63/6P CO 1-0-2	1/10/20
220-400 V AC	6	80 A	114480	Ex9ZE3-80/6P CO 1-0-2	1/10/20
220-400 V AC	6	100 A	114481	Ex9ZE3-100/6P CO 1-0-2	1/1/16

### Wiring diagrams



# Cam Switch Ex9ZE

## Change-Over “1-2”

- “Change-over 1-2” cam switch is a type of cam switch that allows for switching between two electrical sources or configurations, and it is widely used in applications where circuit switching is required to ensure uninterrupted power supply.
- Cam Switch available in **1 — 3 Pole** version up to 80A
- Insulation Voltage (**Ui**) / **450V**-10A, **500V**-16A, **660V** 20A up to 80A
- Impulse Withstand Voltage (**Uimp**) **4kV** 10A up to 80A
- Short Circuit Breaking Capacity **6 kA (10A up to 80A)**
- Utilization Category **AC3 ,AC4 , AC23**
- Turning angle **60°**



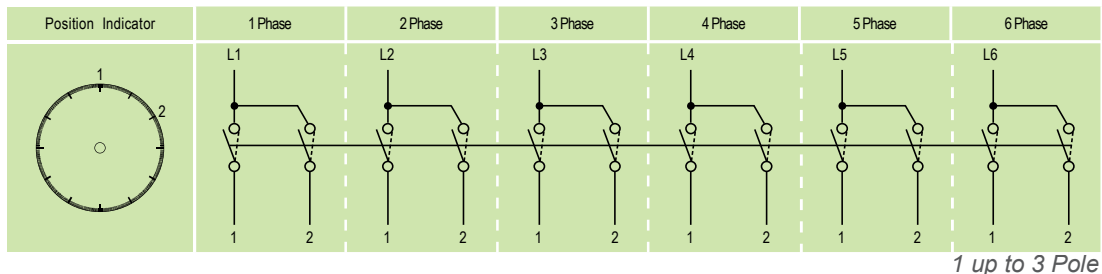
Control voltage	Number of poles	Rated current	Article No.	Type	Packing
220-400 V AC	1	10 A	114482	Ex9ZE2-10/1P CO 1-2	1/10/250
220-400 V AC	1	16 A	114483	Ex9ZE2-16/1P CO 1-2	1/10/250
220-400 V AC	1	20 A	114484	Ex9ZE2-20/1P CO 1-2	1/10/250
220-400 V AC	1	25 A	114485	Ex9ZE2-25/1P CO 1-2	1/10/250
220-400 V AC	1	32 A	114486	Ex9ZE2-32/1P CO 1-2	1/10/100
220-400 V AC	1	40 A	114487	Ex9ZE2-40/1P CO 1-2	1/10/100
220-400 V AC	1	50 A	114488	Ex9ZE2-50/1P CO 1-2	1/10/80
220-400 V AC	1	63 A	114489	Ex9ZE2-63/1P CO 1-2	1/10/80
220-400 V AC	1	80 A	114490	Ex9ZE2-80/1P CO 1-2	1/10/80

220-400 V AC	2	10 A	114491	Ex9ZE2-10/2P CO 1-2	1/10/200
220-400 V AC	2	16 A	114492	Ex9ZE2-16/2P CO 1-2	1/10/200
220-400 V AC	2	20 A	114493	Ex9ZE2-20/2P CO 1-2	1/10/200
220-400 V AC	2	25 A	114494	Ex9ZE2-25/2P CO 1-2	1/10/200
220-400 V AC	2	32 A	114495	Ex9ZE2-32/2P CO 1-2	1/10/100
220-400 V AC	2	40 A	114496	Ex9ZE2-40/2P CO 1-2	1/10/100
220-400 V AC	2	50 A	114497	Ex9ZE2-50/2P CO 1-2	1/10/80
220-400 V AC	2	63 A	114498	Ex9ZE2-63/2P CO 1-2	1/10/80
220-400 V AC	2	80 A	114499	Ex9ZE2-80/2P CO 1-2	1/10/80



220-400 V AC	3	10 A	114500	Ex9ZE2-10/3P CO 1-2	1/10/160
220-400 V AC	3	16 A	114501	Ex9ZE2-16/3P CO 1-2	1/10/160
220-400 V AC	3	20 A	114502	Ex9ZE2-20/3P CO 1-2	1/10/160
220-400 V AC	3	25 A	114503	Ex9ZE2-25/3P CO 1-2	1/10/160
220-400 V AC	3	32 A	114504	Ex9ZE2-32/3P CO 1-2	1/10/80
220-400 V AC	3	40 A	114505	Ex9ZE2-40/3P CO 1-2	1/10/80
220-400 V AC	3	50 A	114506	Ex9ZE2-50/3P CO 1-2	1/10/60
220-400 V AC	3	63 A	114507	Ex9ZE2-63/3P CO 1-2	1/10/60
220-400 V AC	3	80 A	114508	Ex9ZE2-80/3P CO 1-2	1/10/60

### Wiring diagrams



# Cam Switch Ex9ZE

## Multi-Step with “0”

- A “multi-step” cam switch is a type of cam switch that has multiple positions or steps and is used to control specific sequences of Operaces in industrial applications and control systems. Each position in the switch corresponds to a different stage or function in the process, allowing for the definition of a precise sequence of electrical Operaces.
- Cam Switch available in **2 — 7 Steps** version up to 80A
- Insulation Voltage (**Ui**) / **450V**-10A, **500V**-16A, **660V** 20A up to 80A
- Impulse Withstand Voltage (**Uimp**) **4kV** 10A up to 80A
- Short Circuit Breaking Capacity **6 kA** (**10A** up to **80A**)
- Utilization Category **AC3 ,AC4 , AC23**
- Turning angle **45°**



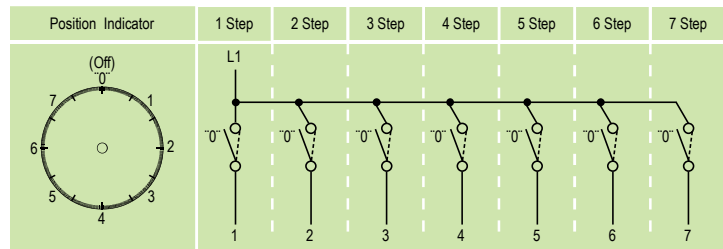
Control voltage	Number of poles	Rated current	Article No.	Type	Packing
220-400 V AC	1	10 A	114509	Ex9ZE3-10/1P MS	1/10/250
220-400 V AC	1	16 A	114510	Ex9ZE3-16/1P MS	1/10/250
220-400 V AC	1	20 A	114511	Ex9ZE3-20/1P MS	1/10/250
220-400 V AC	1	25 A	114512	Ex9ZE3-25/1P MS	1/10/250
220-400 V AC	1	32 A	114513	Ex9ZE3-32/1P MS	1/10/100
220-400 V AC	1	40 A	114514	Ex9ZE3-40/1P MS	1/10/100
220-400 V AC	1	50 A	114515	Ex9ZE3-50/1P MS	1/10/80
220-400 V AC	1	63 A	114516	Ex9ZE3-63/1P MS	1/10/80
220-400 V AC	1	80 A	114517	Ex9ZE3-80/1P MS	1/10/80

220-400 V AC	1	10 A	114518	Ex9ZE4-10/1P MS	1/10/200
220-400 V AC	1	16 A	114519	Ex9ZE4-16/1P MS	1/10/200
220-400 V AC	1	20 A	114520	Ex9ZE4-20/1P MS	1/10/200
220-400 V AC	1	25 A	114521	Ex9ZE4-25/1P MS	1/10/200
220-400 V AC	1	32 A	114522	Ex9ZE4-32/1P MS	1/10/100
220-400 V AC	1	40 A	114523	Ex9ZE4-40/1P MS	1/10/100
220-400 V AC	1	50 A	114524	Ex9ZE4-50/1P MS	1/10/80
220-400 V AC	1	63 A	114525	Ex9ZE4-63/1P MS	1/10/80
220-400 V AC	1	80 A	114526	Ex9ZE4-80/1P MS	1/10/80



220-400 V AC	1	10 A	114527	Ex9ZE5-10/1P MS	1/10/200
220-400 V AC	1	16 A	114528	Ex9ZE5-16/1P MS	1/10/200
220-400 V AC	1	20 A	114529	Ex9ZE5-20/1P MS	1/10/200
220-400 V AC	1	25 A	114530	Ex9ZE5-25/1P MS	1/10/200
220-400 V AC	1	32 A	114531	Ex9ZE5-32/1P MS	1/10/100
220-400 V AC	1	40 A	114532	Ex9ZE5-40/1P MS	1/10/100
220-400 V AC	1	50 A	114533	Ex9ZE5-50/1P MS	1/10/80
220-400 V AC	1	63 A	114534	Ex9ZE5-63/1P MS	1/10/80
220-400 V AC	1	80 A	114535	Ex9ZE5-80/1P MS	1/10/80

### Wiring diagrams



2 up to 4 Steps

# Cam Switch Ex9ZE

## Multi-Step with “0”

- A “multi-step” cam switch is a type of cam switch that has multiple positions or steps and is used to control specific sequences of Operaces in industrial applications and control systems. Each position in the switch corresponds to a different stage or function in the process, allowing for the definition of a precise sequence of electrical Operaces.
- Cam Switch available in **2 — 7 Steps** version up to 80A
- Insulation Voltage (**Ui**) / **450V**-10A, **500V**-16A, **660V** 20A up to 80A
- Impulse Withstand Voltage (**Uimp**) **4kV** 10A up to 80A
- Short Circuit Breaking Capacity **6 kA (10A up to 80A)**
- Utilization Category **AC3 ,AC4 , AC23**
- Turning angle **45°**

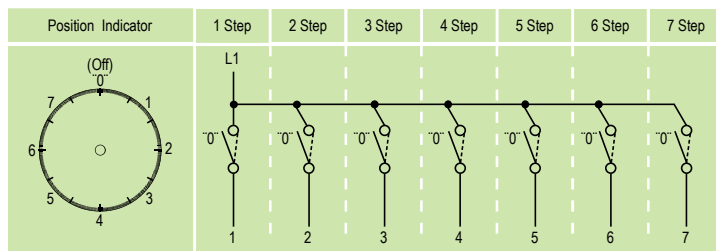


Control voltage	Number of poles	Rated current	Article No.	Type	Packing
220-400 V AC	1	10 A	114536	Ex9ZE6-10/1P MS	1/10/160
220-400 V AC	1	16 A	114537	Ex9ZE6-16/1P MS	1/10/160
220-400 V AC	1	20 A	114538	Ex9ZE6-20/1P MS	1/10/160
220-400 V AC	1	25 A	114539	Ex9ZE6-25/1P MS	1/10/160
220-400 V AC	1	32 A	114540	Ex9ZE6-32/1P MS	1/10/80
220-400 V AC	1	40 A	114541	Ex9ZE6-40/1P MS	1/10/80
220-400 V AC	1	50 A	114542	Ex9ZE6-50/1P MS	1/10/60
220-400 V AC	1	63 A	114543	Ex9ZE6-63/1P MS	1/10/60
220-400 V AC	1	80 A	114544	Ex9ZE6-80/1P MS	1/10/60



220-400 V AC	1	10 A	114545	Ex9ZE8-10/1P MS	1/10/120
220-400 V AC	1	16 A	114546	Ex9ZE8-16/1P MS	1/10/120
220-400 V AC	1	20 A	114547	Ex9ZE8-20/1P MS	1/10/120
220-400 V AC	1	25 A	114548	Ex9ZE8-25/1P MS	1/10/120
220-400 V AC	1	32 A	114549	Ex9ZE8-32/1P MS	1/10/60
220-400 V AC	1	40 A	114550	Ex9ZE8-40/1P MS	1/10/60
220-400 V AC	1	50 A	114551	Ex9ZE8-50/1P MS	1/10/60
220-400 V AC	1	63 A	114552	Ex9ZE8-63/1P MS	1/10/60
220-400 V AC	1	80 A	114553	Ex9ZE8-80/1P MS	1/10/60

### Wiring diagrams



5 up to 7 Steps

# Cam Switch Ex9ZE

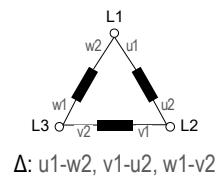
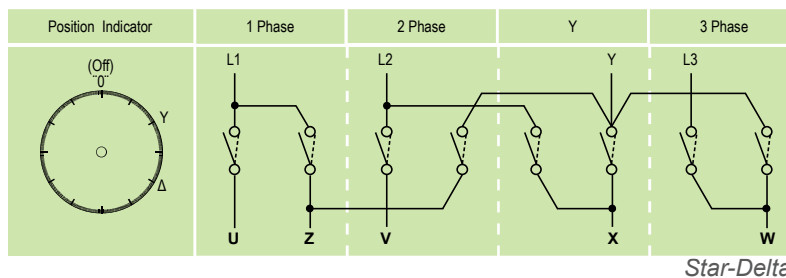
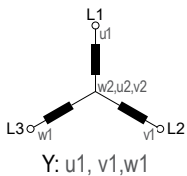
## Star Delta 0, Y, Δ

- A “star-delta” is a type of cam switch used in electrical control systems to switch the connection of a three-phase motor between star and delta configurations. This type of motor is commonly used in industrial applications where smooth starting and control of the initial current are required.
- Cam Switch available in **3 Pole** version up to 80A
- Insulation Voltage (**Ui**) / **450V-10A, 500V-16A, 660V 20A** up to 80A
- Impulse Withstand Voltage (**Uimp**) **4kV** 10A up to 80A
- Short Circuit Breaking Capacity **6 kA (16A up to 80 A)**
- Utilization Category **AC3 ,AC4 , AC23**
- Turning angle **60°**



Control voltage	Number of poles	Rated current	Article No.	Type	Packing
220-400 V AC	3	16 A	114554	Ex9ZE3-16/3P SD	1/10/60
220-400 V AC	3	20 A	114555	Ex9ZE3-20/3P SD	1/10/60
220-400 V AC	3	25 A	114556	Ex9ZE3-25/3P SD	1/10/60
220-400 V AC	3	32 A	114557	Ex9ZE3-32/3P SD	1/10/60
220-400 V AC	3	40 A	114558	Ex9ZE3-40/3P SD	1/10/60
220-400 V AC	3	50 A	114559	Ex9ZE3-50/3P SD	1/10/60
220-400 V AC	3	63 A	114560	Ex9ZE3-63/3P SD	1/10/60
220-400 V AC	3	80 A	114561	Ex9ZE3-80/3P SD	1/10/60

### Wiring diagrams



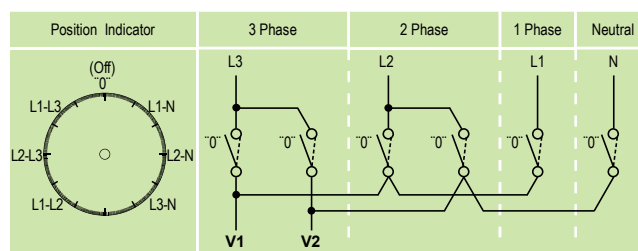
## Voltmeter

- A “voltmeter” cam switch is designed to facilitate voltage measurement by allowing for the quick and secure selection of different circuits or voltage sources for measurement purposes.
- Cam Switch available in **4 Pole** version up to 20A
- Insulation Voltage (**Ui**) / **450V-10A, 500V-16A, 660V-20A**
- Impulse Withstand Voltage (**Uimp**) **4kV** 10A up to 20A
- Short Circuit Breaking Capacity **6 kA (10A up to 20A)**
- Turning angle **45°**
- 7 Positions, (L1-L2, L2-L3, L1-L3, 0, L1-N, L2-N, L3-N)



Control voltage	Number of poles	Rated current	Article No.	Type	Packing
220-400 V AC	3	10 A	114562	Ex9ZE7-10/3P VM	1/10/160
220-400 V AC	3	16 A	114563	Ex9ZE7-16/3P VM	1/10/160
220-400 V AC	3	20 A	114564	Ex9ZE7-20/3P VM	1/10/160

### Wiring diagrams



# Cam Switch Ex9ZE

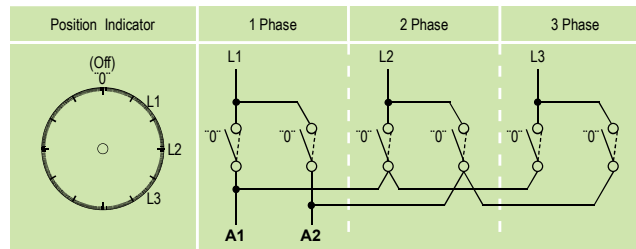
## Ammeter

- An “ammeter” cam switch is a cam switch designed to facilitate current measurement by enabling the quick and secure selection of different circuits or electrical currents for measurement purposes.
- Cam Switch available in **3 Pole** version up to 20A
- Insulation Voltage (**Ui**) / **500V**-16A, **660V**-20A
- Impulse Withstand Voltage (**Uimp**) **4kV** 16A up to 20A
- Short Circuit Breaking Capacity **6 kA (16A up to 20A)**
- Utilization Category **AC3 ,AC4 , AC23**
- Turning angle **45°**



Control voltage	Number of poles	Rated current	Article No.	Type	Packing
220-400 V AC	3	16 A	114565	Ex9ZE4-16/3P AM	1/10/160
220-400 V AC	3	20 A	114566	Ex9ZE4-20/3P AM	1/10/160

### Wiring diagrams



Ammeter

# Technical Data Cam Switch Ex9ZE

## On-Off /On-Off Safety

### General parameters

Suitable for industrial applications
Utilization Category AC-3, AC-4, AC-23
Mounting with screws onto front panel
Protection rating IP20 (Body/Poles) , IP40 (From panel door installation)

### Electrical parameters - main contacts and general

Tested according to		IEC EN 60947-3 / IEC EN 60947-5-1											
Nominal Current (A)		10	16	20	25	32/40	50	63	80	100	115	125	160
Number of Poles		1 — 6 Poles											
Rated operating voltage $U_e$		220 — 400 V AC											
Rated insulation voltage $U_i$		450 V	500 V	660 V									
Rated impulse withstand voltage $U_{imp}$		4 kV											6 kV
Frequency		50 — 60 Hz											
Breaking Capacity		6 kA											
Motor Switch in Utilization Category <b>AC-3</b>		kW											
3 Phase AC-3	220/230 V	1.5	3	3	5.5	9	11	11	12	19	26	26	—
	380/400 V	1.6	5	5	7.7	15	18.5	18.5	22	32	41	41	—
	500/690 V	4	6	8.5	11	19	22	22	28	42	55	55	—
1 Phase AC-3	110 V	0.5	0.8	0.8	1.5	3	3	—	—	—	—	—	—
2 Poles AC-3	220/230 V	1.5	2.5	3	3	7.5	6	—	—	—	—	—	—
	380/400 V	2	2.5	3	5.5	7.5	11	—	—	—	—	—	—
Motor Switch in utilization category <b>AC-23</b>		kW											
3 Phase AC-23	220/230 V	3	5	5	6.5	9	15	15	18.5	22	26	26	—
	380/400 V	5	7	7.5	11	18.5	22	22	32	37	41	41	—
	500/690 V	—	—	—	11	22	30	30	45	55	55	55	—
		kW											
1 Phase	110 V	0.8	0.8	0.8	1.5	3	3.5	—	—	—	—	—	—
2 Pole	220/230 V	2.7	2.5	2.5	3.7	6	9	—	—	—	—	—	—
	380/400 V	2.8	3.7	3.7	5.5	9	15	—	—	—	—	—	—
Motor Switch in utilization category <b>AC-4</b>		kW											
3 Phase AC-4	220/230 V	0.75	1	1.5	2.5	5	6	6	7	—	—	—	—
	380/400 V	1	1.5	2	4	8	11	11	12	—	—	—	—
	500/690 V	—	—	—	4	8	11	11	12	—	—	—	—
Electrical service life		50 000 operating cycles											

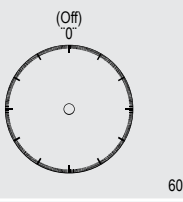
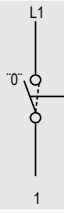
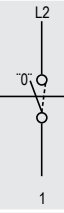
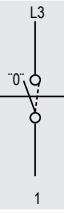
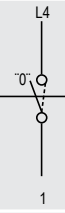
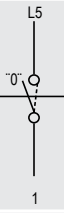

### Mechanical parameters

Nominal Current (A)	10	16	20	25	32/40	50	63	80	100	115	125	160	
Mechanical life (Operation)	1M	750K				500K							
Movement capability-per hour	1/3 sec.				2/6 sec.								
Terminals connection screw	M3	M4				M5							M8
Fastening torque of the screw	1.6 Nm				2 Nm	3.5 Nm			5.5 Nm				
Terminal capacity (mm <sup>2</sup> )	1 - 2.5			2.5 - 4	6 - 10	16 - 25			25 - 35		35	50	
Operating temperature	-20 — +60°C												

# Technical Data Cam Switch Ex9ZE

## On-Off /On-Off Safety

### Electrical diagram

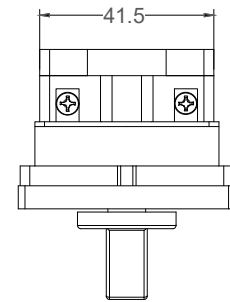
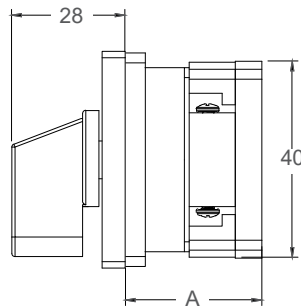
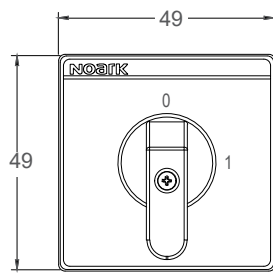
Position Indicator	1 Phase	2 Phase	3 Phase	4 Phase	5 Phase	6 Phase
 <p>(Off) 0</p> <p>60°</p>	 <p>L1</p> <p>0</p> <p>1</p>	 <p>L2</p> <p>0</p> <p>1</p>	 <p>L3</p> <p>0</p> <p>1</p>	 <p>L4</p> <p>0</p> <p>1</p>	 <p>L5</p> <p>0</p> <p>1</p>	 <p>L6</p> <p>0</p> <p>1</p>
0	-	-	-	-	-	-
1	✓	✓	✓	✓	✓	✓

# Technical Data Cam Switch Ex9ZE

## On-Off Cam Switch

### Dimensional drawings

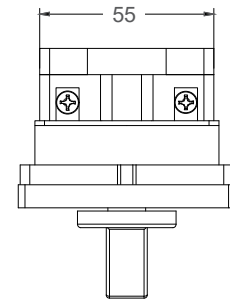
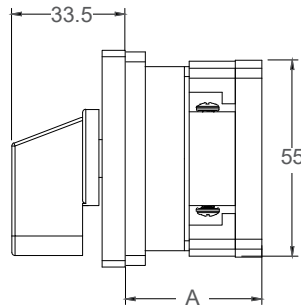
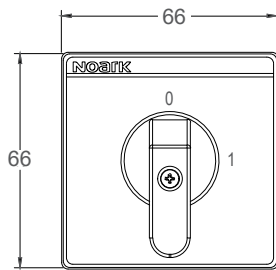
10 up to 25 A



mm

Dimension	1/2 Pole	3/4 Pole	5/6 Pole
A	36	49	62

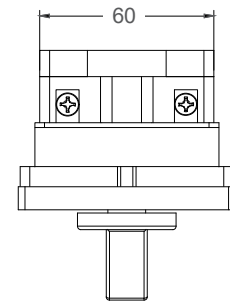
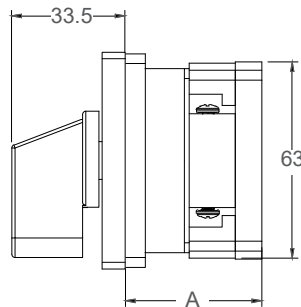
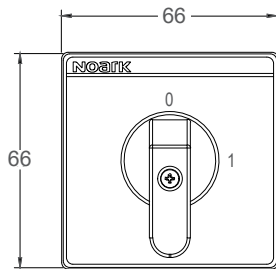
32 up to 40 A



mm

Dimension	1/2 Pole	3/4 Pole	5/6 Pole
A	41.5	56	70.5

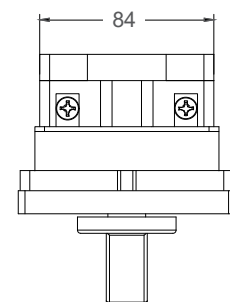
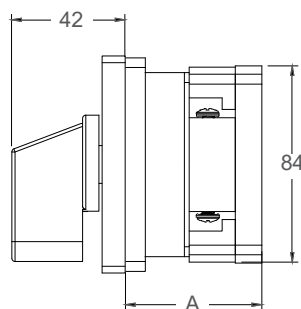
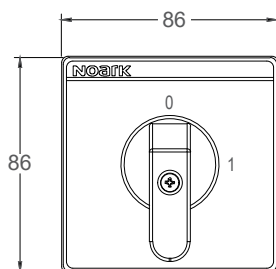
50 up to 80 A



mm

Dimension	1/2 Pole	3/4 Pole	5/6 Pole
A	47	68	89

100 up to 160 A



mm

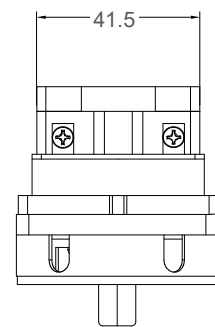
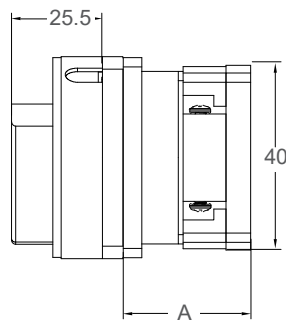
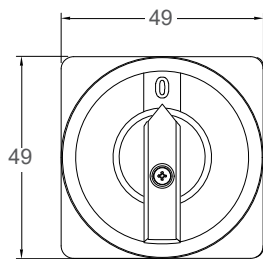
Dimension	1/2 Pole	3/4 Pole	5/6 Pole
A	68	100	131

# Technical Data Cam Switch Ex9ZE

## On-Off Safety Cam Switch

### Dimensional drawings

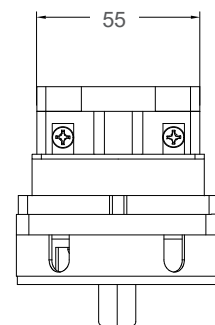
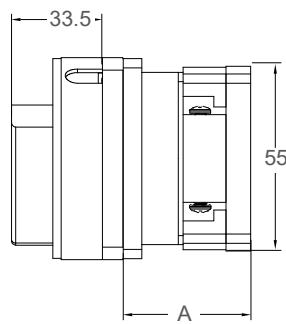
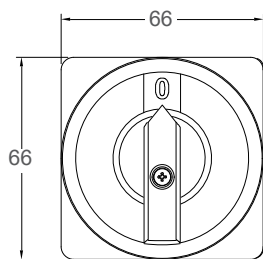
10 up to 25 A



mm

Dimension	1/2 Pole	3/4 Pole	5/6 Pole
A	36	49	62

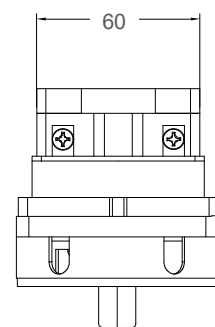
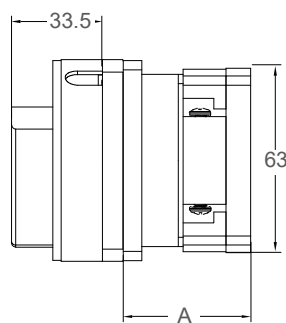
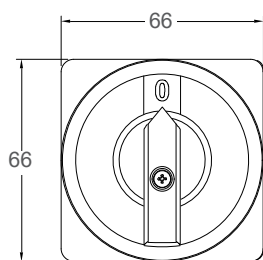
32 up to 40 A



mm

Dimension	1/2 Pole	3/4 Pole	5/6 Pole
A	41.5	56	70.5

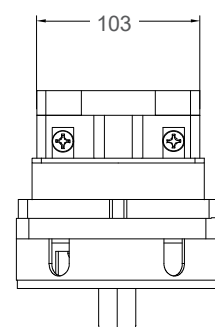
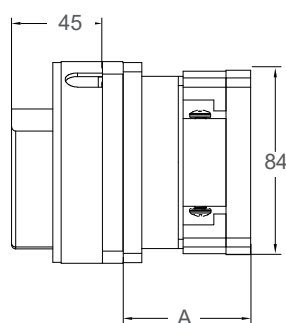
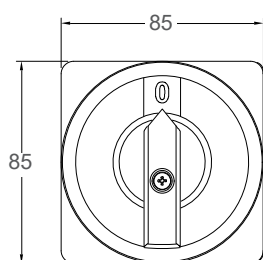
50 up to 80 A



mm

Dimension	1/2 Pole	3/4 Pole	5/6 Pole
A	47	68	89

100 up to 160 A



mm

Dimension	1/2 Pole	3/4 Pole	5/6 Pole
A	68	100	131

# Technical Data Cam Switch Ex9ZE

## Change Over 1-0-2

### General parameters

Suitable for industrial applications
Utilization Category AC-3, AC-4, AC-23
Mounting with screws onto front panel
Protection rating IP20 (Body/Poles) , IP40 (From panel door installation)

### Electrical parameters

Tested according to		IEC EN 60947-3 / IEC EN 60947-5-1											
Nominal Current (A)		10	16	20	25	32/40	50	63	80	100	115	125	160
Number of Poles		1 up to 4											
Number of Poles		1 up to 6										—	
Rated operating voltage $U_e$		220 — 400 V AC											
Rated insulation voltage $U_i$		450 V	500 V	660 V									
Rated impulse withstand voltage $U_{imp}$		4 kV											6 kV
Frequency		50 — 60 Hz											
Breaking Capacity		6 kA											
Motor Switch in utilization category <b>AC-3</b>		kW											
3 Phase AC-3	220/230 V	1.5	3	3	5.5	9	11	11	12	19	26	26	—
	380/400 V	1.6	5	5	7.7	15	18.5	18.5	22	32	41	41	—
	500/690 V	4	6	8.5	11	19	22	22	28	42	55	55	—
1 Phase AC-3	110 V	0.5	0.8	0.8	1.5	3	3	—	—	—	—	—	—
2 Poles AC-3	220/230 V	1.5	2.5	3	3	7.5	6	—	—	—	—	—	—
	380/400 V	2	2.5	3	5.5	7.5	11	—	—	—	—	—	—
Motor Switch in utilization category <b>AC-23</b>		kW											
3 Phase AC-23	220/230 V	3	5	5	6.5	9	15	15	18.5	22	26	26	—
	380/400 V	5	7	7.5	11	18.5	22	22	32	37	41	41	—
	500/690 V	—	—	—	11	22	30	30	45	55	55	55	—
1 Phase	110 V	0.8	0.8	0.8	1.5	3	3.5	—	—	—	—	—	—
2 Pole	220/230 V	2.7	2.5	2.5	3.7	6	9	—	—	—	—	—	—
	380/400 V	2.8	3.7	3.7	5.5	9	15	—	—	—	—	—	—
Motor Switch in utilization category <b>AC-4</b>		kW											
3 Phase AC-4	220/230 V	0.75	1	1.5	2.5	5	6	6	7	—	—	—	—
	380/400 V	1	1.5	2	4	8	11	11	12	—	—	—	—
	500/690 V	—	—	—	4	8	11	11	12	—	—	—	—
Electrical service life		50 000 operating cycles											
Operating temperature		-20 — +60°C											

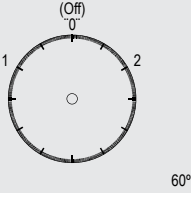
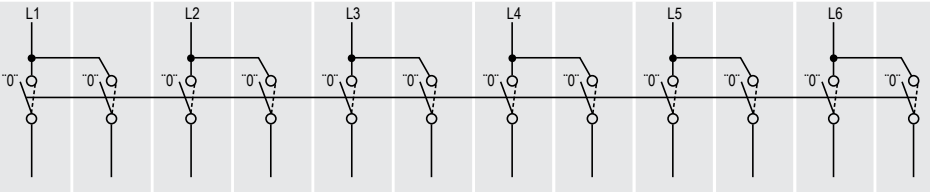
### Mechanical parameters

Nominal Current (A)	10	16	20	25	32/40	50	63	80	100	115	125	160	
Mechanical life (Operation)	1M	750K				500K							
Movement capability-per hour	1/3 sec.				2/6 sec.								
Terminals connection screw	M3	M4				M5						M8	
Fastening torque of the screw	1.6 Nm				2 Nm	3.5 Nm			5.5 Nm				
Terminal capacity (mm <sup>2</sup> )	1 - 2.5			2.5 - 4	6 - 10	16 - 25		25 - 35		35		50	
Operating temperature	-20 — +60°C												

# Technical Data Cam Switch Ex9ZE

## Change Over 1-0-2

### Electrical diagram

Position Indicator	1 Phase		2 Phase		3 Phase		4 Phase		5 Phase		6 Phase	
 <p>(Off) 0 1 2 60°</p>												
1	✓	-	✓	-	✓	-	✓	-	✓	-	✓	-
0	-	-	-	-	-	-	-	-	-	-	-	-
2	-	✓	-	✓	-	✓	-	✓	-	✓	-	✓

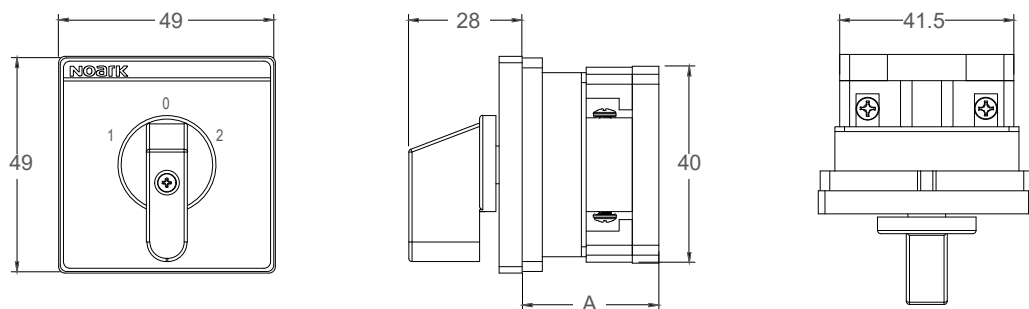
# Technical Data Cam Switch Ex9ZE

## Change Over 1-0-2

### Dimensional drawings

10 up to 25 A

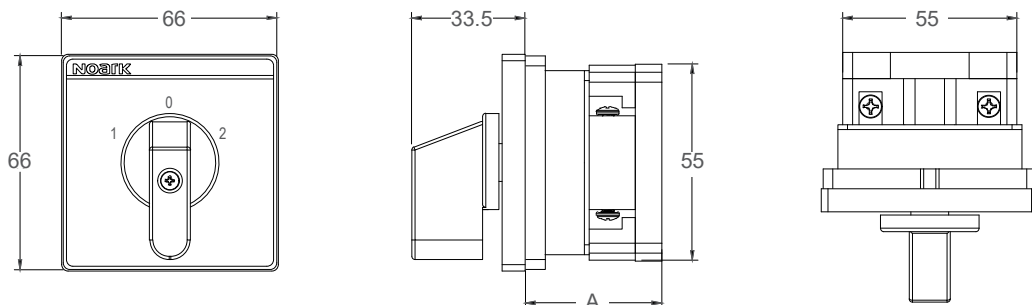
mm



Dimension	1 Pole	2 Pole	3 Pole	4 Pole	6 Pole
A	36	49	62	75	101

32 up to 40 A

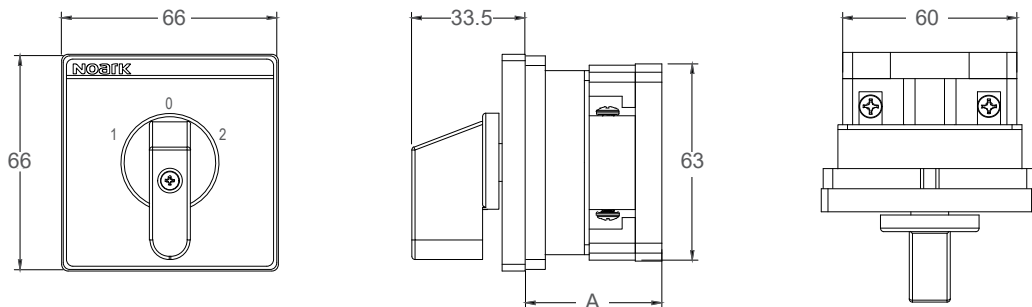
mm



Dimension	1 Pole	2 Pole	3 Pole	4 Pole	6 Pole
A	41.5	56	70.5	85	114

50 up to 80 A

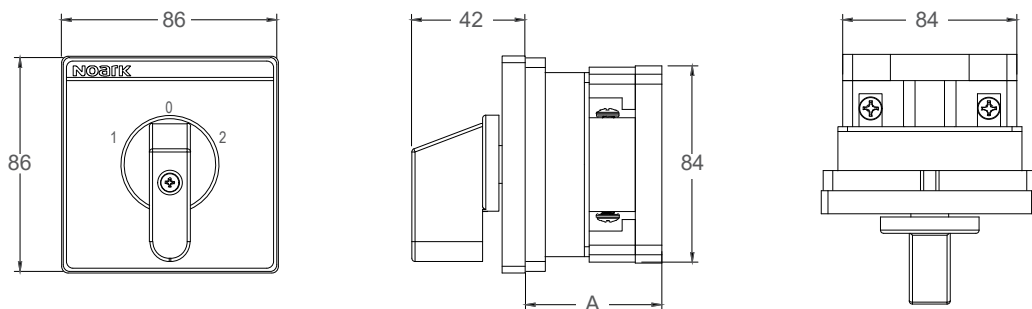
mm



Dimension	1 Pole	2 Pole	3 Pole	4 Pole	6 Pole
A	47	68	89	110	131

100 up to 160 A

mm



Dimension	1 Pole	2 Pole	3 Pole	4 Pole	6 Pole
A	68	100	131	162	224

# Technical Data Cam Switch Ex9ZE

## Change Over 1-2

### General parameters

Suitable for industrial applications
Utilization Category AC-3, AC-4, AC-23
Mounting with screws onto front panel
Protection rating IP20 (Body/Poles) , IP40 (From panel door installation)

### Electrical parameters

Tested according to		IEC EN 60947-3 / IEC EN 60947-5-1							
Nominal Current (A)		10	16	20	25	32/40	50	63	80
Number of Poles		1 up to 3							
Rated operating voltage $U_e$		220 — 400 V AC							
Rated insulation voltage $U_i$		450 V	500 V	660 V					
Rated impulse withstand voltage $U_{imp}$		4 kV							
Frequency		50 — 60 Hz							
Breaking Capacity		6 kA							
Motor Switch in utilization category <b>AC-3</b>		kW							
3 Phase AC-3	220/230 V	1.5	3	3	5.5	9	11	11	12
	380/400 V	1.6	5	5	7.7	15	18.5	18.5	22
	500/690 V	4	6	8.5	11	19	22	22	28
1 Phase AC-3	110 V	0.5	0.8	0.8	1.5	3	3	—	—
2 Poles AC-3	220/230 V	1.5	2.5	3	3	7.5	6	—	—
	380/400 V	2	2.5	3	5.5	7.5	11	—	—
Motor Switch in utilization category <b>AC-23</b>		kW							
3 Phase AC-23	220/230 V	3	5	5	6.5	9	15	15	18.5
	380/400 V	5	7	7.5	11	18.5	22	22	32
	500/690 V	—	—	—	11	22	30	30	45
		kW							
1 Phase	110 V	0.8	0.8	0.8	1.5	3	3.5	—	—
2 Pole	220/230 V	2.7	2.5	2.5	3.7	6	9	—	—
	380/400 V	2.8	3.7	3.7	5.5	9	15	—	—
Motor Switch in utilization category <b>AC-4</b>		kW							
3 Phase AC-4	220/230 V	0.75	1	1.5	2.5	5	6	6	7
	380/400 V	1	1.5	2	4	8	11	11	12
	500/690 V	—	—	—	4	8	11	11	12
Electrical service life		50 000 operating cycles							
Operating temperature		-20 — +60°C							

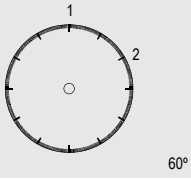
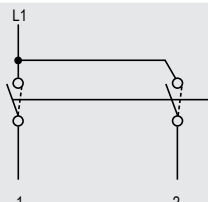
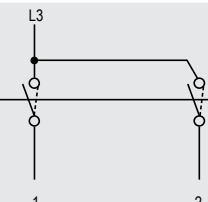
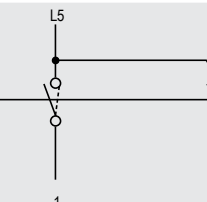
### Mechanical parameters

Nominal Current (A)	10	16	20	25	32/40	50	63	80	
Mechanical life (Operation)	1M	750K			500K				
Movement capability-per hour	1/3 sec.			2/6 sec.					
Terminals connection screw	M3	M4			M5				
Fastening torque of the screw	1.6 Nm				2 Nm	3.5 Nm		5.5 Nm	
Terminal capacity (mm <sup>2</sup> )	1 - 2.5			2.5 - 4	6 - 10	16 - 25		25 - 35	
Operating temperature	-20 — +60°C								

# Technical Data Cam Switch Ex9ZE

## Change Over 1-2

### Change Over Without "0" Electrical diagram

Position Indicator	1 Phase		2 Phase		3 Phase	
 <p>60°</p>						
1	✓	-	✓	-	✓	-
2	-	✓	-	✓	-	✓

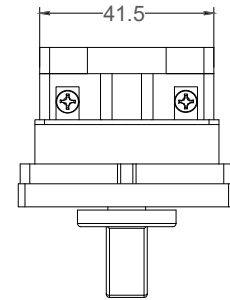
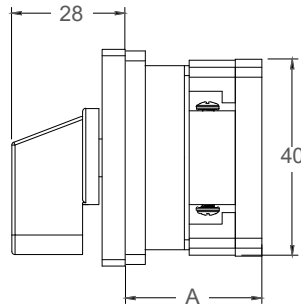
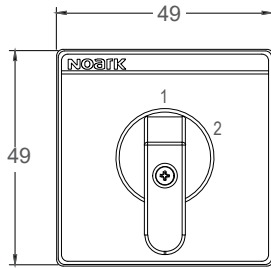
# Technical Data Cam Switch Ex9ZE

## Change Over 1-2

### Dimensional drawings

10 up to 25 A

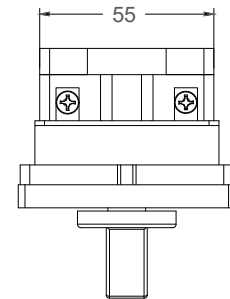
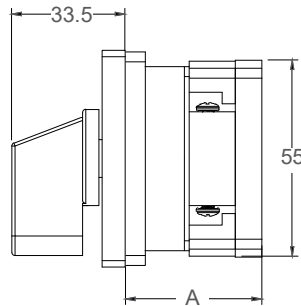
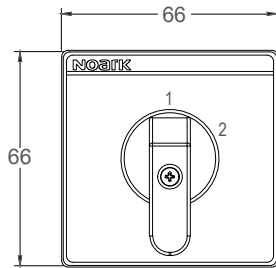
mm



Dimension	1 Pole	2 Pole	3 Pole
A	36	49	62

32 up to 40 A

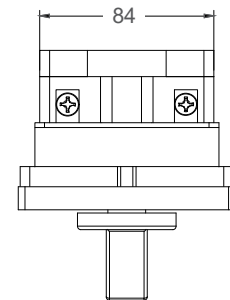
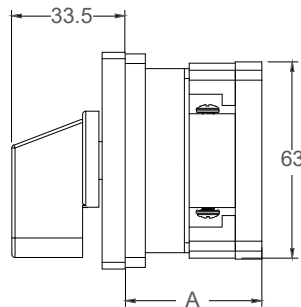
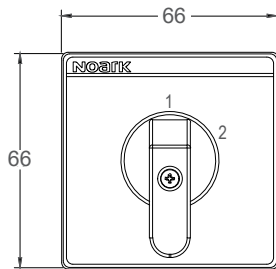
mm



Dimension	1 Pole	2 Pole	3 Pole
A	41.5	56	70.5

50 up to 80 A

mm



Dimension	1 Pole	2 Pole	3 Pole
A	47	68	89

# Technical Data Cam Switch Ex9ZE

## Multi-Step

### General parameters

Suitable for industrial applications
Utilization Category AC-3, AC-4, AC-23
Mounting with screws onto front panel
Protection rating IP20 (Body/Poles) , IP40 (From panel door installation)

### Electrical parameters

Tested according to		IEC EN 60947-3 / IEC EN 60947-5-1							
Nominal Current (A)		10	16	20	25	32/40	50	63	80
Number of Poles		1							
Number of Steps		1 up to 7							
Rated operating voltage $U_e$		220 — 400 V AC							
Rated insulation voltage $U_i$		450 V	500 V	660 V					
Rated impulse withstand voltage $U_{imp}$		4 kV							
Frequency		50 — 60 Hz							
Breaking Capacity		6 kA							
Motor Switch in utilization category <b>AC-3</b>		kW							
3 Phase AC-3	220/230 V	1.5	3	3	5.5	9	11	11	12
	380/400 V	1.6	5	5	7.7	15	18.5	18.5	22
	500/690 V	4	6	8.5	11	19	22	22	28
1 Phase AC-3	110 V	0.5	0.8	0.8	1.5	3	3	—	—
2 Poles AC-3	220/230 V	1.5	2.5	3	3	7.5	6	—	—
	380/400 V	2	2.5	3	5.5	7.5	11	—	—
Motor Switch in utilization category <b>AC-23</b>		kW							
3 Phase AC-23	220/230 V	3	5	5	6.5	9	15	15	18.5
	380/400 V	5	7	7.5	11	18.5	22	22	32
	500/690 V	—	—	—	11	22	30	30	45
1 Phase	110 V	0.8	0.8	0.8	1.5	3	3.5	—	—
2 Pole	220/230 V	2.7	2.5	2.5	3.7	6	9	—	—
	380/400 V	2.8	3.7	3.7	5.5	9	15	—	—
Motor Switch in utilization category <b>AC-4</b>		kW							
3 Phase AC-4	220/230 V	0.75	1	1.5	2.5	5	6	6	7
	380/400 V	1	1.5	2	4	8	11	11	12
	500/690 V	—	—	—	4	8	11	11	12
Electrical service life		50 000 operating cycles							
Operating temperature		-20 — +60°C							

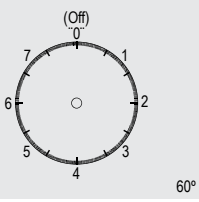
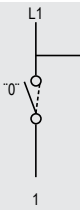






### Mechanical parameters

Nominal Current (A)		10	16	20	25	32/40	50	63	80	
Mechanical life (Operation)		1M	750K			500K				
Movement capability-per hour		1/3 sec.			2/6 sec.					
Terminals connection screw		M3	M4			M5				
Fastening torque of the screw		1.6 Nm				2 Nm	3.5 Nm		5.5 Nm	
Terminal capacity (mm <sup>2</sup> )		1 - 2.5			2.5 - 4	6 - 10	16 - 25		25 - 35	
Operating temperature		-20 — +60°C								

# Technical Data Cam Switch Ex9ZE

## Multi-Step

### Electrical diagram

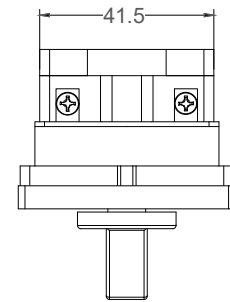
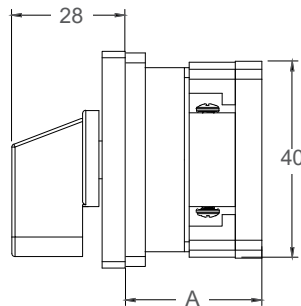
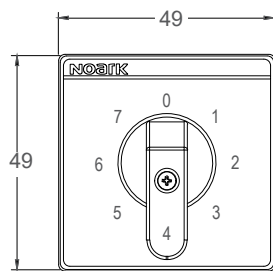
Position Indicator	1 Step	2 Step	3 Step	4 Step	5 Step	6 Step	7 Step
 <p>(Off) 0 7 1 2 3 4 5 6 60°</p>	 <p>L1 1</p>	 <p>2</p>	 <p>3</p>	 <p>4</p>	 <p>5</p>	 <p>6</p>	 <p>7</p>
0	-	-	-	-	-	-	-
1	✓	-	-	-	-	-	-
2	-	✓	-	-	-	-	-
3	-	-	✓	-	-	-	-
4	-	-	-	✓	-	-	-
5	-	-	-	-	✓	-	-
6	-	-	-	-	-	✓	-
7	-	-	-	-	-	-	✓

# Technical Data Cam Switch Ex9ZE

## Multi-Step

### Dimensional drawings

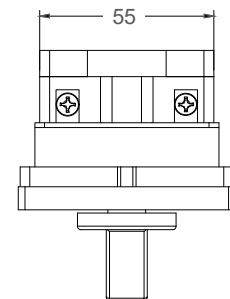
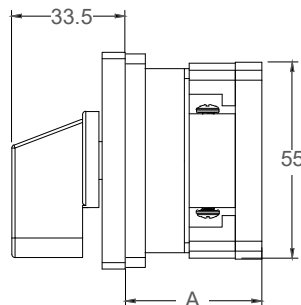
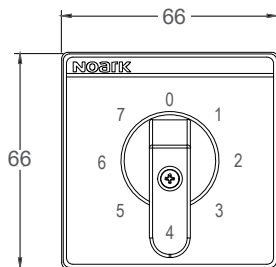
10 up to 25 A



mm

Dimension	2 Steps	3 Steps	4 Steps	5 Steps	7 Steps
A	36	49	49	62	75

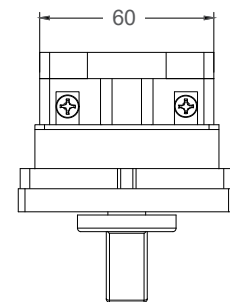
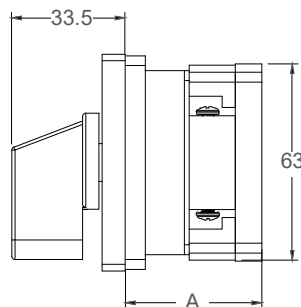
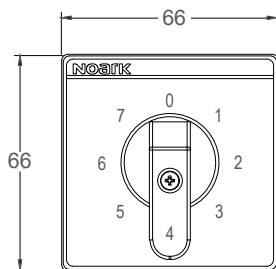
32 up to 40 A



mm

Dimension	2 Steps	3 Steps	4 Steps	5 Steps	7 Steps
A	41.5	56	56	70.5	85

50 up to 80 A



mm

Dimension	2 Steps	3 Steps	4 Steps	5 Steps	7 Steps
A	47	68	68	89	110

# Technical Data Cam Switch Ex9ZE

## Star-Delta 0, Y, Δ

### General parameters

Suitable for industrial applications
Utilization Category AC-3, AC-4, AC-23
Mounting with screws onto front panel
Protection rating IP20 (Body/Poles) , IP40 (From panel door installation)

### Electrical parameters

Tested according to		IEC EN 60947-3 / IEC EN 60947-5-1						
Nominal Current (A)		16	20	25	32/40	50	63	80
Number of Poles		3						
Rated operating voltage $U_e$		220 — 400 V AC						
Rated insulation voltage $U_i$		500 V	660 V					
Rated impulse withstand voltage $U_{imp}$		4 kV						
Frequency		50 — 60 Hz						
Breaking Capacity		6 kA						
Motor Switch in utilization category <b>AC-3</b>		kW						
3 Phase AC-3	220/230 V	3	3	5.5	9	11	11	12
	380/400 V	5	5	7.7	15	18.5	18.5	22
	500/690 V	6	8.5	11	19	22	22	28
1 Phase AC-3	110 V	0.8	0.8	1.5	3	3	—	—
2 Poles AC-3	220/230 V	2.5	3	3	7.5	6	—	—
	380/400 V	2.5	3	5.5	7.5	11	—	—
Motor Switch in utilization category <b>AC-23</b>		kW						
3 Phase AC-23	220/230 V	5	5	6.5	9	15	15	18.5
	380/400 V	7	7.5	11	18.5	22	22	32
	500/690 V	—	—	11	22	30	30	45
1 Phase	110 V	0.8	0.8	1.5	3	3.5	—	—
2 Pole	220/230 V	2.5	2.5	3.7	6	9	—	—
	380/400 V	3.7	3.7	5.5	9	15	—	—
Motor Switch in utilization category <b>AC-4</b>		kW						
3 Phase AC-4	220/230 V	1	1.5	2.5	5	6	6	7
	380/400 V	1.5	2	4	8	11	11	12
	500/690 V	—	—	4	8	11	11	12
Electrical service life		50 000 operating cycles						
Operating temperature		-20 — +60°C						

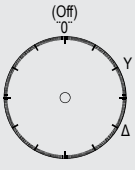
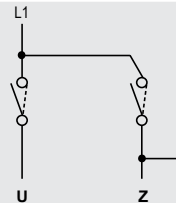
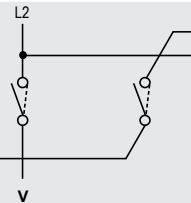
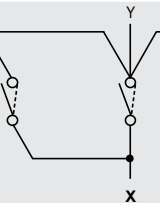
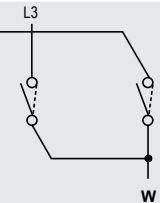
### Mechanical parameters

Nominal Current (A)	10	16	20	25	32/40	50	63	80
Mechanical life (Operation)	1M	750K			500K			
Movement capability-per hour	1/3 sec.			2/6 sec.				
Terminals connection screw	M3	M4			M5			
Fastening torque of the screw	1.6 Nm				2 Nm	3.5 Nm		5.5 Nm
Terminal capacity (mm <sup>2</sup> )	1 - 2.5			2.5 - 4	6 - 10	16 - 25		25 - 35
Operating temperature	-20 — +60°C							

# Technical Data Cam Switch Ex9ZE

## Star-Delta 0, Y, Δ

### Electrical diagram

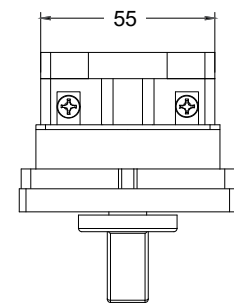
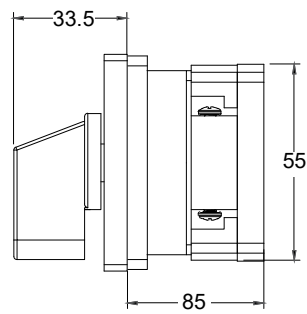
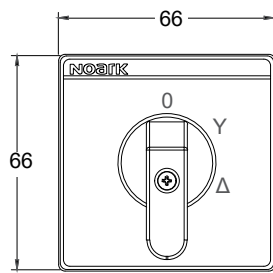
Position Indicator	1 Phase		2 Phase		Y		3 Phase	
								
0	-	-	-	-	-	-	-	-
Y	✓		✓	✓		✓		
Δ	✓	✓	✓		✓		✓	✓

# Technical Data Cam Switch Ex9ZE

## Star-Delta 0, Y, Δ

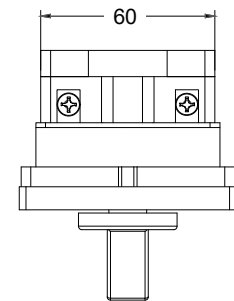
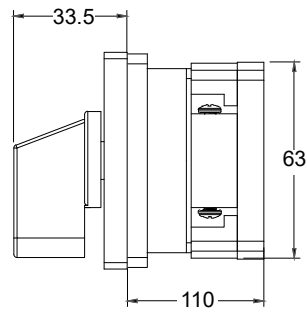
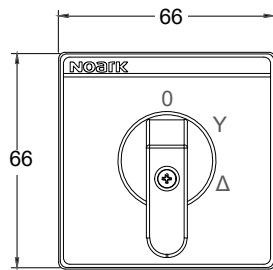
### Dimensional drawings

16 up to 40 A



mm

50 up to 80 A



mm

# Technical Data Cam Switch Ex9ZE

## Voltmeter

### General parameters

Suitable for industrial applications
Utilization Category AC-3, AC-4, AC-23
Mounting with screws onto front panel
Protection rating IP20 (Body/Poles) , IP40 (From panel door installation)

### Electrical parameters

Tested according to		IEC EN 60947-3 / IEC EN 60947-5-1		
Nominal Current (A)		<b>10</b>	<b>16</b>	<b>20</b>
Number of Poles		<b>3</b>		
Number of Positions		<b>1 up to 7</b>		
Rated operating voltage $U_e$		220 — 400 V AC		
Rated insulation voltage $U_i$		450 V	500 V	660 V
Rated impulse withstand voltage $U_{imp}$		4 kV		
Frequency		50 — 60 Hz		
Breaking Capacity		6 kA		
Motor Switch in utilization category <b>AC-3</b>		kW		
3 Phase AC-3	220/230 V	1.5	3	3
	380/400 V	1.6	5	5
	500/690 V	4	6	8.5
1 Phase AC-3	110 V	0.5	0.8	0.8
2 Poles AC-3	220/230 V	1.5	2.5	3
	380/400 V	2	2.5	3
Motor Switch in utilization category <b>AC-23</b>		kW		
3 Phase AC-23	220/230 V	3	5	5
	380/400 V	5	7	7.5
	500/690 V	—	—	—
1 Phase	110 V	0.8	0.8	0.8
2 Pole	220/230 V	2.7	2.5	2.5
	380/400 V	2.8	3.7	3.7
Motor Switch in utilization category <b>AC-4</b>		kW		
3 Phase AC-4	220/230 V	0.75	1	1.5
	380/400 V	1	1.5	2
	500/690 V	—	—	—
Electrical service life		50 000 operating cycles		
Operating temperature		-20 — +60°C		

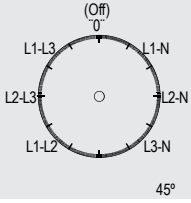
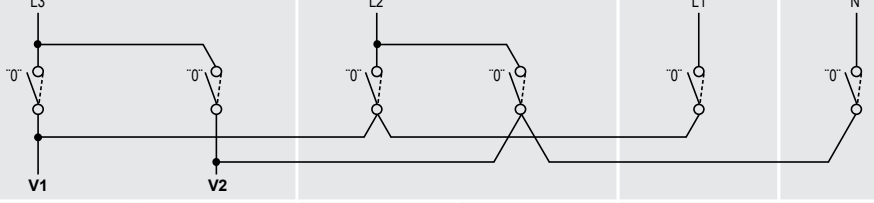
### Mechanical parameters

Nominal Current (A)	<b>10</b>	<b>16</b>	<b>20</b>
Mechanical life (Operation)	1M	750K	
Movement capability-per hour	1/3 sec.		2/6 sec.
Terminals connection screw	M3	M4	
Fastening torque of the screw	1.6 Nm		
Terminal capacity (mm <sup>2</sup> )	1 - 2.5		
Operating temperature	-20 — +60°C		

# Technical Data Cam Switch Ex9ZE

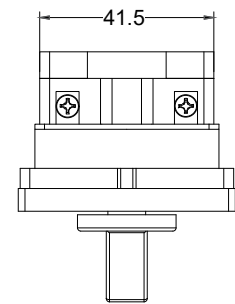
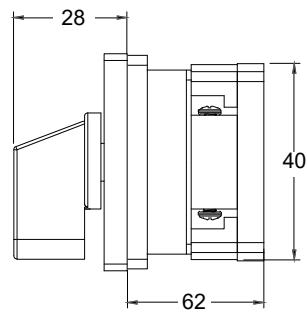
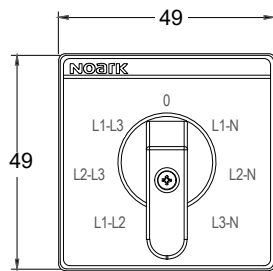
## Voltmeter

### Electrical diagram

Position Indicator	3 Phase		2 Phase		1 Phase	Neutral
						
L3 - N	✓	-	-	-	-	✓
L2 - N	-	-	✓	-	-	✓
L1 - N	-	-	-	-	✓	✓
0	-	-	-	-	-	-
L1 - L3	-	✓	-	-	✓	-
L2 - L3	-	✓	✓	-	-	-
L1 - L2	-	-	-	✓	✓	-

### Dimensional drawing

10 up to 20 A



mm

# Technical Data Cam Switch Ex9ZE

## Ammeter

### General parameters

Suitable for industrial applications
Utilization Category AC-3, AC-4, AC-23
Mounting with screws onto front panel
Protection rating IP20 (Body/Poles) , IP40 (From panel door installation)

### Electrical parameters

Tested according to	IEC EN 60947-3 / IEC EN 60947-5-1		
Nominal Current (A)	<b>10</b>		<b>16</b>
Number of Poles	<b>3</b>		
Number of Positions	<b>1 up to 7</b>		
Rated operating voltage $U_e$	220 — 400 V AC		
Rated insulation voltage $U_i$	450 V		500 V
Rated impulse withstand voltage $U_{imp}$	4 kV		
Frequency	50 — 60 Hz		
Breaking Capacity	6 kA		
Motor Switch in utilization category <b>AC-3</b>	kW		
3 Phase AC-3	220/230 V	1.5	3
	380/400 V	1.6	5
	500/690 V	4	6
1 Phase AC-3	110 V	0.5	0.8
2 Poles AC-3	220/230 V	1.5	2.5
	380/400 V	2	2.5
Motor Switch in utilization category <b>AC-23</b>	kW		
3 Phase AC-23	220/230 V	3	5
	380/400 V	5	7
	500/690 V	—	—
1 Phase	110 V	0.8	0.8
2 Pole	220/230 V	2.7	2.5
	380/400 V	2.8	3.7
Motor Switch in utilization category <b>AC-4</b>	kW		
3 Phase AC-4	220/230 V	0.75	1
	380/400 V	1	1.5
	500/690 V	—	—
Electrical service life	50 000 operating cycles		
Operating temperature	-20 — +60°C		

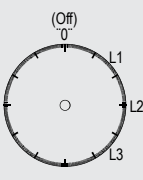
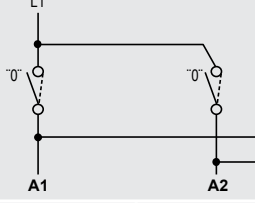
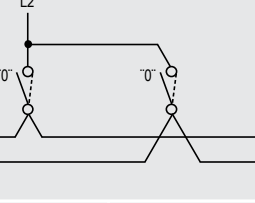
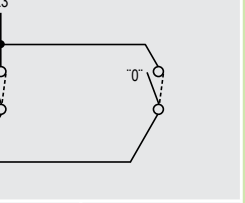
### Mechanical parameters

Nominal Current (A)	<b>10</b>		<b>16</b>
Mechanical life (Operation)	1M		750K
Movement capability-per hour	1/3 sec.		
Terminals connection screw	M3		M4
Fastening torque of the screw	1.6 Nm		
Terminal capacity (mm <sup>2</sup> )	1 - 2.5		
Operating temperature	-20 — +60°C		

# Technical Data Cam Switch Ex9ZE

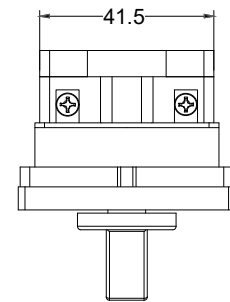
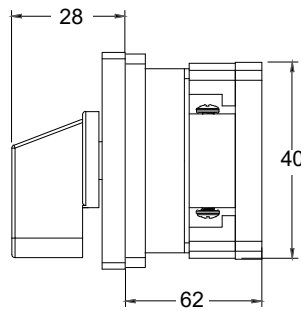
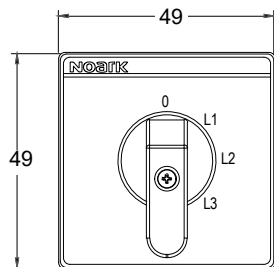
## Ammeter

### Electrical diagram

Position Indicator	1 Phase		2 Phase		3 Phase	
						
0	-	✓	-	✓	-	✓
L1	✓	-	-	✓	-	✓
L2	-	✓	✓	-	-	✓
L3	✓	-	✓	✓	-	-

### Dimensional drawings

16 up to 20 A



mm