

Pictograms of the table heads

Notes, additions	Bridging time	Colour	Length of pushbutton circuit
$I_{imp, total}$ 10/350μs Total lightning impulse current	I_n Rated current (A)	$L \times E$ Number of LED's (pcs) D	Protection degree
U_p Voltage protection level	$I_{imp, 1P}$ 10/350μs Lightning impulse current	U_n Rated voltage (V)	I_n Rated operating current $L-N$ 8/20μs
I_{cn} EN60698 Rated operating short circuit breaking capacity limit of MCB	U_c Continuous operation voltage limit	I_{max} 8/20μs Total discharge current	Dimensions ($L \times W \times H$)
$I_{\Delta n}$ (mA) Rated residual current	I_e Nominal operational current	U_m Nominal control voltage	Terminal capacity mm^2
U_{up} Upper voltage protection level	P_{max} Rated power	P_s Self consumption	NC NO CO Contacts
$\times P$ Number of poles 1P+P 1P P	U_{down} Lower current protection level	C Tripping characteristic	Socket with hinged cover
I_{sec} Upper secondary voltage limit	$\times 17.5$ Modules	Left side of the circuit breaker	Σ Number of applicable pushbuttons
side protective contacts	U_{sec} Secondary voltage	U_{pr} Primary voltage	
Network system	male protective contact	Normal socket	

Pictograms of the technical data

230 V AC Raged voltage (V)	$50/60$ Hz Rated frequency	Lamp bodies to be installed on ceilings or side walls	IP 54 Protection degree
Volume	Relativ humidity	T_a -40...+105 °C Ambient temperature	low batt Low battery display
Changeable insert	Block type	AUX 1xNO Auxiliary contacts	[mm²] 0,75-2,5 Connectable cable
F_t Thermal fuse	Spark gap	Varistor	Optical signal
63 A gG Suggested backup fuse	I^{2t} 3 Energy efficiency class	E3 Energy efficiency class	$R \geq 0.5m\Omega$ Resistance
LCD Meter with LCD display	Protection class: II.	AC For AC systems	A, AC For AC and pulsed DC systems
$U_{imp, 6 kV}$ Rated impulse withstand voltage	U_i 690 V Rated insulation voltage	$\times 10.000$ Electrical life	$\times 10.000$ Mechanical life
I_{cn} EN60698 10 kA Rated operating short circuit breaking capacity limit of MCB	Lamp bodies to be installed on side walls	P_m 0,8 W Self consumption	$[h]$ 20.000 Lifespan
Seal-leadable on 0-1-2 position	Seal-leadable on OFF position	8mm Distance between open contacts	VO UL94 Flammability according to UL94
35×7.5 Can be install on mounting rail	The devices can be mounted on normal type connecting rails	The devices can be mounted on normal or spade type connecting rails	



Type 1 lightning arresters **4**



Combined (type 1 + 2) lightning and surge arresters **4**



Type 2 surge arresters **5**



Inserts / Bases **5**



Type 2 surge arresters for DC (PV) networks **6**



Type 3 surge arresters (fine protection), modular (block) type **6**



Type 2+3 surge arresters (for LED driver) **7**



Auxiliary units **12**



Lockable latch for modular protecting devices **13**



DPN (1+N poles) type circuit breakers **13**



MB Circuit breakers **14**



TDZ Circuit breakers **15**



TDA type circuit breakers **16**



KMH type high current overload circuit breakers **17**



KVKM type combined protective switches, electromechanical **18**



KVKVE Combined protective switch with one-module width **19**



RB residual current circuit breakers **20**



TFV residual current circuit breakers **21**



TFVH residual current circuit breakers for high current **21**



TFG residual current circuit breakers **22**



TFGA adaptor with residual current circuit breaker **22**



Motor-driven automatic re-connection device **23**



TIK type disconnector switches **24**



Serial selector switches **25**



Contactors for installations **26**



Staircase time switch **27**



Impulse-Relay **27**



Signal lamps **28**



Signal bells **28**



Safety (bell) transformer **29**



Modular socket outlet **29**



Surface mounted type socket outlets and switches **30**



Socket-outlet, Shuko with USB port **33**



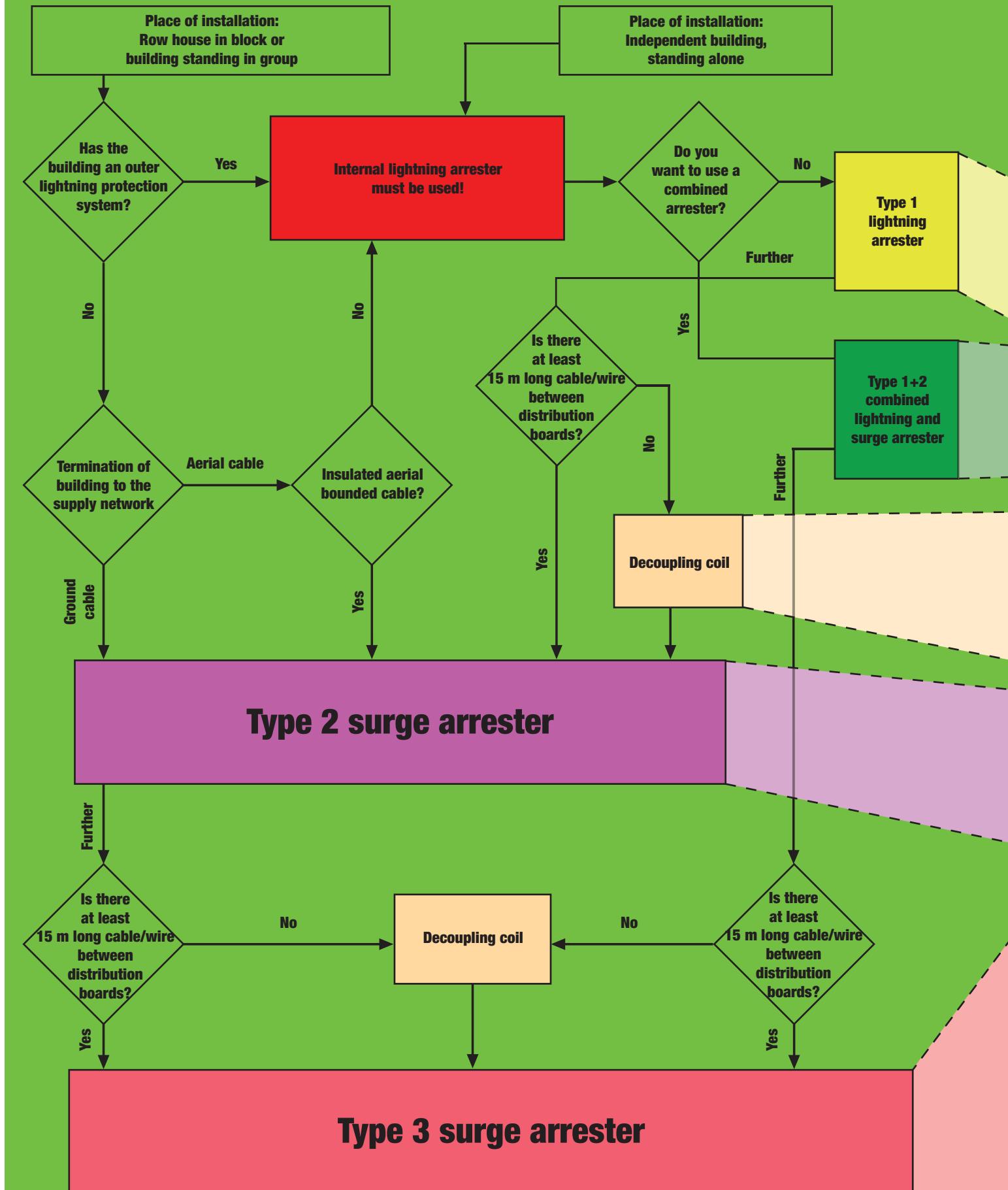
Carbon-monoxide alarm sensor **34**



Wireless smoke detector **35**

F





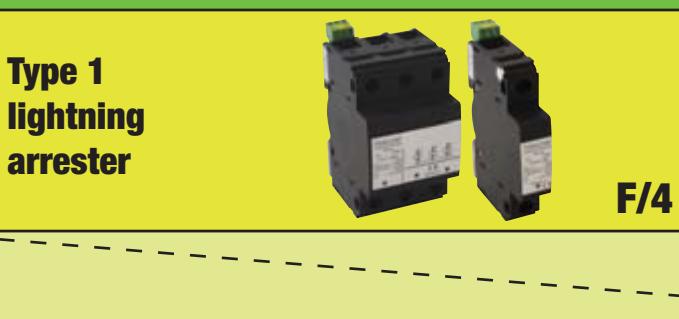
Guide to find the suitable overvoltage protection

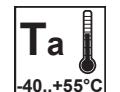
The process of planning the suitable internal lightning and overvoltage protection of buildings are very complex so we are suggest to contact with a professional to find the best solution!

For easier planning we have prepared a short guide in flow chart form where you can find the needed elements to protect your low voltage devices on the place of installation.

The flow chart must start from the proper box according to the type of the place of installation and the arrows must follow until the type 3 arresters. For the minimal protection at least the type 2 and type 3 arresters must installed. The common place of type 1 and type 1+2 arresters is the main distribution board of building; we are suggest to install the type2 and type 3 arresters to the side distribution boards. If the length of supply cable/wire between type 3 arrester and the protected device is longer than 30 m the type 3 arrester have to repeat at the connection of device. For protection of data network we recommend to use our extension cords with data network protection option.

Further detailed information see on ANNEX!

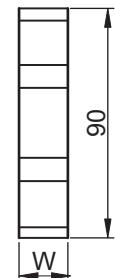
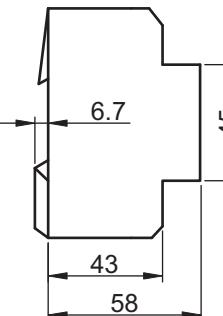


Type 1 lightning arresters**F/0**

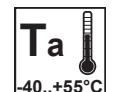
TRACON	xP	I _{imp} 1P 10/350μs	I _{imptotal} Σ 10/350μs	U _n	U _p	U _c	W (mm)	
TTV1-50-1P	1P	25 kA	50 kA	230 V, 50 Hz; 1~			18	TN, TT
TTV1-50-2P	2P	25 kA	50 kA				36	TN, IT
TTV1-50-3P	3P	25 kA	50 kA				54	TN, TT
TTV1-50-3P+N/PE	3P+N/PE	25 kA	50 kA	3×230/400 V, 50 Hz; 3~	0,9/1,5 kV	260 V, AC	72	TN, TT
TTV1-50-4P	4P	25 kA	50 kA				72	TN, IT



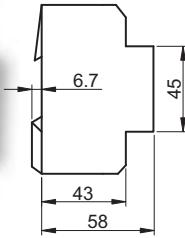
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The selection guide see on page F/2-3, the connection diagrams on page F/8.

Combined (type 1 + 2) lightning and surge arresters

TRACON	xP	I _{imp} 1P 10/350μs	I _{max} 8/20μs	U _n	U _p	U _c	W (mm)	
TTV1+2-100-1P	1P	8 kA	100 kA				27	TN, TT, IT
TTV1+2-100-2P	2P	8 kA	100 kA				54	TN, TT, IT
TTV1+2-100-3P	3P	8 kA	100 kA				81	TN, TT, IT
TTV1+2-100-4P	4P	8 kA	100 kA				108	TN, TT, IT
TTV1+2-100-3P+N/PE	3P+N/PE	8 kA	100 kA				108	TN, TT, IT
TTV1+2-80-1P	1	8 kA	80 kA	230/400 V, 50 Hz	385 V AC, 500 V DC		27	TN, TT, IT
TTV1+2-80-2P	2	8 kA	80 kA				54	TN, TT, IT
TTV1+2-80-3P	3	8 kA	80 kA		385 V AC, 500 V DC		81	TN, TT, IT
TTV1+2-80-4P	4	8 kA	80 kA				108	TN, TT, IT
TTV1+2-80-3P+N/PE	3P+N/PE	8 kA	80 kA				108	TN, TT, IT



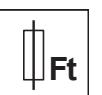
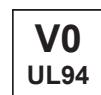
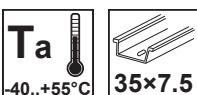
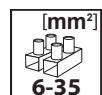
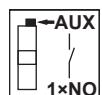
The combined devices are applicable to arrest high energy current impulses (10/350μs waveform) which can appear in one- or three-phase overhead lines by lightning and/or discharge overvoltage occurred by switch-type (8/20μs wave-form) over-currents. These arresters have compact (block type) mounting form. The type 1 + 2 lightning arresters must be installed into the main distribution box of the building right after the first main current limitation device and before the power meter.

Attention! The discharge capability of combined devices cannot reach the discharge capability of single devices!

These devices can also be used in properly planned photovoltaic (DC) systems as well.

The selection guide see on page F/2-3, the connection diagrams on page F/8.

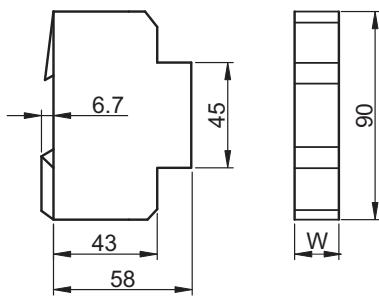
Type 2 surge arresters



TRACON	xP	I _n L-N 8/20μs	I _{max} 8/20μs	U _n	U _p	U _c	W (mm)	
TTV2-60-1P	1P	30 kA	60 kA	2,0 kV	385 V AC	1,8 kV	18	TN, TT, IT
TTV2-60-2P	2P	30 kA	60 kA				36	TN, TT, IT
TTV2-60-3P	3P	30 kA	60 kA				54	TN, TT, IT
TTV2-60-3P+N/PE	3P+N/PE	30 kA	60 kA				72	TN, TT, IT
TTV2-60-4P	4P	30 kA	60 kA				72	TN, TT, IT
TTV2-40-1P	1P	20 kA	40 kA				18	TN, TT, IT
TTV2-40-2P	2P	20 kA	40 kA				36	TN, TT, IT
TTV2-40-3P	3P	20 kA	40 kA				54	TN, TT, IT
TTV2-40-3P+N/PE	3P+N/PE	20 kA	40 kA				72	TN, TT, IT
TTV2-40-4P	4P	20 kA	40 kA				72	TN, TT, IT
TTV2-30-1P+N/PE*	1P+N/PE	15 kA	30 kA	1,5 kV	320 V AC	1,8 kV	18	TN, TT, IT
TTV2-30-3P+N-PE**	3P+N-PE	15 kA	30 kA				36	TN, TT, IT
TTV2-20-1P	1P	10 kA	20 kA				18	TN, TT, IT
TTV2-20-2P	2P	10 kA	20 kA				36	TN, TT, IT
TTV2-20-3P	3P	10 kA	20 kA	1,5 kV	385 V AC	1,8 kV	54	TN, TT, IT
TTV2-20-3P+N/PE	3P+N/PE	10 kA	20 kA				72	TN, TT, IT
TTV2-20-4P	4P	10 kA	20 kA				72	TN, TT, IT

* 2 pcs arrester in one module width for one phase TNC-S and TNS type networks

** 4 pcs arrester in two modules width for three phase TNC-S and TNS type networks



The type 2 surge arresters are applicable to discharge overvoltage caused by switch-type (8/20μs wave-form) over currents.

The type 2 arresters must be installed into sub-distribution boards (at condominium into distribution boards of flats) after main distribution boards containing type 1 arresters. For proper operation at least 10- 15 m cable or wire must be placed between type 1 and type 2 arresters. Otherwise a decoupling coil has to be installed between the two devices. These protectors are modular types with changeable insert; the auxiliary contact is built-in into the housing of the device.

Inserts for type 2 arresters

TRACON	I _n L-N 8/20μs	I _{max} 8/20μs	W (mm)
TTV2-60-M	30 kA	60 kA	18
TTV2-40-M	20 kA	40 kA	18
TTV2-30-A-M*	15 kA	30 kA	18
TTV2-30-B-M**	15 kA	30 kA	18
TTV2-20-M	10 kA	20 kA	18
TTV2-40-N/PE-M	20 kA	40 kA	18



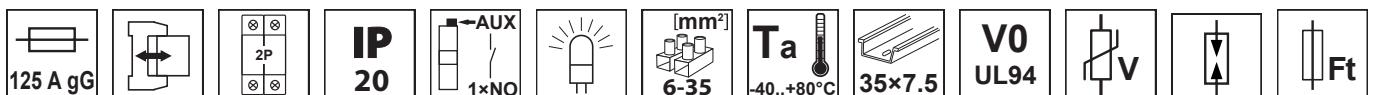
*2P insert for **TTV2-30-3P+N/PE** arrester

1P+N/PE insert for **TTV2-30-1P+N/PE and **TTV2-30-3P+N/PE** arresters.

Arrester bases

TRACON	xP	W (mm)
TTV2-BASE-1P	1P	18
TTV2-BASE-2P	2P	36
TTV2-BASE-3P	3P	54
TTV2-BASE-4P	4P	72



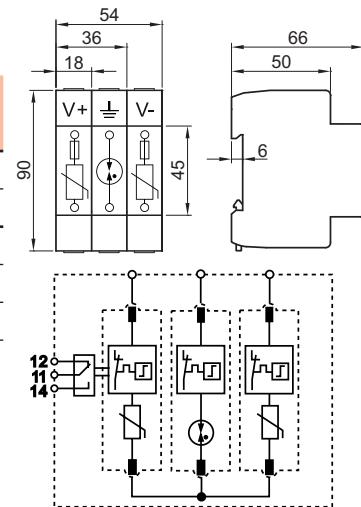
Type 2 surge arresters for DC (PV) networks

TRACON	xP	U_n	U_p	U_c	I_n L-N 8/20μs	I_{max} 8/20μs
TTV2-40-DC-600	2 P	600 V DC	3 kV	800 V DC	20 kA	40 kA
TTV2-40-DC-1000	2 P	1000 V DC	4 kV	1200 V DC	20 kA	40 kA

**Inserts for type 2 arresters**

TRACON	I_n L-N 8/20μs	I_{max} 8/20μs	U_p
TTV2-40-DC-600-M	20 kA	40 kA	3 kV
TTV2-40-DC-1000-M	20 kA	40 kA	4 kV
TTV2-40-DC-600-V	20 kA	40 kA	3 kV
TTV2-40-DC-1000-V	20 kA	40 kA	4 kV
TTV2-40-DC-600-G	20 kA	40 kA	3 kV
TTV2-40-DC-1000-G	20 kA	40 kA	4 kV

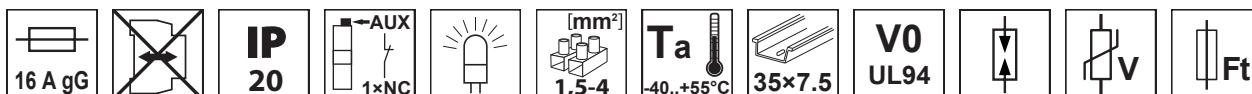
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The type 2 surge arresters are applicable to discharge overvoltage occurred by switch-type (**8/20 μs** wave-form) over-currents.

The DC arresters were developed especially for direct current networks of photovoltaic (PV) systems.

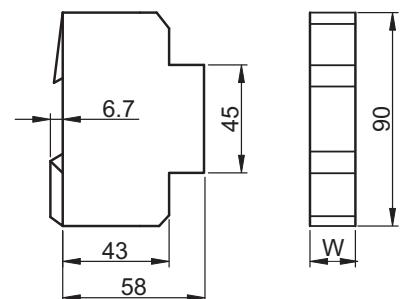
These protectors are modular types with changeable insert; the auxiliary contact is mounted to the base of device.

Type 3 surge arresters (fine protection), modular (block) type

TRACON	xP	I_n L-N 8/20μs	I_{max} 8/20μs	U_n	U_p	U_c	W (mm)	
TTV3-10-1P+N/PE	1P+N/PE	5 kA	10 kA	230 V, 50 Hz; 1~			36	TN, TT
TTV3-10-3P+N/PE	3P+N/PE	5 kA	10 kA	3×230/400 V, 50 Hz; 3~	1,5 kV	385/440 V	72	TN, IT



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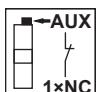
The arresters of type 3 must be installed as close to the protected device as possible. These arresters are secondary protection devices and applicable to protection against discharge overvoltage occurred by switch-type (**8/20μs** wave-form) over-currents. These arresters have compact (block type) construction.

Attention!

The type 3 devices alone cannot provide complete protection of electric devices against overvoltage!

These types of arresters have to be connected in series or parallel with the protected device and can be mounted into distribution boards for one- and three-phase networks. In case of serial connection the device to be protected has to be installed after the short circuit protection device.

Type 3 surge arresters (fine protection), for wall box mount



TRACON

I_n
L-N
8/20μsI_{max}
8/20μsU_nU_pU_c

TTV3-5-1P+N-PE

1P+N-PE

2,5 kA

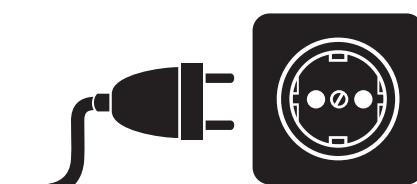
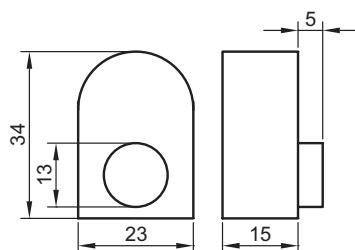
5 kA

230 V, 50 Hz; 1~

1,25 kV

255 V AC

TN, IT



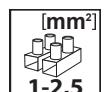
The arresters of type 3 must be installed as close to the protected device as possible. These arresters are secondary protection devices and applicable to protection against discharge overvoltage occurred by switch-type (8/20μs wave-form) over-currents. These arresters have compact (block type) construction.

Attention!

The type 3 devices alone cannot provide complete protection of electric devices against overvoltage!

This arrester can be built into electronic actuating devices, household devices, channels or deep wall boxes with parallel connection. The protection unit is integrated into a plastic case; in case of arresting an acoustic signal give message to the user.

Type 2+3 surge arresters (for LED driver)



TRACON

I_n
L-N
8/20μsI_{max}
8/20μsU_nU_pU_c

TTVL2+3-10

5 kA

10 kA

230 V, 50 Hz

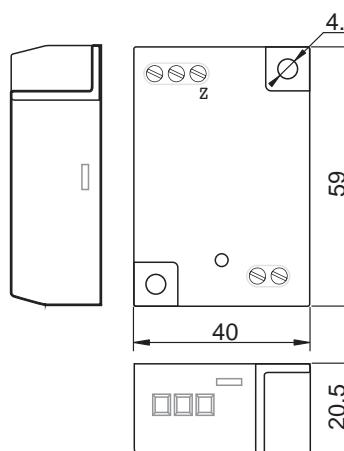
1,5 kV

320 V AC

TN, IT

The TTVL2+3-10 is a compact typ 2+3 SPD for LED Drivers. The SPD protects any 120-277 VAC single phase driver from the effects of lightning and switching transients.

Failure is indicated by illuminated lights on unit.



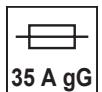
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- Check our new products
- Be updated

Our assortment is expanding quickly and continuously! Our catalogue shows the assortment of January 2017. Be up to date by our web page!

Decoupling coil

Pictograms

F/0**TRACON****I_n****U_n****L****TTV-CSF35**

2

35 A

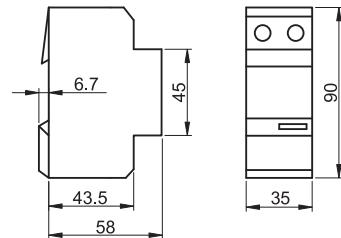
500 V AC/DC

18 µH ± 10 %

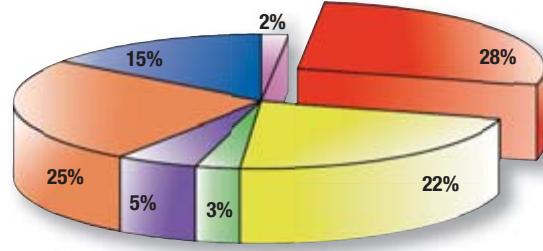


For well coordinated operation between the type 1 lightning arrester and the type 2 surge arrester, in complex lightning and overvoltage protection systems sufficient value of cable/wire impedance must be provided to enable voltage drop.

This condition is satisfied if the length of cable/wire is at least 10 – 15 meters. If this condition cannot be satisfied, an inductive reactance (decoupling coil) must be used.

**RELEVANT STANDARD
EN 61558**
**Distribution of insurance damages**

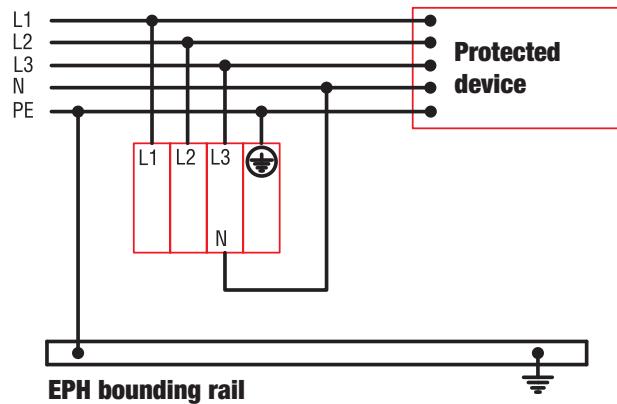
- █ Storm damages (2 %)
- █ Lightning and overvoltage (28 %)
- █ Robbing, vandalism (22 %)
- █ Fire damages (3 %)
- █ Flooding, drainage (5 %)
- █ Human omission (25 %)
- █ Other (15 %)

**TRACON APPLICATION**

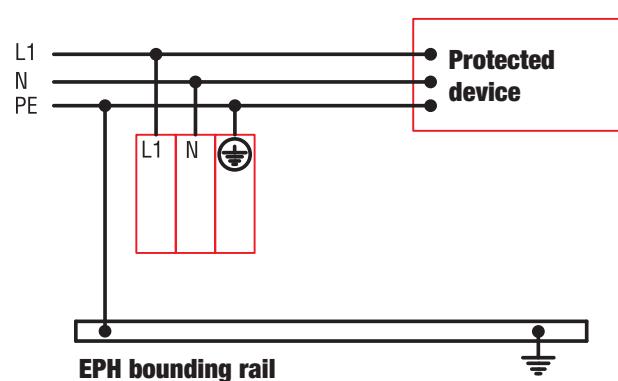
Examples of connection of surge protection devices

The necessary number of surge protection devices – to be installed – is defined by the number of conductors independent from PE. This way by looking through the basic wiring diagrams of the three-phase energy supplying network you will see that for TN-C network 3 pcs, for TN-S, TT and IT network 4 pcs of one-pole surge protection devices or a corresponding number of multi-pole surge protection devices should be installed at every protection point.

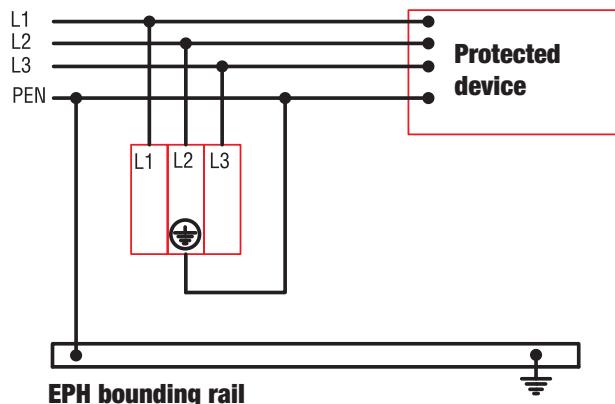
TN-S Three phases + N/PE link



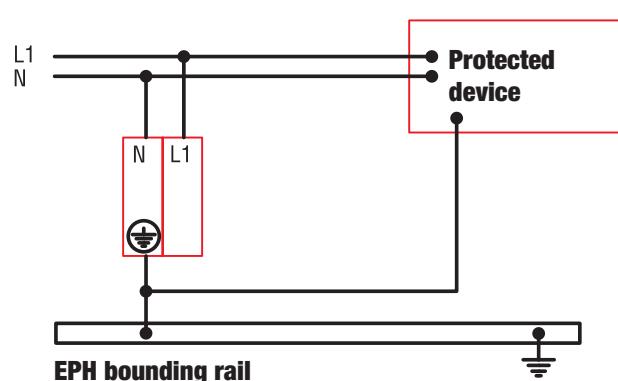
TT- One phase + N/PE link



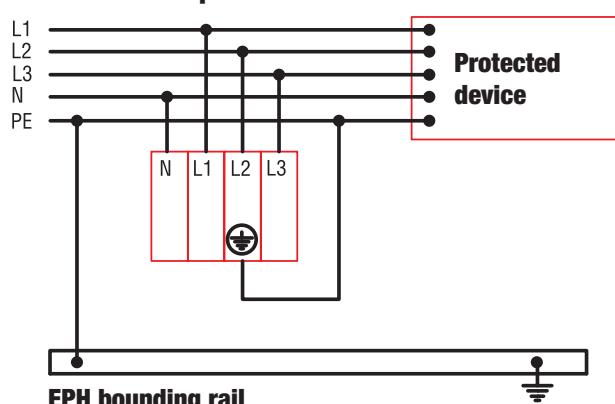
TN-C Three phases link



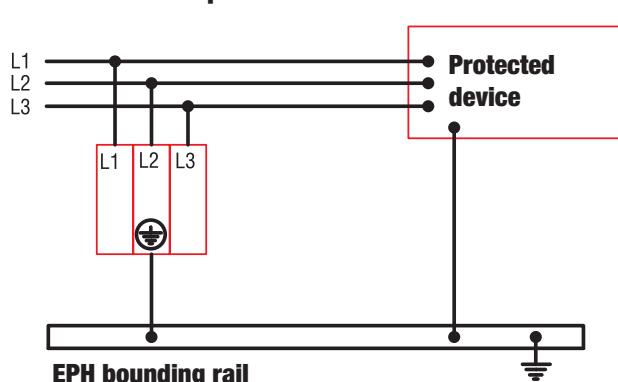
TT- One phase link



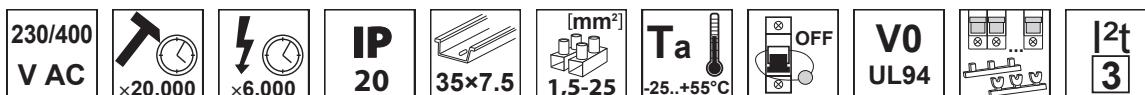
TN-S Three phases + neutral link



IT- Three phases link



Circuit breakers

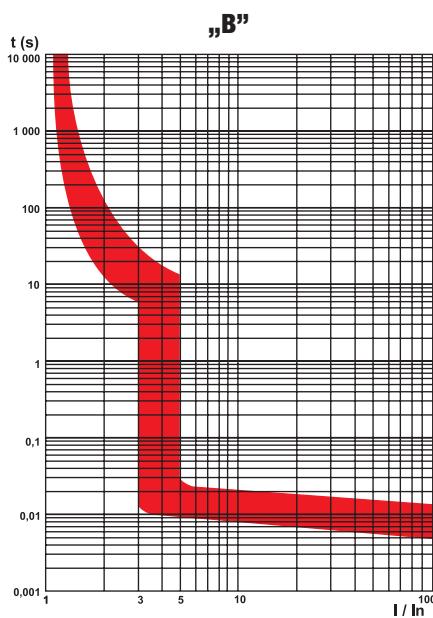


TRACON			In	Icn EN60698
DPN	C	1+N	6 – 32 A	4,5 kA
MB	B, C	1, 2, 3	6 – 63 A	4,5 kA
TDZ	B, C, D	1, 2, 3, 4	1 – 63 A	6 kA
TDA	B, C	1, 2, 3, 4	1 – 63 A	10 kA
KMH	C	1, 2, 3, 4	63 – 125 A	6 kA

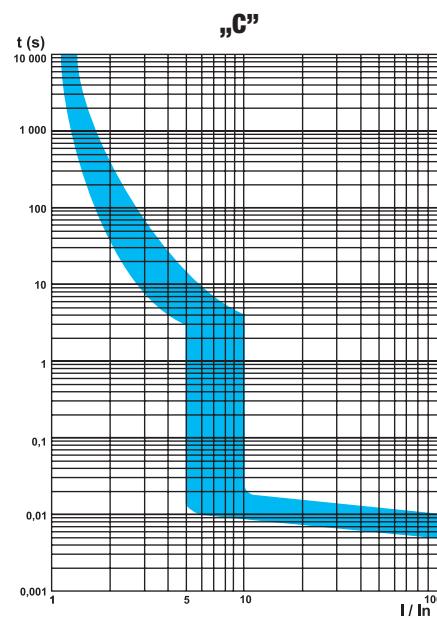
Circuit breakers are meant for overload protection and damage prevention in electrical networks and for the protection against environmental damage and accidents. A bimetal (in case of overload) or electromagnetic (in case of short circuit) breaker unit is used to interrupt the circuit, interruption by hand being an alternative. All poles operate together, simultaneously.

Trip characteristics

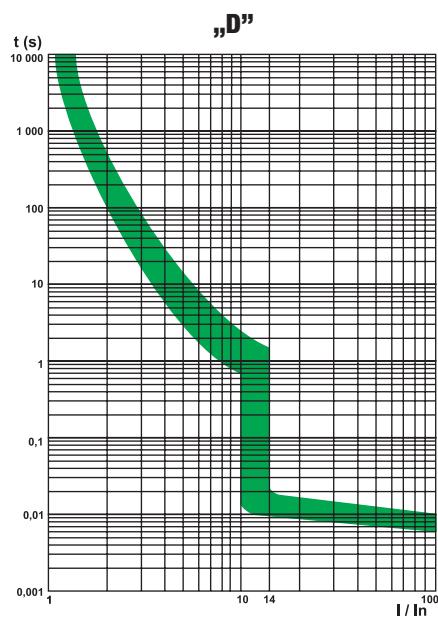
The EN 60898 standard determines the operating parameters, the requirements of performance and structure, and the order of tests. All three type of characteristics (B, C, D) of circuit breakers are operating on the same way ($<2,55 \times I_n$) on the overload range. The different is seen on the overload range up to $3 \times I_n$, where the B type is tripping at $3 \dots 5 \times I_n$, the C type is tripping at $5 \dots 10 \times I_n$, the D type is tripping at $10 \dots 15 \times I_n$ fail current.



For general use – for protection of consumers with small starting current, circuits with incandescent lamps, for the protection of wires.



For general use – for protection of household electrical machines, equipments, small shock current motors.



For protection of motors with powerful starting current, transformers and other inductive type users.

Data in relation to the outer temperature

The maximum loading current of the circuit breaker decreases with the rise in the outer temperature. E.g. If more circuit breakers are installed side by side into the same distribution box, then the rise in temperature, inside the box has to be considered when choosing the appropriate circuit breakers.

E.g. while the loading current of a 16A rated current circuit breaker ($I=16A$) can be 17,9A on 20 °C ,then this value on 40 °C is only the same 16A, while on 60 °C it can only be 13,9A.

The operating **reference temperature of the circuit breakers is 40 °C**.

Allowed maximum loading current (A)

I_n (A)	20 °C	30 °C	40 °C	50 °C	60 °C
2	2.18	2.08	2	1.9	1.8
4	4.52	4.24	4	3.72	3.44
6	6.48	6.24	6	5.76	5.46
10	11.4	10.7	10	9.2	8.4
16	17.9	16.9	16	15	13.9
20	22.2	21.2	20	18.8	17.6
25	27.7	26.5	25	23.5	21.7
32	35.2	33.6	32	30.4	28.4
40	44.4	42.4	40	37.5	34.8
50	56	53	50	46.5	43
63	71.8	67.4	63	57.9	52.9

Accessories

TRACON	Denomination	DPN	MB	TDZ	TDA	KMH
EDS-□, EDFK-□	Distribution boxes	✓	✓	✓	✓	✓
TFSS-□	Normal connecting rails	✓	✓	✓	✓	-
TFSS-□V	Spade type connecting rails	-	✓	✓	-	-
TFSS-1CS	Connecting clip with screw	✓	✓	✓	✓	-
35/7,5□SIN	Mounting rails according to EN 50022	✓	✓	✓	✓	✓
TDT, TDT-2	Protective cover	✓	✓	✓	✓	-

Flush mounted distribution boxes



H/2

Surface mounted distribution boxes



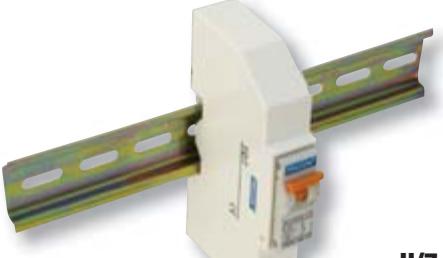
H/2

DC type MCB for direct current electric networks



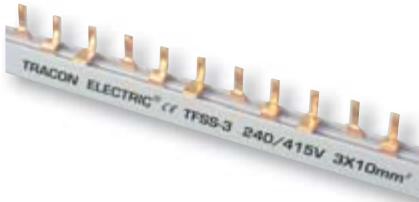
M/7

Enclosure for moulded devices



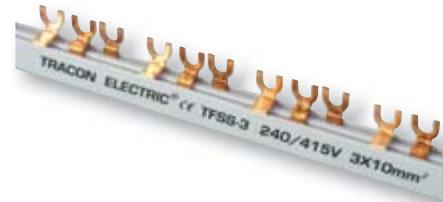
H/7

Normal connecting rails



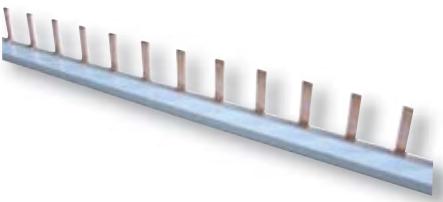
N/10

Spade type connecting rails



N/10

Connecting rails for high current devices



N/10

Mounting rails according to EN 50022



N/11

Connecting clip with screw



N/10






Key to electricity

Tracon Key to electricity





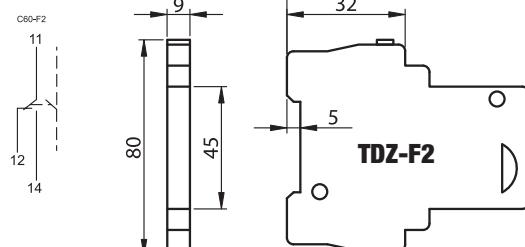



Auxiliary units230/400
V ACIP
20Ta
-25...+55°CUi
500 VVO
UL94**Pictograms****F/0**

TRACON	→	I_n (A) (415 V AC)	I_n (A) (240 V AC)	I_n (A) (125 V DC)	I_n (A) (48 V DC)	I_n (A) (24 V DC)
TDZ-F2	TDZ	3 A	6 A	1 A	2 A	4 A

This contact shows the ON/OFF state of the circuit breaker's contact.

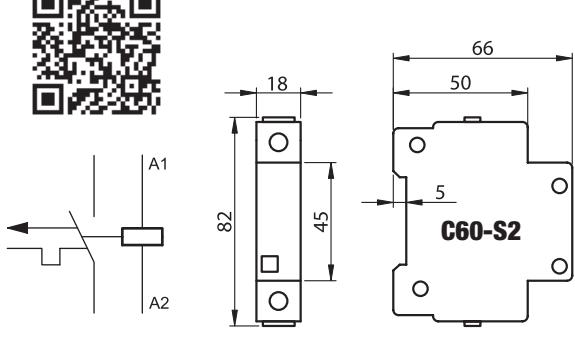



Working current (shunt) release230/400
V ACIP
20Ta
-25...+55°CUi
500 VVO
UL94

TRACON	→	U_s
C60-S2	TDZ	110-415 V AC/ 110-220 V DC

It switches off the connected circuit breaker by impulse operating voltage, thus being suitable for remote control. In case of release the reset button jumps out and the circuit breaker can be switched on again only after pushing this button in. Attention: the operating coil is allowed to be under voltage for 10 sec maximum!

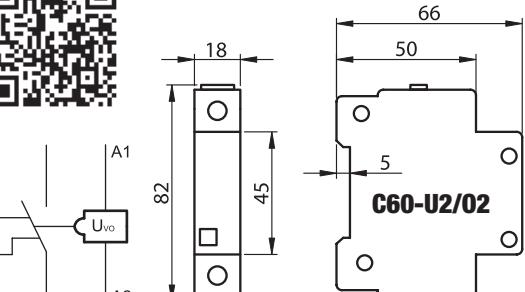



Under/over voltage release230/400
V ACIP
20Ta
-25...+55°CUi
500 VVO
UL94

TRACON	→	U_{up}	U_{down}
C60-U2/02	TDZ	280 V ± 5 %	170 V ± 5 %

The release switches off the circuit breaker if the supply voltage is beyond rated operating range, protecting the attached device from harmful impacts of voltage variation. The circuit breaker is able to switch on only when the voltage on the contacts of the release gets back into the operating range (170 V – 280 V). In case of release the reset button jumps out and the circuit breaker can be switched on again only after pushing this button in.





Lockable latch for modular protecting devices

Using this latch the modular protecting devices can be locked with padlock on "OFF" position. The latch is applicable for devices with 8 – 10 mm actuator lever cutting and two 1 - 1,5 mm hole needed on the top of lever arch to fix the latch. The shackle diameter of used padlock can be up to 8 mm. Using the latch in „ON” position is forbidden!

TRACON



MDL

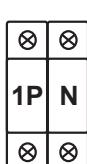
MB, RB, TDZ, TDA, KVKM, KVK, KVKE, TFG, TFIG, TFK, TIK, SVK



DPN (1+N poles) type circuit breakers

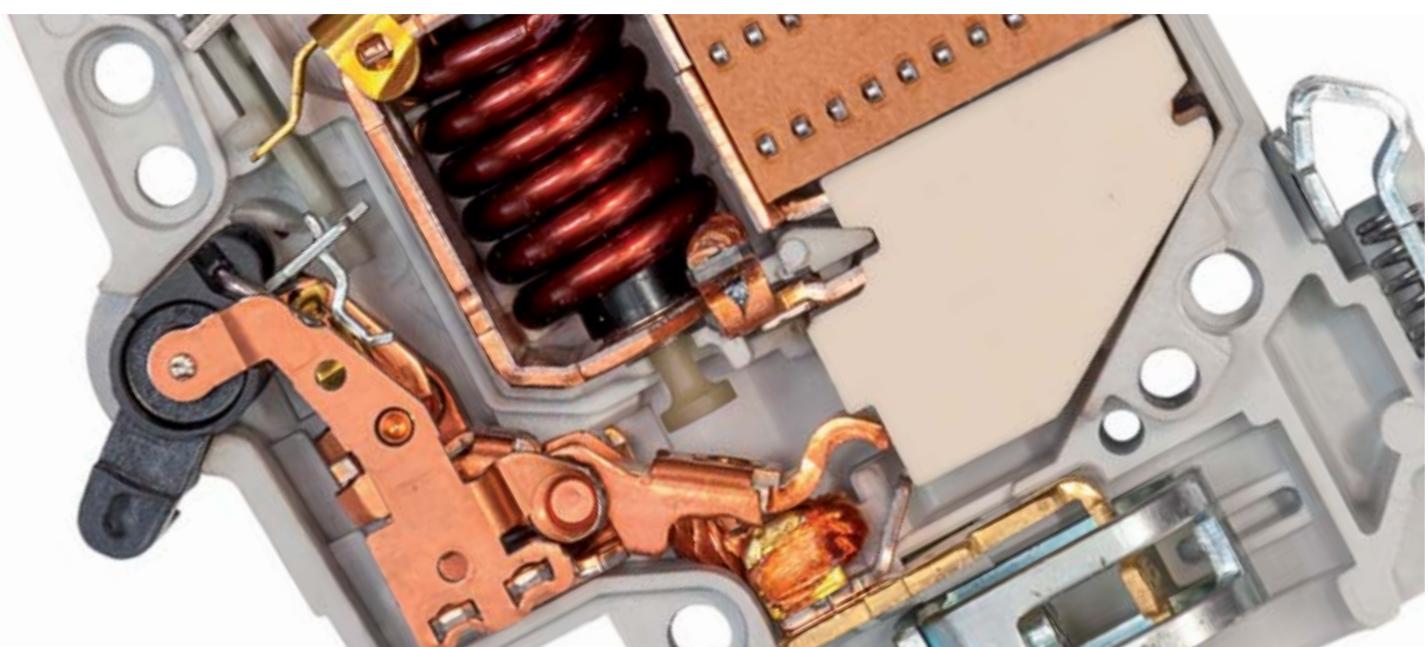
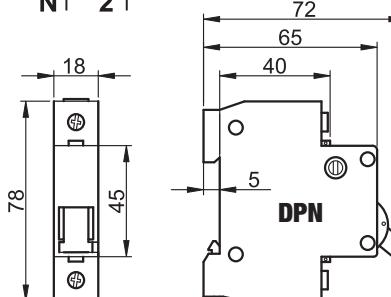
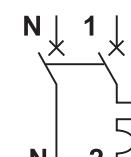
230/400 V AC											
--------------	--	--	--	--	--	--	--	--	--	--	--

TRACON

 I_n (A)

DPN-C-6	6
DPN-C-10	10
DPN-C-13	13
DPN-C-16	16
DPN-C-20	20
DPN-C-25	25
DPN-C-32	32

* Devices with two poles, have one protected (phase) and one switched neutral (N) pole.



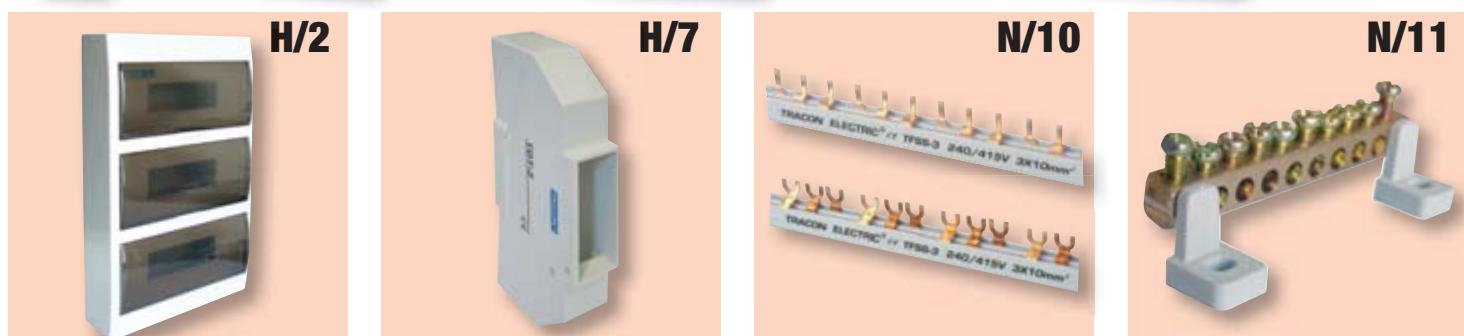
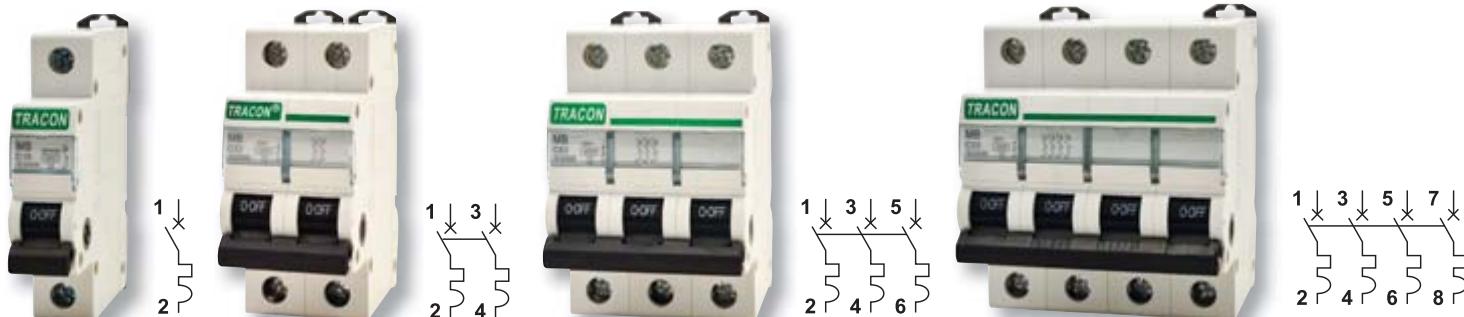
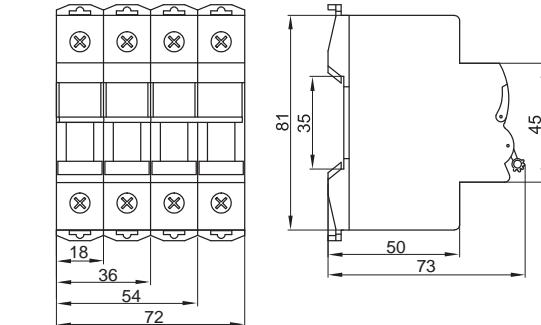
MB Circuit breakers

230/400 V AC				IP 20			Ta $-25..+55^{\circ}\text{C}$		V0 UL94			I_cn EN 60898 4,5 kA	
--------------	--	--	--	-------	--	--	-------------------------------	--	---------	--	--	----------------------	--

TRACON			In (A)	TRACON	In (A)	
B	C			B	C	
MB-1B-6	MB-1C-6		6	MB-3B-6	MB-3C-6	6
MB-1B-10	MB-1C-10		10	MB-3B-10	MB-3C-10	10
MB-1B-13	MB-1C-13		13	MB-3B-13	MB-3C-13	13
MB-1B-16	MB-1C-16		16	MB-3B-16	MB-3C-16	16
MB-1B-20	MB-1C-20		20	MB-3B-20	MB-3C-20	20
MB-1B-25	MB-1C-25		25	MB-3B-25	MB-3C-25	25
MB-1B-32	MB-1C-32		32	MB-3B-32	MB-3C-32	32
MB-1B-40	MB-1C-40		40	MB-3B-40	MB-3C-40	40
MB-1B-50	MB-1C-50		50	MB-3B-50	MB-3C-50	50
MB-1B-63	MB-1C-63		63	MB-3B-63	MB-3C-63	63
MB-2B-6	MB-2C-6		6	-	MB-4C-10	10
MB-2B-10	MB-2C-10		10	-	MB-4C-16	16
MB-2B-13	MB-2C-13		13	-	MB-4C-20	20
MB-2B-16	MB-2C-16		16	-	MB-4C-25	25
MB-2B-20	MB-2C-20		20	-	MB-4C-32	32
MB-2B-25	MB-2C-25		25	-	MB-4C-40	40
MB-2B-32	MB-2C-32		32	-	MB-4C-50	50
MB-2B-40	MB-2C-40		40	-	MB-4C-63	63
MB-2B-50	MB-2C-50		50			
MB-2B-63	MB-2C-63		63			



RELEVANT STANDARD
EN 60898



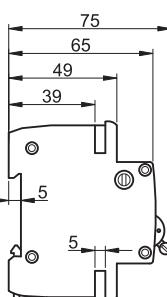
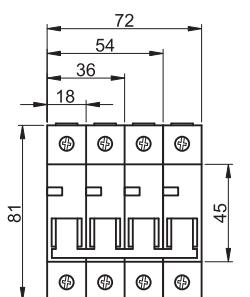
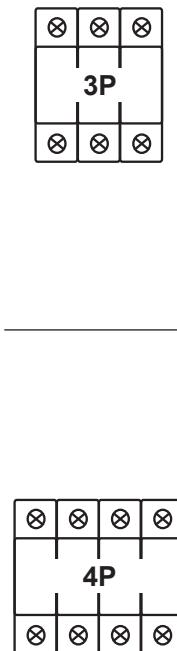
TDZ Circuit breakers230/400
V AC**IP
20**[mm²]
1,5-25**T_a**
-25...+55°C**U_i**
500 V**V0**
UL94**I_{cn}**
6 kA

TRACON				I _n (A)
B	C	D		
TDZ-1B-1	TDZ-1C-1	TDZ-1D-1	1	
TDZ-1B-2	TDZ-1C-2	TDZ-1D-2	2	
TDZ-1B-4	TDZ-1C-4	TDZ-1D-4	4	
TDZ-1B-6	TDZ-1C-6	TDZ-1D-6	6	
TDZ-1B-10	TDZ-1C-10	TDZ-1D-10	10	
TDZ-1B-13	TDZ-1C-13	TDZ-1D-13	13	
TDZ-1B-16	TDZ-1C-16	TDZ-1D-16	16	
TDZ-1B-20	TDZ-1C-20	TDZ-1D-20	20	
TDZ-1B-25	TDZ-1C-25	TDZ-1D-25	25	
TDZ-1B-32	TDZ-1C-32	TDZ-1D-32	32	
TDZ-1B-40	TDZ-1C-40	TDZ-1D-40	40	
TDZ-1B-50	TDZ-1C-50	TDZ-1D-50	50	
TDZ-1B-63	TDZ-1C-63	TDZ-1D-63	63	
TDZ-2B-1	TDZ-2C-1	TDZ-2D-1	1	
TDZ-2B-2	TDZ-2C-2	TDZ-2D-2	2	
TDZ-2B-4	TDZ-2C-4	TDZ-2D-4	4	
TDZ-2B-6	TDZ-2C-6	TDZ-2D-6	6	
TDZ-2B-10	TDZ-2C-10	TDZ-2D-10	10	
TDZ-2B-13	TDZ-2C-13	TDZ-2D-13	13	
TDZ-2B-16	TDZ-2C-16	TDZ-2D-16	16	
TDZ-2B-20	TDZ-2C-20	TDZ-2D-20	20	
TDZ-2B-25	TDZ-2C-25	TDZ-2D-25	25	
TDZ-2B-32	TDZ-2C-32	TDZ-2D-32	32	
TDZ-2B-40	TDZ-2C-40	TDZ-2D-40	40	
TDZ-2B-50	TDZ-2C-50	TDZ-2D-50	50	
TDZ-2B-63	TDZ-2C-63	TDZ-2D-63	63	

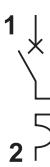
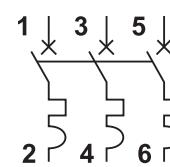
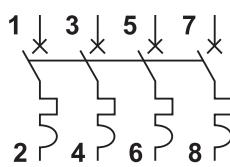
1P

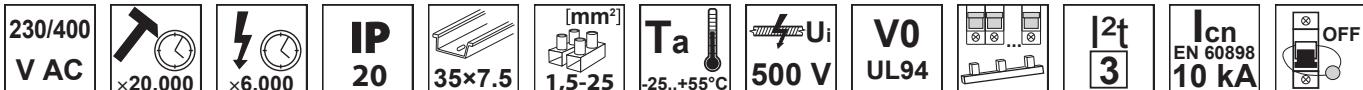
2P

TRACON				I _n (A)
B	C	D		
TDZ-3B-1	TDZ-3C-1	TDZ-3D-1	1	
TDZ-3B-2	TDZ-3C-2	TDZ-3D-2	2	
TDZ-3B-4	TDZ-3C-4	TDZ-3D-4	4	
TDZ-3B-6	TDZ-3C-6	TDZ-3D-6	6	
TDZ-3B-10	TDZ-3C-10	TDZ-3D-10	10	
TDZ-3B-13	TDZ-3C-13	TDZ-3D-13	13	
TDZ-3B-16	TDZ-3C-16	TDZ-3D-16	16	
TDZ-3B-20	TDZ-3C-20	TDZ-3D-20	20	
TDZ-3B-25	TDZ-3C-25	TDZ-3D-25	25	
TDZ-3B-32	TDZ-3C-32	TDZ-3D-32	32	
TDZ-3B-40	TDZ-3C-40	TDZ-3D-40	40	
TDZ-3B-50	TDZ-3C-50	TDZ-3D-50	50	
TDZ-3B-63	TDZ-3C-63	TDZ-3D-63	63	
TDZ-4B-1	TDZ-4C-1	TDZ-4D-1	1	
TDZ-4B-2	TDZ-4C-2	TDZ-4D-2	2	
TDZ-4B-4	TDZ-4C-4	TDZ-4D-4	4	
TDZ-4B-6	TDZ-4C-6	TDZ-4D-6	6	
TDZ-4B-10	TDZ-4C-10	TDZ-4D-10	10	
TDZ-4B-13	TDZ-4C-13	TDZ-4D-13	13	
TDZ-4B-16	TDZ-4C-16	TDZ-4D-16	16	
TDZ-4B-20	TDZ-4C-20	TDZ-4D-20	20	
TDZ-4B-25	TDZ-4C-25	TDZ-4D-25	25	
TDZ-4B-32	TDZ-4C-32	TDZ-4D-32	32	
TDZ-4B-40	TDZ-4C-40	TDZ-4D-40	40	
TDZ-4B-50	TDZ-4C-50	TDZ-4D-50	50	
TDZ-4B-63	TDZ-4C-63	TDZ-4D-63	63	

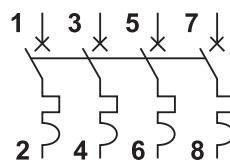
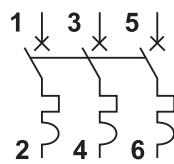
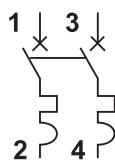
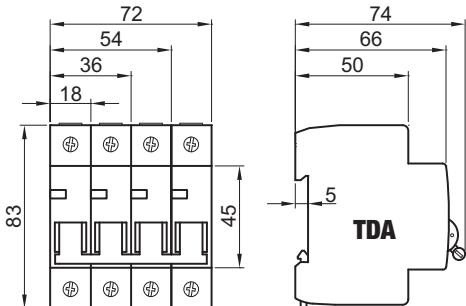


F/12

ETL-SEMKO CERTIFICATE NO.
SE-303872TÜV MEEI TEST DOCUMENTATION
D0128V0605RELEVANT STANDARD
EN 60898

TDA type circuit breakers

TRACon			In (A)
B	C		
TDA-1B-1	TDA-1C-1	1	
TDA-1B-2	TDA-1C-2	2	
TDA-1B-4	TDA-1C-4	4	
TDA-1B-6	TDA-1C-6	6	
TDA-1B-10	TDA-1C-10	10	
TDA-1B-13	TDA-1C-13	13	
TDA-1B-16	TDA-1C-16	16	
TDA-1B-20	TDA-1C-20	20	
TDA-1B-25	TDA-1C-25	25	
TDA-1B-32	TDA-1C-32	32	
TDA-1B-40	TDA-1C-40	40	
TDA-1B-50	TDA-1C-50	50	
TDA-1B-63	TDA-1C-63	63	
TDA-2B-1	TDA-2C-1	1	
TDA-2B-2	TDA-2C-2	2	
TDA-2B-4	TDA-2C-4	4	
TDA-2B-6	TDA-2C-6	6	
TDA-2B-10	TDA-2C-10	10	
TDA-2B-13	TDA-2C-13	13	
TDA-2B-16	TDA-2C-16	16	
TDA-2B-20	TDA-2C-20	20	
TDA-2B-25	TDA-2C-25	25	
TDA-2B-32	TDA-2C-32	32	
TDA-2B-40	TDA-2C-40	40	
TDA-2B-50	TDA-2C-50	50	
TDA-2B-63	TDA-2C-63	63	
TRACon			In (A)
B	C		
TDA-3B-1	TDA-3C-1	1	
TDA-3B-2	TDA-3C-2	2	
TDA-3B-4	TDA-3C-4	4	
TDA-3B-6	TDA-3C-6	6	
TDA-3B-10	TDA-3C-10	10	
TDA-3B-13	TDA-3C-13	13	
TDA-3B-16	TDA-3C-16	16	
TDA-3B-20	TDA-3C-20	20	
TDA-3B-25	TDA-3C-25	25	
TDA-3B-32	TDA-3C-32	32	
TDA-3B-40	TDA-3C-40	40	
TDA-3B-50	TDA-3C-50	50	
TDA-3B-63	TDA-3C-63	63	
TDA-4B-1	TDA-4C-1	1	
TDA-4B-2	TDA-4C-2	2	
TDA-4B-4	TDA-4C-4	4	
TDA-4B-6	TDA-4C-6	6	
TDA-4B-10	TDA-4C-10	10	
TDA-4B-13	TDA-4C-13	13	
TDA-4B-16	TDA-4C-16	16	
TDA-4B-20	TDA-4C-20	20	
TDA-4B-25	TDA-4C-25	25	
TDA-4B-32	TDA-4C-32	32	
TDA-4B-40	TDA-4C-40	40	
TDA-4B-50	TDA-4C-50	50	
TDA-4B-63	TDA-4C-63	63	



TÜV MEEI TEST DOCUMENTATION
M1 2692428 01



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- Check our new products
- Be updated

Our assortment is expanding quickly and continuously! Our catalogue shows the assortment of January 2017. Be up to date by our web page!

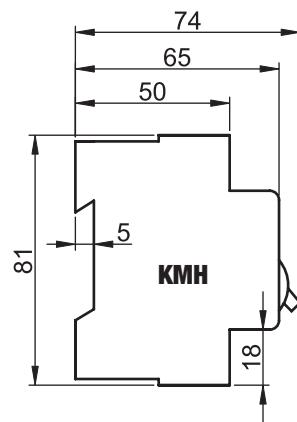
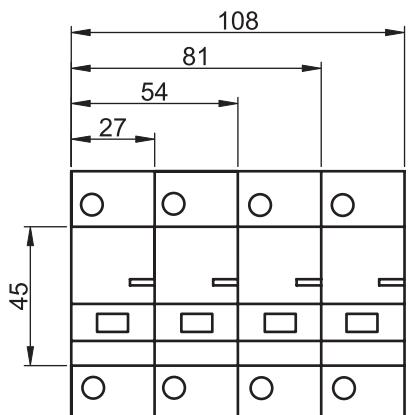
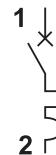
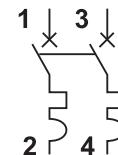
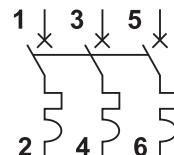
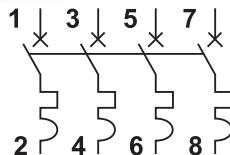
KMH type high current overload circuit breakers

	230/400 V AC			IP 20		[mm ²] 16-35	T _a -25...+55°C		V0 UL94		I _t 2t 3		
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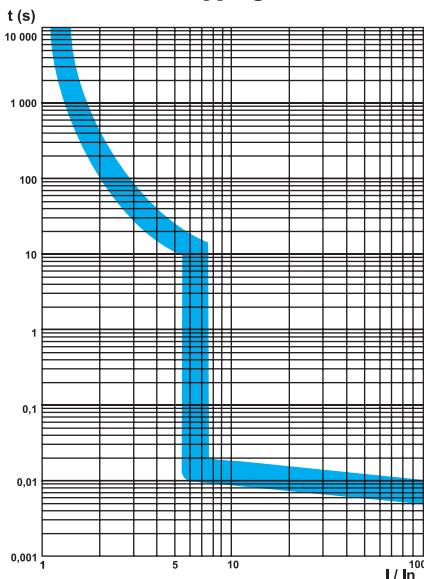


In (A)	
KMH-263	63
KMH-280	80
KMH-2100	100
KMH-2125	125

In (A)	
KMH-463	63
KMH-480	80
KMH-4100	100
KMH-4125	125



Tripping characteristic



F/0

RELEVANT STANDARD
EN 60898

Combined protection switches

TRACON		xP	x17.5	I _n (A)	I _{cn} EN60698
KVKE	B, C	2	1	6 – 32 A	6 kA
KVK	B, C	2	2	6 – 32 A	3 kA
KVKM	B, C	2	2	6 – 40 A	6 kA

The combined protective switch is mainly used in electrical installations of buildings, for personal, overload and short circuit protection. It is especially suitable for electrical protection of rooms with increased safety requirements.

The current transformer of the protective switch, namely the magnetic quick breaker and the bimetallic, thermal, residual current breaker are placed in the same box. The device has an optical sign, which turns red if the break occurs due to a defect (overload, short circuit, or earth circuit). At manual switching-off, this red colour does not appear. By pressing the "T" pushbutton, the residual current switching part of the product can be checked. This check should be made at least once in a month.

Thanks to its dimensions, this switch can easily replace the existing protective device (circuit breaker).

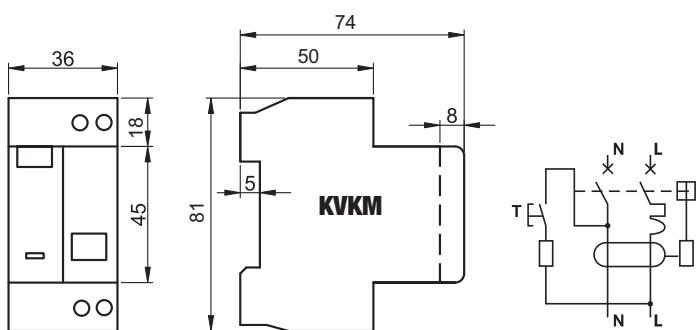
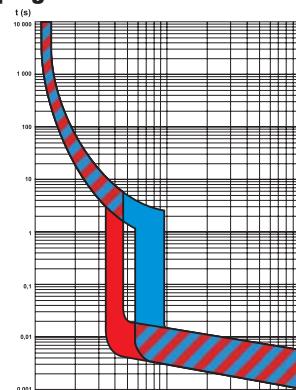


KVKM type combined protective switches, electromechanical

	230 V AC			IP 20			Ta -25..+55°C	Ui 690 V	V0 UL94		Icn EN 60898 6 kA	
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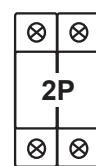
Tripping characteristic



RELEVANT STANDARD
EN 60898-1

RELEVANT STANDARD
EN 61009-1

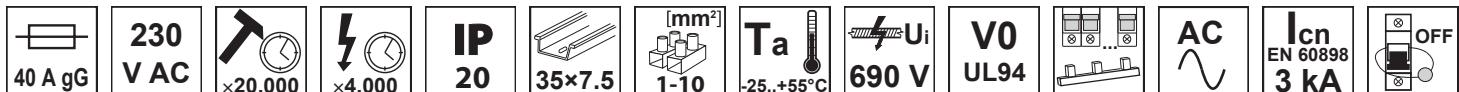
TRACON		I _n (A)	I _{Δn} (mA)
KVKMB-6/030	KVKM-6/030	6	30
KVKMB-6/100	KVKM-6/100	6	100
KVKMB-6/300	KVKM-6/300	6	300
KVKMB-10/030	KVKM-10/030	10	30
KVKMB-10/100	KVKM-10/100	10	100
KVKMB-10/300	KVKM-10/300	10	300
KVKMB-16/030	KVKM-16/030	16	30
KVKMB-16/100	KVKM-16/100	16	100
KVKMB-16/300	KVKM-16/300	16	300
KVKMB-20/030	KVKM-20/030	20	30
KVKMB-20/100	KVKM-20/100	20	100
KVKMB-20/300	KVKM-20/300	20	300
KVKMB-25/030	KVKM-25/030	25	30
KVKMB-25/100	KVKM-25/100	25	100
KVKMB-25/300	KVKM-25/300	25	300
KVKMB-32/030	KVKM-32/030	32	30
KVKMB-32/100	KVKM-32/100	32	100
KVKMB-32/300	KVKM-32/300	32	300
KVKMB-40/030	KVKM-40/030	40	30
KVKMB-40/100	KVKM-40/100	40	100
KVKMB-40/300	KVKM-40/300	40	300



The electro-mechanic RCCB protects against electric shock even in case of braking of neutral-wire!



KVK type combined protective switches

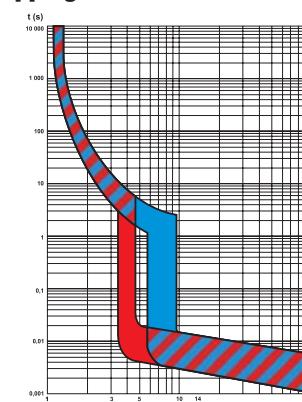
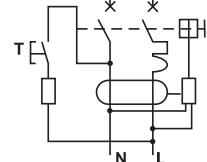
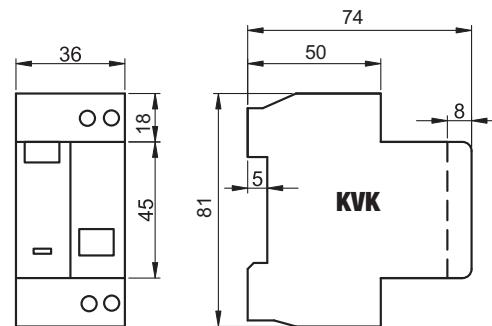


TRACON

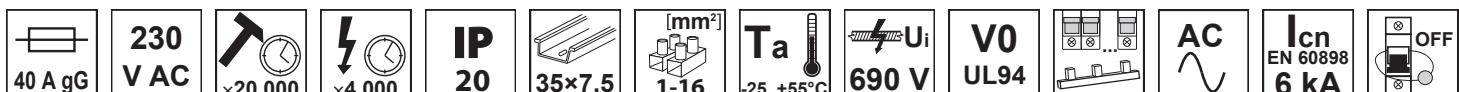
B	C	I _n (A)	I _{Δn} (mA)
KVKB-6/03	KVK-6/03	6	30
KVKB-6/10	KVK-6/10	6	100
KVKB-6/30	KVK-6/30	6	300
KVKB-10/03	KVK-10/03	10	30
KVKB-10/10	KVK-10/10	10	100
KVKB-10/30	KVK-10/30	10	300
KVKB-16/03	KVK-16/03	16	30
KVKB-16/10	KVK-16/10	16	100
KVKB-16/30	KVK-16/30	16	300
KVKB-20/03	KVK-20/03	20	30
KVKB-20/10	KVK-20/10	20	100
KVKB-20/30	KVK-20/30	20	300
KVKB-25/03	KVK-25/03	25	30
KVKB-25/10	KVK-25/10	25	100
KVKB-25/30	KVK-25/30	25	300
KVKB-32/03	KVK-32/03	32	30
KVKB-32/10	KVK-32/10	32	100
KVKB-32/30	KVK-32/30	32	300



Tripping characteristic


E3


KVKVE Combined protective switch with one-module width

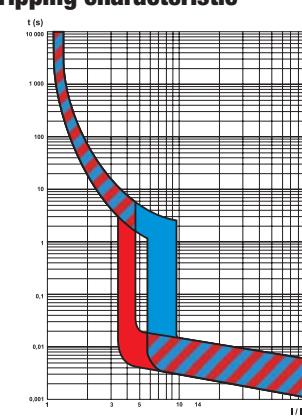
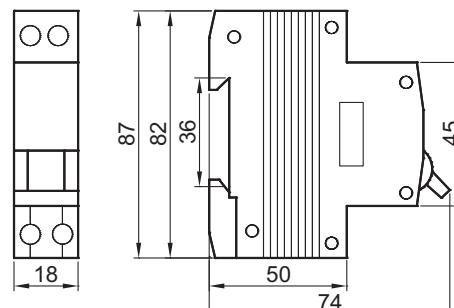


TRACON

B	C	I _n (A)	I _{Δn} (mA)
KVKVEB-6/30	KVKVE-6/30	6	30
KVKVEB-6/100	KVKVE-6/100	6	100
KVKVEB-10/30	KVKVE-10/30	10	30
KVKVEB-10/100	KVKVE-10/100	10	100
KVKVEB-13/30	KVKVE-13/30	13	30
KVKVEB-13/100	KVKVE-13/100	13	100
KVKVEB-16/30	KVKVE-16/30	16	30
KVKVEB-16/100	KVKVE-16/100	16	100
KVKVEB-20/30	KVKVE-20/30	20	30
KVKVEB-20/100	KVKVE-20/100	20	100
KVKVEB-25/30	KVKVE-25/30	25	30
KVKVEB-25/100	KVKVE-25/100	25	100
KVKVEB-32/30	KVKVE-32/30	32	30
KVKVEB-32/100	KVKVE-32/100	32	100



Tripping characteristic


E3

RELEVANT STANDARD
EN 61009-1

Residual current circuit breakers

TRACON	xP	I _n (A)	I _{Δn} (mA)	I _{cn} EN60898
RB		2, 4	25, 40, 63	30, 100, 300, 500
TFV		2, 4	16, 25, 40, 63	30, 100, 300
TFVH		4	80, 100, 125	30, 100, 300
TFG		2, 4	16, 25, 40, 63	30, 100, 300
TFGA		-	16	30
TFIG		2, 4	16, 25, 40, 63, 80, 100	30, 100, 300
				10 kA

TRACON	Denomination	RB	TFV	TFVH	TFG	TFIG
EDS-□, EDFK-□	Distribution boxes	✓	✓	✓	✓	✓
TFSS-□	Normal connecting rails	✓	✓	✓	✓	✓
TFSS-□V	Spade type connecting rails	✓	✓	✓	✓	✓
TFSS-1CS	Connecting clip with screw	✓	✓	✓	✓	-
35/7,5□SIN	Mounting rails according to EN 50022	✓	✓	✓	✓	✓

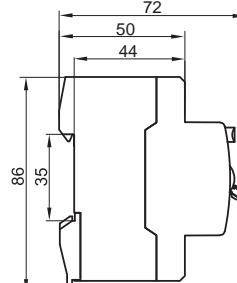
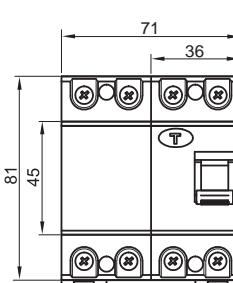
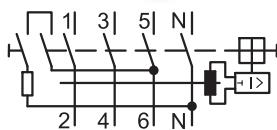
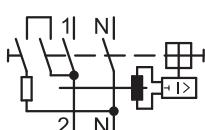
The residual current circuit breakers are most up-to-date devices mainly used for protection against indirect contact, but in some cases also against direct contact. The residual current breaker automatically starts to operate if the defect current (eg. insulation defect, short circuit etc.) in the protected network exceeds a critical value. Installation is suggested and in some cases even compulsory, in outdoor connections, in building site boxes, concrete mixers, bathrooms, etc.

Over 6000 A independent short circuit current one must be use a shunt fuse!

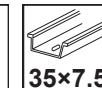
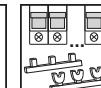
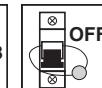


RB residual current circuit breakers

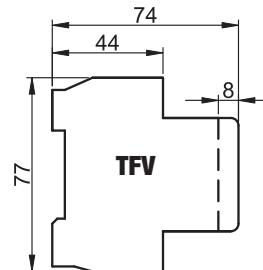
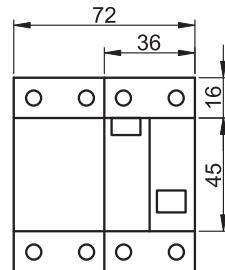
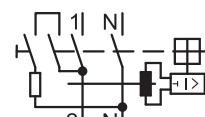
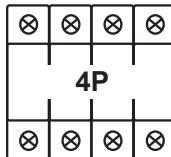
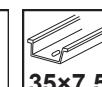
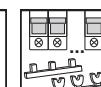
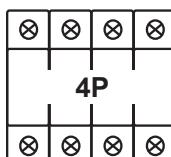
	230/400 V AC			IP 20		[mm²] 2,5-25	Ta -25..+55°C	Ui 500 V	V0 UL94		Icn EN 60898 4,5 kA	
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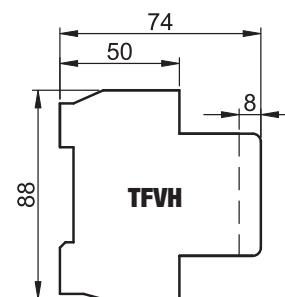
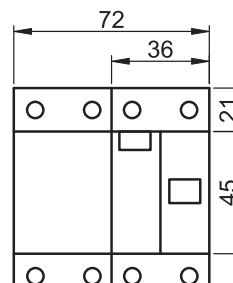
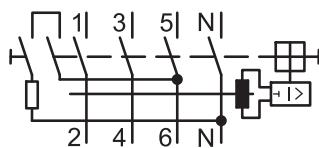
TRACON	I _n (A)	I _{Δn} (mA)
RB2-25030	25	30
RB2-25100	25	100
RB2-25300	25	300
RB2-25500	25	500
RB2-40030	40	30
RB2-40100	40	100
RB2-40300	40	300
RB2-40500	40	500
RB4-25030	25	30
RB4-25100	25	100
RB4-25300	25	300
RB4-25500	25	500
RB4-40030	40	30
RB4-40100	40	100
RB4-40300	40	300
RB4-40500	40	500
RB4-63030	63	30
RB4-63100	63	100
RB4-63300	63	300
RB4-63500	63	500

TFV residual current circuit breakers230/400
V ACx10.000
x4.000IP
20[mm²]
2,5-25Ta
-25...+55°CUi
500 VIcn
EN 60898
6 kA**TRACON****I_n
(A)****I_{Δn}
(mA)**

TFV2-16030	16	30
TFV2-16100	16	100
TFV2-16300	16	300
TFV2-25030	25	30
TFV2-25100	25	100
TFV2-25300	25	300
TFV2-40030	40	30
TFV2-40100	40	100
TFV2-40300	40	300
TFV2-63030	63	30
TFV2-63100	63	100
TFV2-63300	63	300
TFV4-16030	16	30
TFV4-16100	16	100
TFV4-16300	16	300
TFV4-25030	25	30
TFV4-25100	25	100
TFV4-25300	25	300
TFV4-40030	40	30
TFV4-40100	40	100
TFV4-40300	40	300
TFV4-63030	63	30
TFV4-63100	63	100
TFV4-63300	63	300

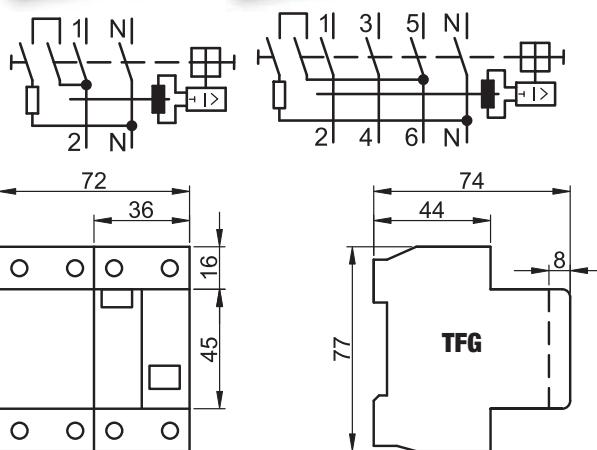
TÜV MEEI TEST DOCUMENTATION
D0461V092CCA CERTIFICATE NO.
CCA/HU0212/A1**TFVH residual current circuit breakers for high current**230/400
V ACx10.000
x4.000IP
20[mm²]
2,5-50Ta
-25...+55°CUi
500 VIcn
EN 60898
6 kA**TRACON****I_n
(A)****I_{Δn}
(mA)**

TFVH4-80030	80	30
TFVH4-80100	80	100
TFVH4-80300	80	300
TFVH4-100030	100	30
TFVH4-100100	100	100
TFVH4-100300	100	300
TFVH4-125030	125	30
TFVH4-125100	125	100
TFVH4-125300	125	300

TÜV MEEI TEST DOCUMENTATION
M1 2792130 01

TFG residual current circuit breakers

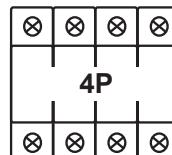
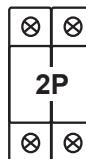
	230/400				IP 20		[mm²] 2,5-25	Ta -25...+55°C		V0 UL94		Icn EN 60898 6 kA	
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IECEE-CB CERTIFICATE NO.
CN-2734

ETL-SEMKO CERTIFICATE NO.
615432

TRACON	I _n (A)	I _{Δn} (mA)
TFG2-16030	16	30
TFG2-16100	16	100
TFG2-16300	16	300
TFG2-25030	25	30
TFG2-25100	25	100
TFG2-25300	25	300
TFG2-40030	40	30
TFG2-40100	40	100
TFG2-40300	40	300
TFG2-63030	63	30
TFG2-63100	63	100
TFG2-63300	63	300
TFG4-16030	16	30
TFG4-16100	16	100
TFG4-16300	16	300
TFG4-25030	25	30
TFG4-25100	25	100
TFG4-25300	25	300
TFG4-40030	40	30
TFG4-40100	40	100
TFG4-40300	40	300
TFG4-63030	63	30
TFG4-63100	63	100
TFG4-63300	63	300

**TFGA adaptor with residual current circuit breaker**

TRACON		I _n (A)	I _{Δn} (mA)	P _{max}	IP..
TFGA-1		16	30	3.600 W	IP 40
TFGA-4		16	30	3.600 W	IP 44
TFGA-1F		16	30	3.600 W	IP 40
TFGA-4F		16	30	3.600 W	IP 44



230 V AC	Ta -25...+55°C
	V0 UL94

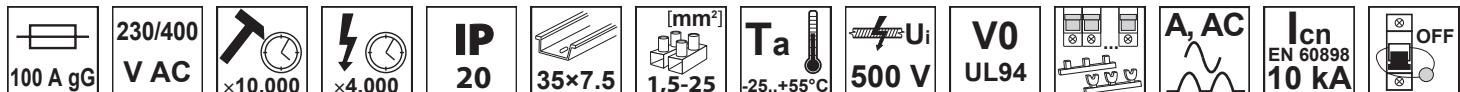
A, AC	Icn EN 60898 6 kA
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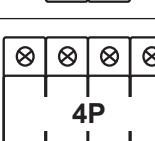
The TFGA type adaptor with residual current circuit breaker is a very modern protective device against direct touch of electric network with protective conductor, moreover in such of cases protects against indirect touch, too. The RCCB switches off automatically when the leakage current is too high on the protected network.

Being portable, it can be used for any network not provided with residual current protection.

The device can be switched on by the RESET button. Before first use the operation of the device must tested by the TEST button; after pushing the button the device has to switch off the plug from the network. While using the device continuously it must be tested monthly by pushing the TEST button. After installing the adaptor the protected device or net can be plugged into the socket-outlet.

Motor-driven automatic re-connection device



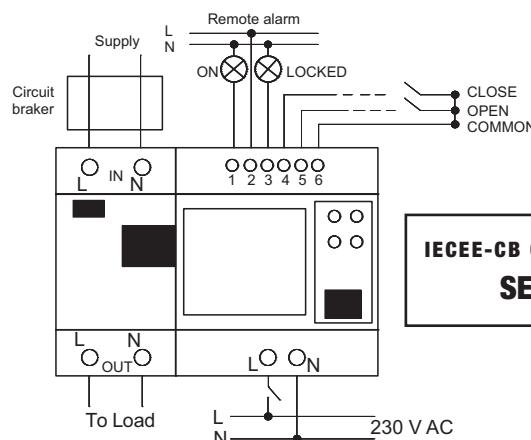
TRACon			I _n (A)
	IΔn= 30 mA	IΔn= 100 mA	IΔn= 300 mA
	TFIG2-16030	TFIG2-16100	TFIG2-16300
	TFIG2-25030	TFIG2-25100	TFIG2-25300
	TFIG2-40030*	TFIG2-40100*	TFIG2-40300
	TFIG2-63030	TFIG2-63100	TFIG2-63300
	TFIG2-80030	TFIG2-80100	TFIG2-80300
<hr/>			
	TFIG4-16030	TFIG4-16100	TFIG4-16300
	TFIG4-25030	TFIG4-25100	TFIG4-25300
	TFIG4-40030	TFIG4-40100*	TFIG4-40300
	TFIG4-63030	TFIG4-63100	TFIG4-63300*
	TFIG4-80030	TFIG4-80100	TFIG4-80300

*Available from stock; other types can be ordered with 4 weeks shipping time

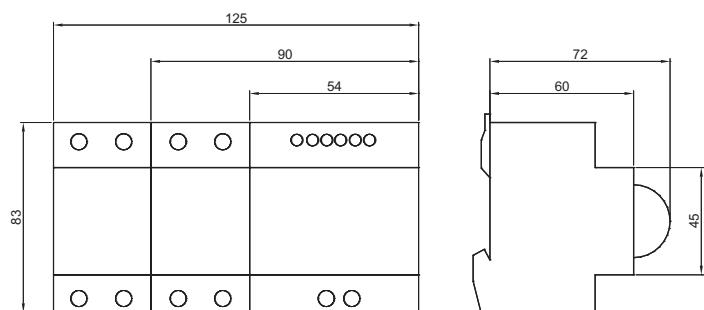


This device automatically re-connects the previously disconnected consumer (due to overcurrent generated by failure or atmospheric phenomena), once the current into the circuit has fallen back into the normal range. Such devices are an advantage in places where circuit break-off is expected to take long until the arrival of the service personnel (telecommunication stations, traffic control by signal lamps, remote control switching devices).

The cause of the overcurrent is usually transitory, long time interruption is unnecessary and causes important disturbance.



IECEE-CB CERTIFICATE NO.
SE-58939

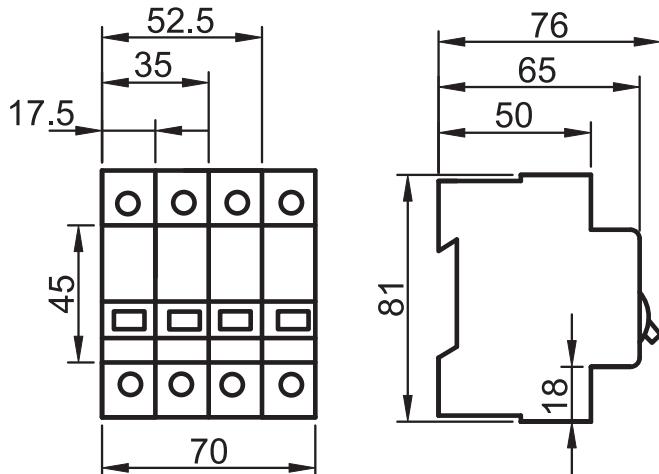
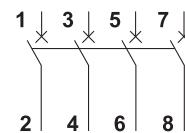
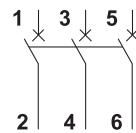
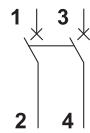
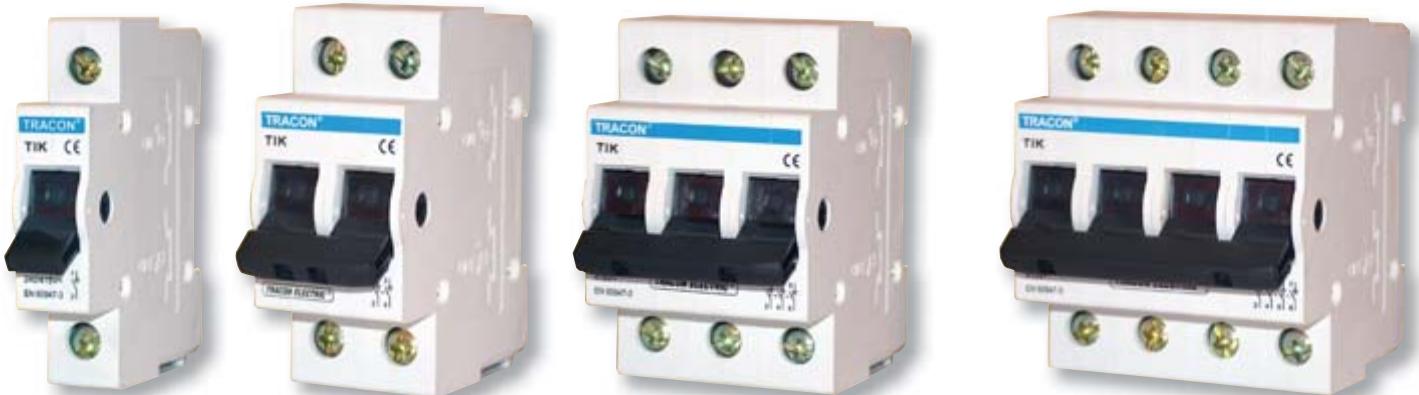


Technical data	Circuit breaker	Motor-driven automatic re-connection device
Adjustable number of re-connections	–	1, 2, 4, 6, 8
Break-off time / Switch-off time	0,1 s	1 s
Switch-on time	–	2 s
Adjustable re-connection time delay	–	10 – 30 – 60 – 120 – 180 s
Status LED-s	–	green: ON, red: OFF, flashing red: waiting for re-connection
Manual ON / OFF switching	with handle	with the convex cover
Load-bearing of the auxiliary contact	–	250 V AC, 5 A
Remote control input	–	NC / NO / CO

TIK type disconnector switches

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TRACON	I _n (A)	mm ²	TRACON	I _n (A)	mm ²
TIK1-20	20		TIK3-20	20	
TIK1-25	25		TIK3-25	25	
TIK1-32	32		TIK3-32	32	
TIK1-40	40		TIK3-40	40	
TIK1-63	63	16-50	TIK3-63	63	
TIK1-80	80		TIK3-80	80	
TIK1-100	100		TIK3-100	100	
TIK1-125	125		TIK3-125	125	
TIK2-20	20		TIK4-20	20	
TIK2-25	25		TIK4-25	25	
TIK2-32	32	16-50	TIK4-32	32	
TIK2-40	40		TIK4-40	40	
TIK2-63	63		TIK4-63	63	
TIK2-80	80		TIK4-80	80	
TIK2-100	100		TIK4-100	100	
TIK2-125	125		TIK4-125	125	



RELEVANT STANDARD
EN 60947-3



Serial selector switches



230/400
V AC



x30.000
x10.000

IP
20

35x7.5
mm²

1-16

Ta
-25..+55°C

U_i
690 V

V0
UL94



U_{imp}
6 kV



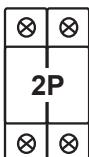
TRACON

I_n
(A)



SVK1-16
SVK1-32
SVK1-63

16
32
63

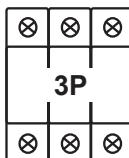


SVK2-16
SVK2-32
SVK2-63

16
32
63

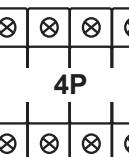
TRACON

I_n
(A)



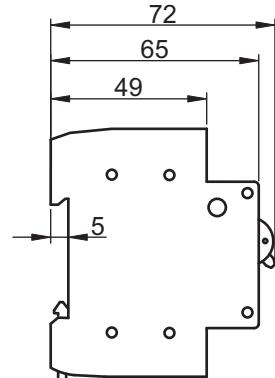
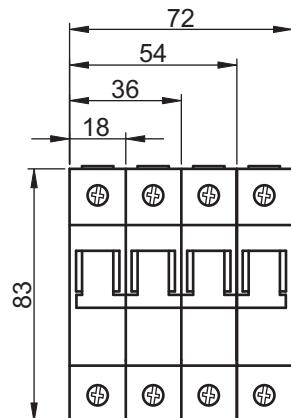
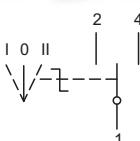
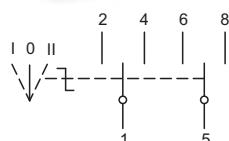
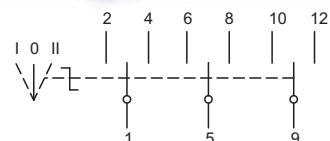
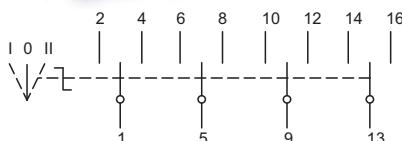
SVK3-16
SVK3-32
SVK3-63

16
32
63



SVK4-16
SVK4-32
SVK4-63

16
32
63

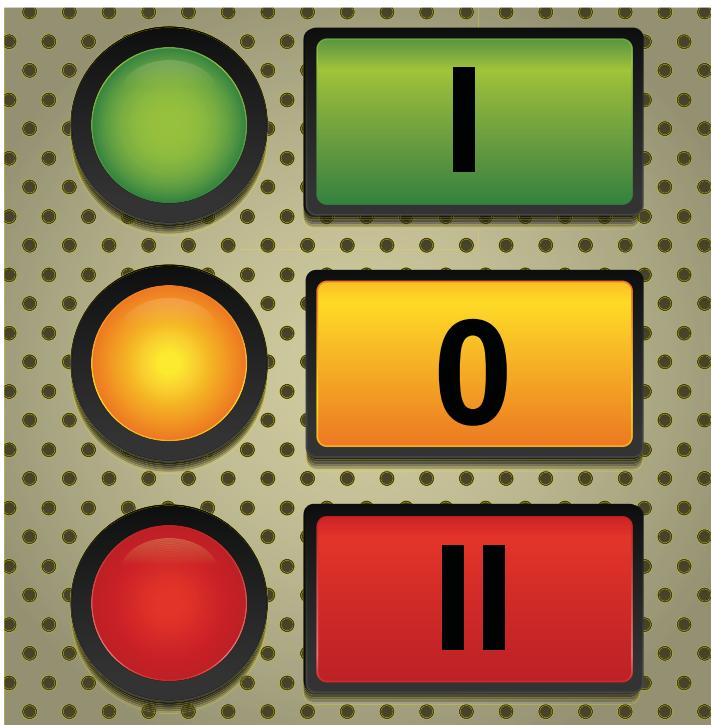


RELEVANT STANDARD
EN 60947-3



RELEVANT STANDARD
EN 60669-1

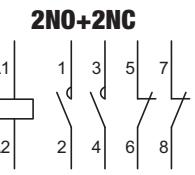
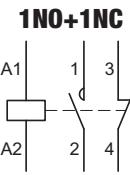
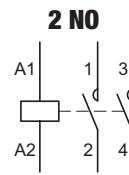
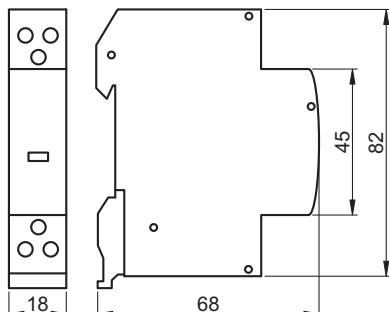
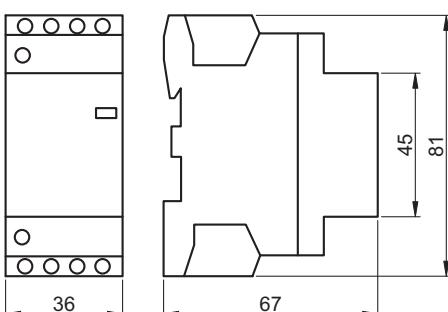
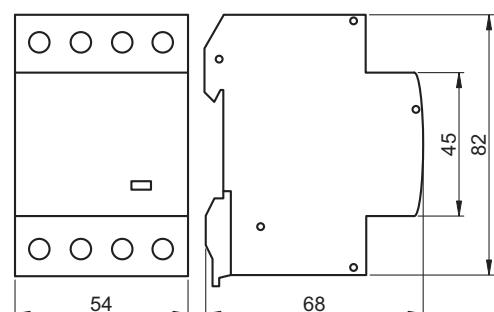
TÜV MEEI TEST DOCUMENTATION
28211822 001



Contactors for installations

	230/400 V AC			IP 20		[mm ²] 1,5-25	T _a -25..+55°C	U _i 500 V	V0 UL94	
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TRACON	U _m	I _n (A)	I _e			NC	NO
			AC1/AC7a	AC3 (400V)	AC7b		
THK2-20-24	24 V AC	20 A	20	-	7	2 NO	
THK2-20-24/1NO+1NC/	24 V AC	20 A	20	-	7	1NO+1NC	
THK2-20	230 V AC	20 A	20	-	7	2 NO	
THK2-20/1NO+1NC/	230 V AC	20 A	20	-	7	1NO+1NC	
THK2-32-24	24 V AC	32 A	32	-	12	2 NO	
THK2-32	230 V AC	32 A	32	-	12	2 NO	
THK2-40-24	24 V AC	40 A	40	-	15	2 NO	
THK2-40	230 V AC	40 A	40	-	15	2 NO	
THK3-20-24	24 V AC	20 A	20	5	7	3 NO	
THK3-20	230 V AC	20 A	20	5	7	3 NO	
THK3-32-24	24 V AC	32 A	32	5.5	12	3 NO	
THK3-32	230 V AC	32 A	32	5.5	12	3 NO	
THK3-40-24	24 V AC	40 A	40	7	15	3 NO	
THK3-40	230 V AC	40 A	40	7	15	3 NO	
THK4-20-24	24 V AC	20 A	20	5	7	4 NO	
THK4-20	230 V AC	20 A	20	5	7	4 NO	
THK4-32-24	24 V AC	32 A	32	5.5	12	4 NO	
THK4-32	230 V AC	32 A	32	5.5	12	4 NO	
THK4-40-24	24 V AC	40 A	40	7	15	4 NO	
THK4-40	230 V AC	40 A	40	7	15	4 NO	
THK4-63	230 V AC	63 A	63	15	20	4 NO	
THK4-63-24	24 V AC	63 A	63	15	20	4 NO	
THK4-63/2NO+2NC/	230 V AC	63 A	63	15	20	2NO+2NC	
THK4-63-24/2NO+2NC/	24 V AC	63 A	63	15	20	2NO+2NC	

**THK2-20****THK2-32, 2-40, 3-20, 4-20****THK3-32, 3-40, 4-32, 4-40, 4-63**

Staircase time switch

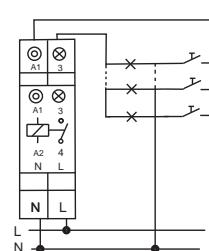
230 V AC	$\times 40.000$	IP 20		[mm ²] 35x7.5	1-2,5	T _a -10..+55 °C	U _i 500 V	V0 UL94
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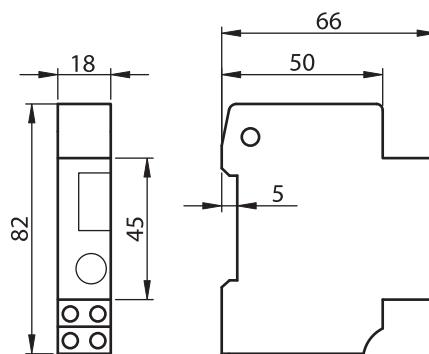
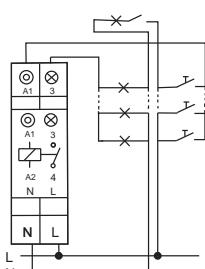
TRACON		P _s	I _n	L	Σ	P _{max}
TLA-3		30 sec – 12 min	1 VA	16 A ($\cos \varphi = 1$)	max. 250 m	$\times 50$ max. 2.300 W max. 800 W

Selection between continuous operation and automatic programs can be made by the selector switch on the front plate of the device.

Three wire system



Four wire system



Impulse-Relay

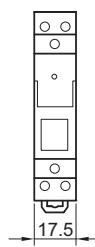
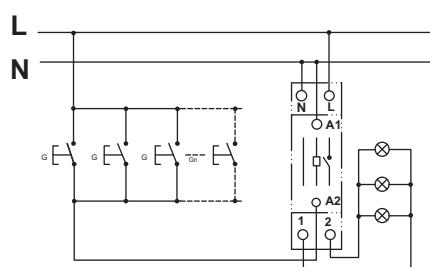
$\times 10^5$	$\times 10^5$	P _m 0,02 VA	IP 20	[mm ²] 0,75-4	35x7.5	T _a -25..+55 °C	U _i 500 V
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TRACON	U _m	P _{max}	cos $\varphi=1$	cos $\varphi=0,6$
IMP-12	12 V AC	max. 3.500 W max. 1.300 W	$\times 100.000$	$\times 50.000$
IMP-24	24 V AC	max. 3.500 W max. 1.300 W	$\times 100.000$	$\times 50.000$
IMP-230	230 V AC	max. 3.500 W max. 1.300 W	$\times 100.000$	$\times 50.000$

These bistable modular Impulse-Relays can be used for remote control of electric circuits and can be switched manually as well. Both phase and neutral wire must carry through relay but only phase will be switched.

1. The LED is lighting at „ON” state.
2. The LED is not lighting at „OFF” state.
3. The operation status of device can be changed manually by pressing the pushbutton on the front side.
4. After backout the output of device will stay in OFF state independent from the ON/OFF state of device before the blackout.



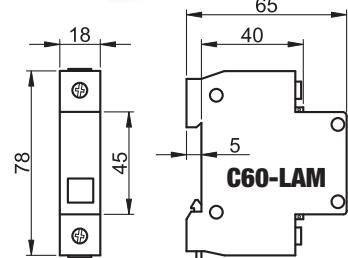
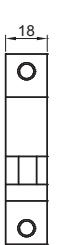
SCAN THE QR CODE!

- Check our new products
- Be updated

Our assortment is expanding quickly and continuously! Our catalogue shows the assortment of January 2017. Be up to date by our web page!

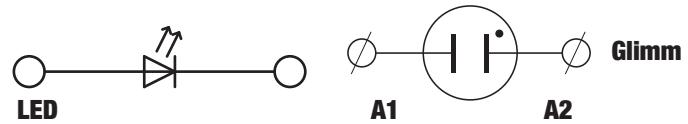
Signal lamps**Pm**
0,8 VA50/60 Hz [h]
20.000IP
20[mm²]
1-25

35x7.5

Ta
-25...+55°CUi
500 V**Pictograms****F/0**

TRACon	U _n	
SLJL-AC230-P	230 V AC	x 1 LED
SLJL-AC230-Z	230 V AC	x 1 LED
SLJL-AC230-S	230 V AC	x 1 LED
SLJL-AC230-F	230 V AC	x 1 LED
SLJL-AC230-K	230 V AC	x 1 LED
SLJL-AC24-P	24 V AC	x 1 LED
SLJL-AC24-Z	24 V AC	x 1 LED
SLJL-AC24-S	24 V AC	x 1 LED
SLJL-AC24-F	24 V AC	x 1 LED
SLJL-AC24-K	24 V AC	x 1 LED
SLJL-AC230-SZP	3x230 V AC	x 3 LED
SLJL-DC220-P	220 V DC	x 1 LED
SLJL-DC220-Z	220 V DC	x 1 LED
SLJL-DC220-S	220 V DC	x 1 LED
SLJL-DC220-F	220 V DC	x 1 LED
SLJL-DC220-K	220 V DC	x 1 LED
SLJL-DC24-P	24 V DC	x 1 LED
SLJL-DC24-Z	24 V DC	x 1 LED
SLJL-DC24-S	24 V DC	x 1 LED
SLJL-DC24-F	24 V DC	x 1 LED
SLJL-DC24-K	24 V DC	x 1 LED
C60-LAM-P	230 V AC	x 1 GLIMM
C60-LAM-Z	230 V AC	x 1 GLIMM
C60-LAM-S	230 V AC	x 1 GLIMM

The **SLJL-AC230-SZP** type can display the supply the voltage in all three phases in one module width with three different colored LED.

**Signal bells****Pm**
0,05 VA

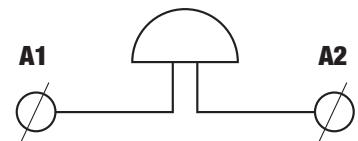
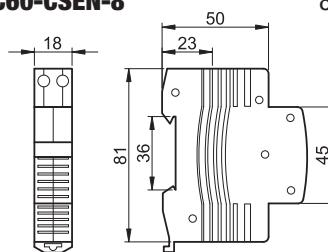
50/60 Hz

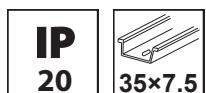
IP
20[mm²]
1-10

35x7.5

Ta
-25...+55°CUi
500 V

TRACon	U _m	
C60-CSEN	230 V AC	60 dB
C60-CSEN-24	24 V AC	60 dB
C60-CSEN-12	12 V AC	60 dB
C60-CSEN-8	8 V AC	60 dB



Safety (bell) transformer

Pictograms

F/0

TRACON	P_s	U_{upr}	U_{sec}	I_{sec}
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BT-8/1

max. 8 VA

230 V AC

4, 8, 12 V AC

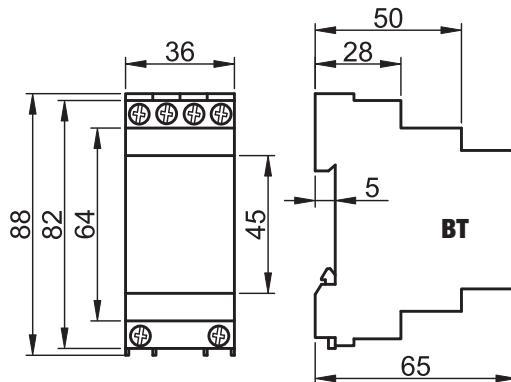
0,66 A

BT-8/2

8, 12, 24 V AC

0,33 A

Safe separating transformers supplying extra low voltage. Used as bell power supply it can also be used for other purposes according to the secondary voltage, e.g. supplier for other electric devices.


RELEVANT STANDARD
EN 61558-2-8

 \emptyset U_1
 \emptyset U_2
 \emptyset U_3
 \emptyset $230 \text{ V}, 50 \text{ Hz}$
Modular socket outlet**TRACON** I_n
(A) U_n **C60-DAO**2P+ \perp

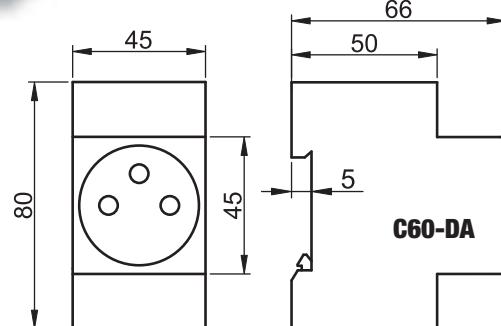
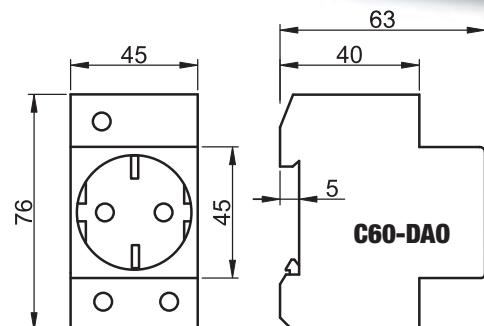
16

250 V AC

**C60-DA**2P+ \perp

16

250 V AC


RELEVANT STANDARD
MSZ 9872
RELEVANT STANDARD
IEC 60884-1
TÜV MEEI TEST DOCUMENTATION
28208191 001

Surface mounted type socket outlets and switches

230 V AC V1 UL94 IP 54 [mm²] 1-2,5 Ta -25..+55°C U_i 500 V



Pictograms

F/0

TR-PH02



TR-PH01



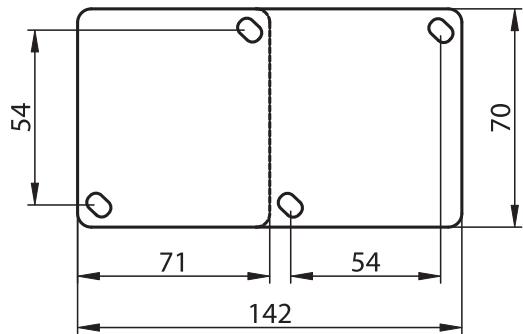
TR-PH09V



TR-PHF01



TR-PH03

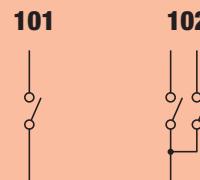
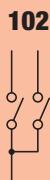
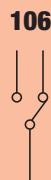
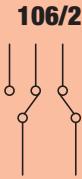


RELEVANT STANDARD
EN 60669-1

TÜV MEEI TEST DOCUMENTATION
28208176 001

TRACON

TR-PH01		x1	-	-
TR-PHF01		-	x1	-
TR-PH02		x2	-	-
TR-PHF02		-	x2	-
TR-PH03		x1	-	101
TR-PHF03		-	x1	101
TR-PH08		x1	-	106
TR-PHF08		-	x1	106
TR-PH03V		x1	-	101
TR-PHF03V		-	x1	101
TR-PH08V		x1	-	106
TR-PHF08V		-	x1	106
TR-PH09V		x1	-	105
TR-PHF09V		-	x1	105
TR-PH10V		x1	-	106/2
TR-PHF10V		-	x1	106/2
TR-PH09		x1	-	105
TR-PHF09		-	x1	105
TR-PH10		x1	-	106/2
TR-PHF10		-	x1	106/2
TR-PH04		-	-	102
TR-PH05		-	-	101
TR-PH05L			-	101
TR-PH06			-	106
TR-PH06L			-	106
TR-PH07			-	N101
TR-PH07L			-	N101
TR-PH05-2			-	105
TR-PH06-2			-	106/2

**101****102****106****105****106/2****N101**

TTK types surface mounted switches and socket outlets

230 V AC	V1 UL94	IP 20	[mm ²] 1-2,5	Ta -25..+55°C	U _i 500 V
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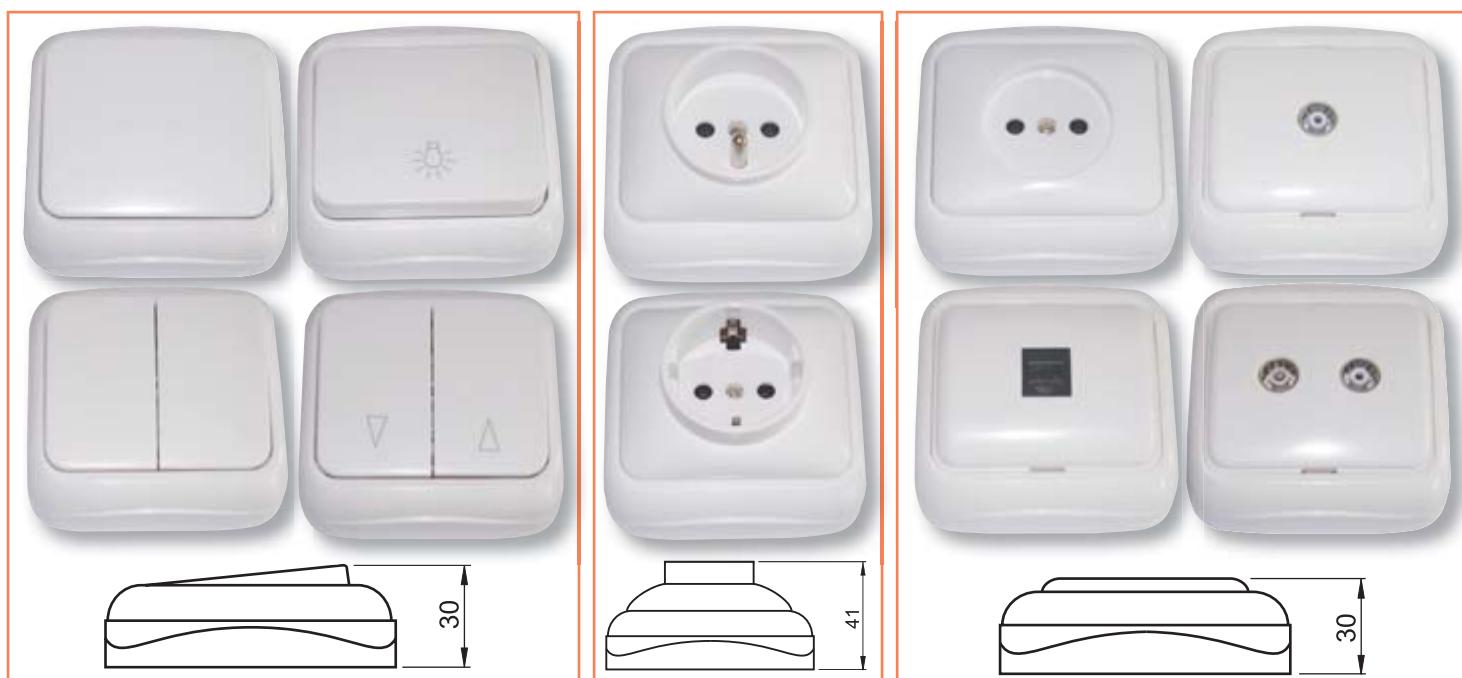
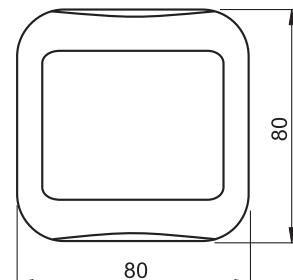
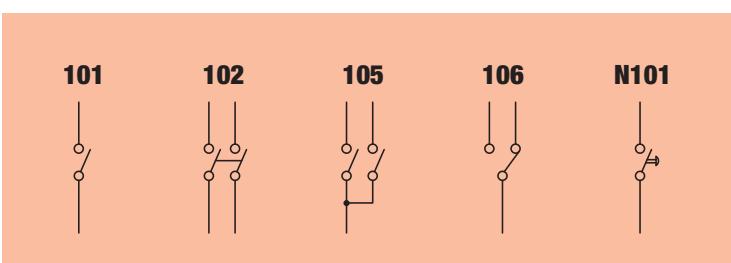
**F/0****TRACON**

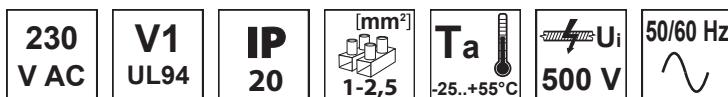
TTK-11	TTK-12	TTK-13*	TTK-21	TTK-31	TTK-32
SCHUKO	FRENCH	NO EARTH*	(RJ11 6/4) Telephone	9,5 mm TV	9,5 mm TV+FM

TRACON

TTK-01	TTK-02	TTK-03	TTK-04B	TTK-04L	TTK-04W	TTK-05	TTK-06	TTK-07
101	106	102	N101	N101	N101	105	2x101	2x101

* to be used only for old installations as replacement;


RELEVANT STANDARD
EN 60669-1
RELEVANT STANDARD
IEC 60884-1
RELEVANT STANDARD
MSZ 9871-2
TÜV MEEI TEST DOCUMENTATION
28208176 001

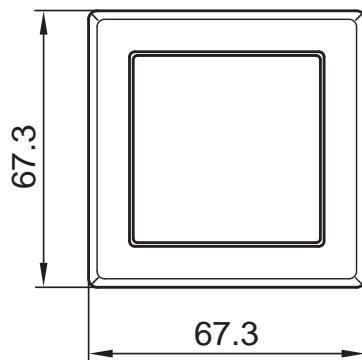
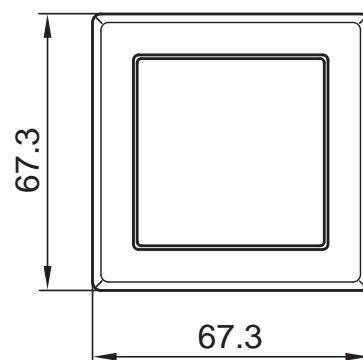
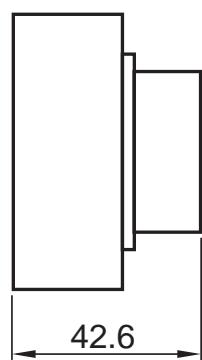
TFK type surface mounted switches and socket outlets

Pictograms

F/0**TRACON**

TFK101	TFK101B	TFK102	TFK105	TFK106	TFKSCH	TFKSCH-2	TFKSCH-3

TFK101 **TFK101B** **TFK102** **TFK105** **TFK106** **TFKSCH** **TFKSCH-2** **TFKSCH-3**
 × 1 10 AX/250 V × 1 16 A/250 V, IP 20 × 2 16 A/250 V, IP 20 × 3 16 A/250 V, IP 20
 IP 20, (101) IP 20, (N101) IP 20, (102) IP 20, (105) IP 20, (106)

**TFK...****TFKSCH..**

RELEVANT STANDARD
EN 60669-1



RELEVANT STANDARD
IEC 60884-1



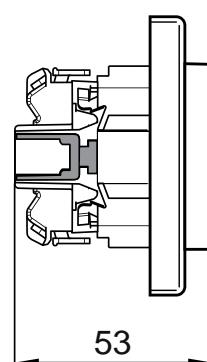
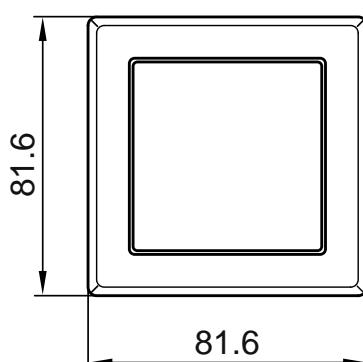
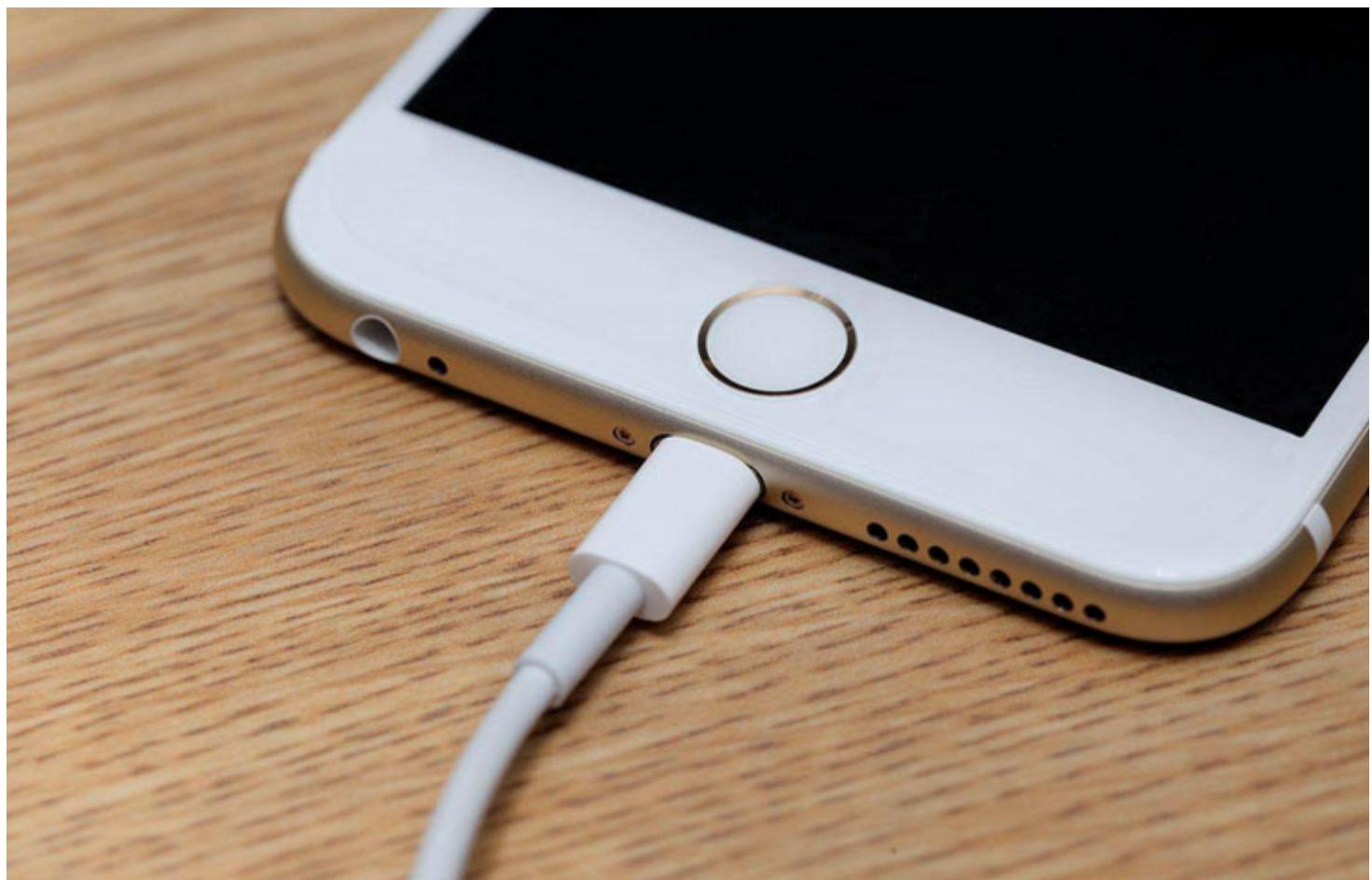
Socket-outlet, Shuko with USB port230
V ACV1
UL94IP
20[mm²]
1-2,5Ta
-25..+55°C

500 V

50/60 Hz

**F/O****TRACON****USB-21**x 1
16 A/250 V,
IP 20

USB:5V, 2100mA

**SCHUKO + USB****USB-21****SCAN THE QR CODE!**

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CO sensor

Pictograms

F/O

CO gas concentration	30 ppm	50 ppm	100 ppm	300 ppm
Requirement of EN 50291 standard	No alarm	60 - 90 min.	10 - 40 min.	<3 min.
Measuring values according to Test Report No. R-546875 by TÜV SÜD	No alarm	66 -71 min.	26 – 33 min.	64 – 85 s
Measuring values according to Test Report No. G/265/2015 by Szenzortechnika Ltd.	No alarm	71 – 72 min.	20 min.	31 – 50 s

Using this compact size of sensors the presence of color and odorless CO gas can be detected in the air of flats. The CO gas can appear in the air by the defected heaters thanks for the incomplete combustion so causing even death by suffocation. The device gives visual and audio alarm signal in 4 steps if the sensed CO level steps over the pre-adjusted values so save the life of people living in the flat. But the device does not protect against the chronic effects of CO gas and does not give full protection against special risks! Using the sensor does not replace the proper installation and maintenance of heaters and the adequate ventilation!

Sensor type:	electro-chemistry cell
Power supply:	3 pcs 1,5 V AA battery
Current:	standby mode: <80 µA alarm mode: 0,4 - 1,5 mA
Alarm signal:	optical and sound
Display (LCD):	standby: PPM, room temperature, battery state alarm/test: ERR –error; --- - test; HCO – high CO value
Optical display (LED):	operation (green), error (yellow), alarm(red)
Standup time:	5 s
Built-in test button	

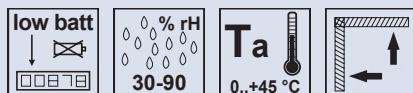


The lifetime of sensor is 7 years from the first installation. The device has „end of lifetime” displaying option.



Prevent the accident!

Wireless smoke detector with transmission



TRACON



Hz



SD101LD > 85 dB / 3 m 433,92 MHz Ø125 x 125 x 48 mm

With help of these compact size wireless sensors the smoke can be detected on the air of rooms so they are applicable as excellent protective device on fire protection. The sensor gives tone alarm signal in case of smoke detection and this signal can be forwarded to other similar devices. This way the smoke detection inside closed areas can be signaling out to other open areas.

Power supply:

3 pcs 1,5 V AA battery (sender)
1 pcs 9 V 6LR61 battery (receiver)

Alarm signal:

optical and sound

Current:

Standby (9 V): <12 µA

Alarm (9 V): <20 mA

Signal (4,5 V): <230 µA

Built-in test and learn button

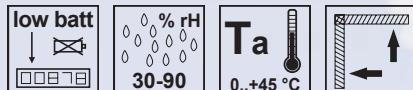


Pictograms

F/0


RELEVANT STANDARD
EN 14604:2005


Smoke detector without transmission



TRACON



SD133A > 85 dB / 3 m 103x103x35 mm

The operation methods of these sensors are similar with the wireless sensors but having no wireless transmission modules.

Power supply:

1 pcs 9 V 6LR61 battery (receiver)

Alarm signal:

optical and sound

Current:

Standby (9 V): <12 µA

Alarm (9 V): <20 mA

Signal (4,5 V): <230 µA

Built-in test and learn button


RELEVANT STANDARD
EN 14604:2005


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