

V:KO

by **Panasonic**



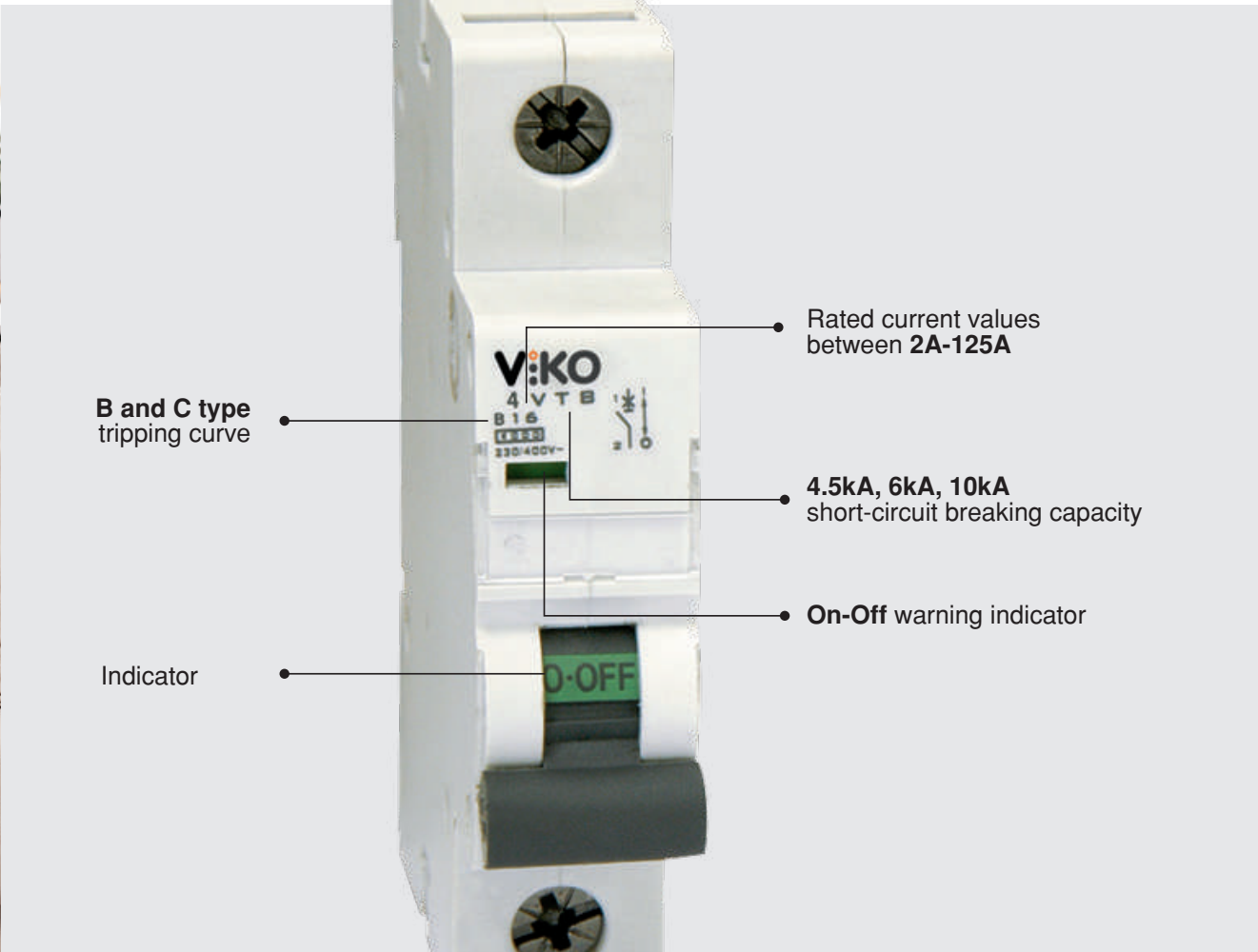
Miniature Circuit Breaker



Automate your safety...



- Body structure designed according to high disconnecting capacity
- Energy saving with low power consumption
- Class IP20 connection terminals with high protection against manual contact
- 12-plate cell to attenuate the active arc formed
- AgC4 contact structure for long life
- Accessories options for your need



Miniature circuit breakers provide superior protection with their thermal-magnetic tripping feature.

Thermal Protection

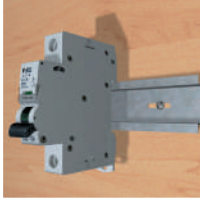
Provides protection by switching off in case of overload. Activates the thermocouple mechanism which tilts due to high temperature and make main contacts disconnect from each other.

Magnetic Protection

At high currents or in case of short-circuit, piston inside the coil switches off by triggering the mechanism with magnetic changes and provides protection.

Miniature Circuit Breaker

Advantages

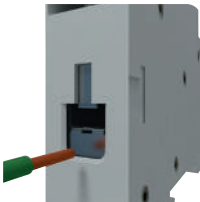
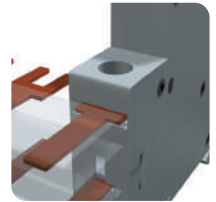


Compatibility with DIN Rails and Screw Assembly

Product can be installed on any desired surface, even in the absence of a DIN rail.

All Types of Busbar Connections

Provides an installation safer than wiring and an aesthetical, fast connection



Protected Terminals

Ensures that the wire is fully inserted into terminal through protected terminals. At the same time, it does not allow a faulty wire connection and prevents arc formation during installation.

Labeling System

By looking on top of the fuse, it is easy to understand in which line a problem is, finding the fault becomes more convenient.



Indicator

Indicator on the circuit breaker makes the switch position visible. This feature minimizes the malfunction time and enables safe intervention to the assembly.

-  OFF position
-  ON position

Insulation Wall

At multiple connections, it does not allow circuit breakers to contact each other, eliminates the potential arc and short-circuit risk, protects the assembly.



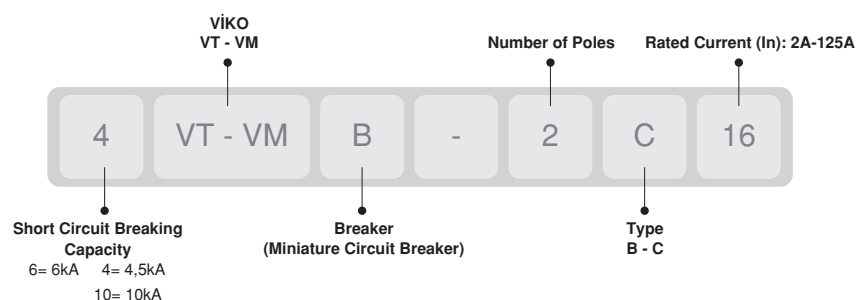
Compatibility with Accessories

With compatibility of the auxiliary accessory assembly spot, it offers the option to use with accessories.



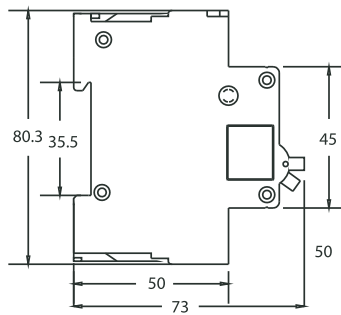
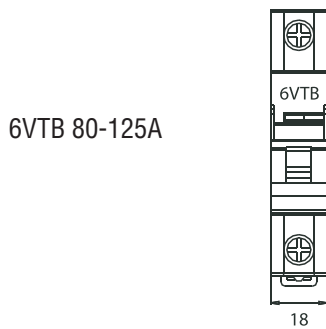
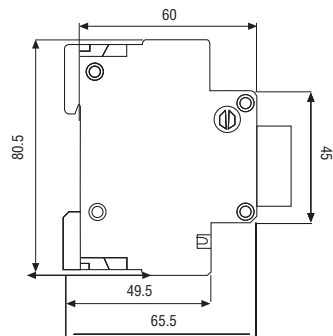
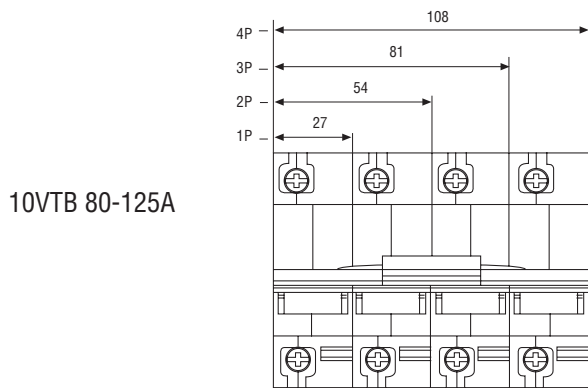
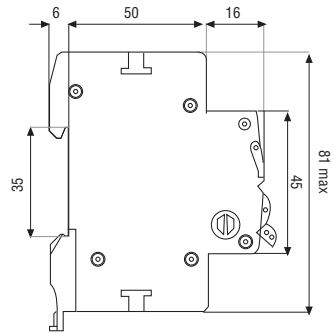
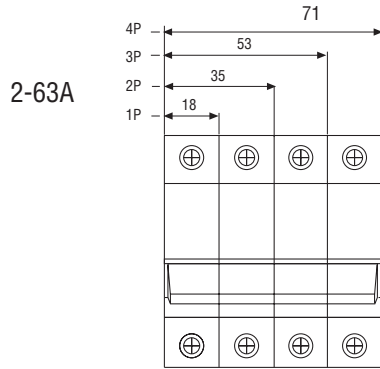
Technical Information

Model	4VMB				4VTB				6VTB				10VTB				
Protection	Overload and Short Circuit								Thermal and magnetic protection								
Standards	IEC60898 TS EN 60898-1				IEC / EN 60898 TS 5018-1 EN 60898-1				IEC / EN 60898 TS 5018-1 EN 60898-1				IEC / EN 60898, IEC / EN 60947-2 TS 5018-1 EN 60898-1				
Quality Certificates	TSE		CE		TSE		CE		TSE		CE		TSE*		CE		
Number of Poles	1P	2P	3P	4P	1P	2P	3P	4P	1P	2P	3P	4P	1P	2P	3P	4P	
Tripping Characteristics	B-C	B-C	B-C	B-C	B-C	B-C	B-C	B-C	B-C	C	C	C	C	C	C	C	
Connection Section	2A-63A 25 mm ²				2A-63A 25 mm ²				6A-63A 25 mm ²				6A-63A 25 mm ²				
Rated Frequency	50/60Hz																
Disconnecting Capacity	4.5kA - 230/400V AC				4.5kA - 230/400V AC				6kA - 230/400V AC				10kA - 230/400V AC				
Rated Current Values																	
	2A	✓	✓	✓	✓	✓											
	4A	✓	✓	✓	✓	✓											
	6A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	10A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	16A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	20A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	25A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	32A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	40A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	50A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	63A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	80A									✓	✓	✓	✓	✓	✓	✓	✓
	100A									✓	✓	✓	✓	✓	✓	✓	✓
	125A									✓	✓	✓	✓	✓	✓	✓	✓
Rated Voltage of Impact Resistance	4kV																
Rated Insulation Voltage	500V																
Electrical Endurance	4VMB: 4000 cycles; 4VTB: 4000 cycles; 6VTB&10VTB: 10000 cycles																
Mechanical Endurance	4VMB: 10000 cycles; 4VTB: 8000 cycles; 6VTB&10VTB: 20000 cycles																
Surrounding Temperature Min / Max	-5 / +40°C																
Protection Class	IP20																
Mounting Type	DIN EN 50 022 - 35 mm ²												* 80 - 100 - 125 A not included.				

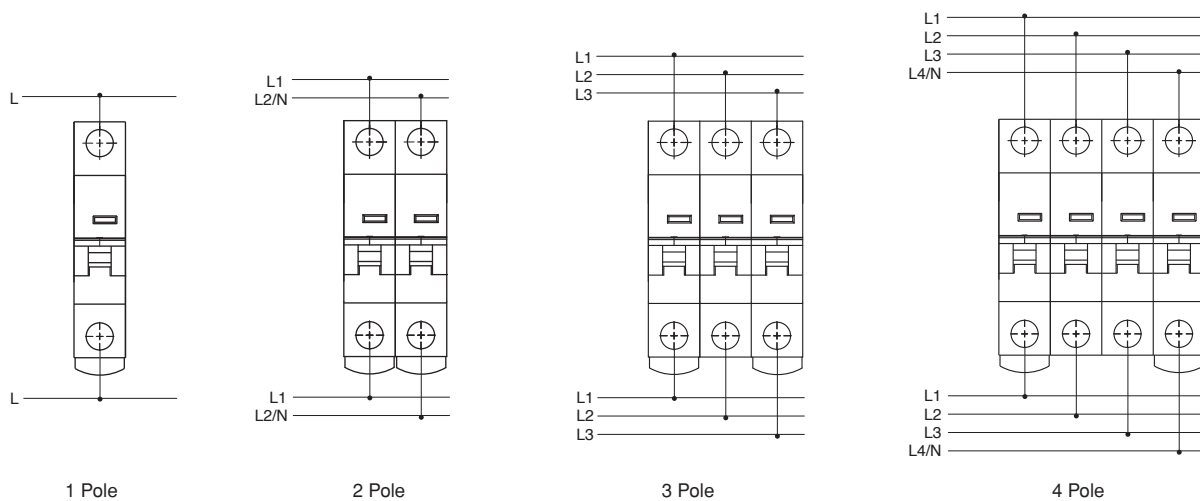


Miniature Circuit Breaker

Dimensions (mm)



Connection Diagram



Accessories



VIKO miniature circuit breaker have accessories options for your need of accessory series and satisfy users' every need, thanks to its fast mounting possibility due to the feature of screwless type connection.



4VTB Series (2-63A) Miniature Circuit Breaker Accessories

Description		Ref. No
Auxiliary Contact	1NO + 1NC	VTBK-AU1/11
Shunt Relay	110/415V AC	VTBK-SR1
Under Voltage Coil		VTBK-UR1
Alarm Contact		VTBK-AC1

6VTB-10VTB Series (6-63A) Miniature Circuit Breaker Accessories

Description		Ref. No
Auxiliary Contact	1NO + 1NC	VTBK-AU1/11
Shunt Relay	110/415V AC	VTBK-SR1

6VTB (80-100-125A) Miniature Circuit Breakers

Description		Ref. No
Auxiliary Contact	1NO + 1NC	VTBK-AU3/11
Alarm Contact	1NO +1NC	VTBK-AC2
Mechanic Lock		VTBK-MI2

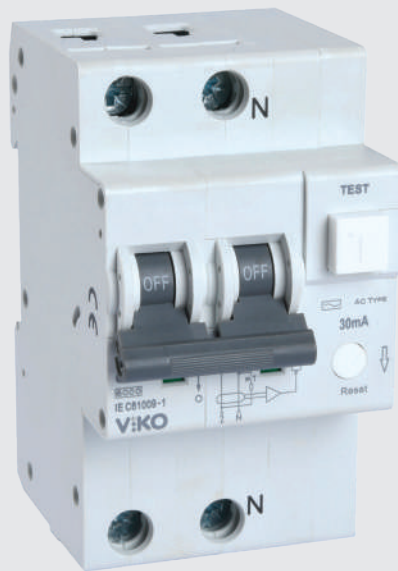
10VTB (80-100-125A) Miniature Circuit Breaker Accessories

Description		Ref. No
Auxiliary Contact	1NO + 1NC	VTBK-AU4/11
Alarm Contact	1NO+1NC	VTBK-AC3
Mechanic Lock		VTBK-MI3

Versatile protection



Residual Current Operated Circuit Breaker regularly monitor the circuit to ensure the safe operation of electrical circuits, breaking the circuit if it detects an imbalance (such as overcurrent or short circuit). These devices are commonly used where there is a need to combine protection against overload, short circuit and earth leakage currents. A wide range of products is available to suit the needs of the installation.



V:KO Residual Current Operated Circuit Breaker, which protect both the users and the circuit to which they are connected, save space in the panel as they can fulfil the function of two separate devices. General installation time is also reduced by using Residual Current Protected Automatic Fuses. Thus, Residual Current Operated Circuit Breaker are now the preferred device used by electricians instead of installing both Residual Current Protection Relays and Automatic Fuses separately.

- Versatile protection
- Space saving in fuse boxes
- Advantage of installation time

Residual Current Operated Circuit Breaker

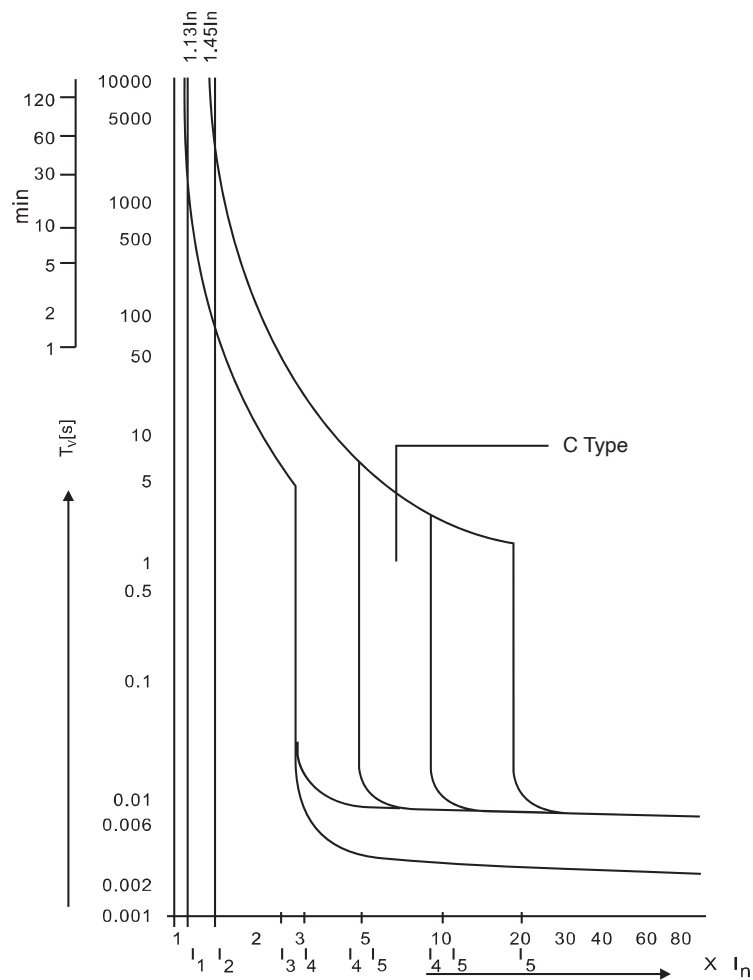
Technical Information

Electrical Properties	
Mod	Electronic
Type	AC
Nominal Current Rating I_n	6,10,16,20,25,32,40,50,63A
Number of Poles	2P(1P+N), 4P(3P+N)
Operating Voltage U_e	2P 240V~ 4P 415V~
Isolation Voltage U_i	500V
Operating Frequency	50/60Hz
Leakage Current Nominal Value ($I_{\Delta n}$)	30, 300mA
Opening Time $I_{\Delta n}$	≤0.1S
Short Circuit Breaking Capacity	6,000A
Energy Class	3
Impulse Withstand Voltage (1.5/50) U_{imp}	4,000V
Dielectric Test Voltage	2kV
Pollution Degree	2
Trip Characteristic	C
Mechanical Properties	
Electrical Life	4,000 Opening and Closing
Mechanical Life	10,000 Opening and Closing
Contact Position Indicator	Yes
Protection Class	IP20
Operating Temperature	-5°C ~ +40°C
Storage Temperature	-25°C ~ +70°C
Assembly	
Terminal Connection Type	Cable/Pin-type Busbar / U-type Busbar
Terminal Size for Cable Connection (Upper/Lower)	25mm ² 18-3AWG
Terminal Size for Busbar Connection (Upper/Lower)	25mm ² 18-3AWG
Tightening Torque	2.5Nm 22In-lbs
Mounting	35mm DIN Rail
Connection	From the top

Characteristics

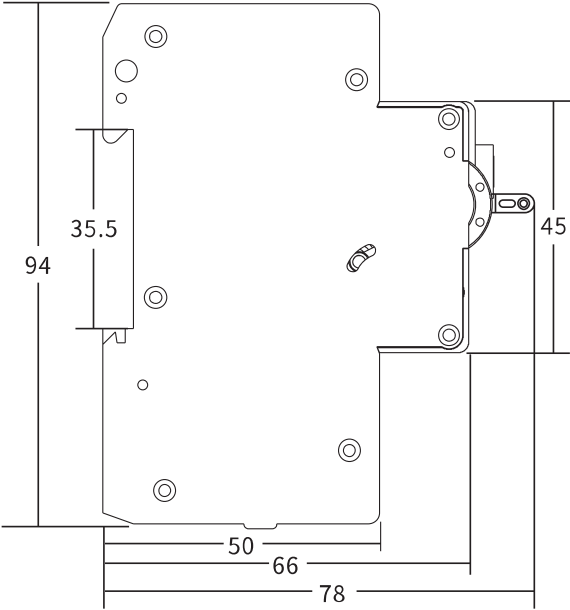
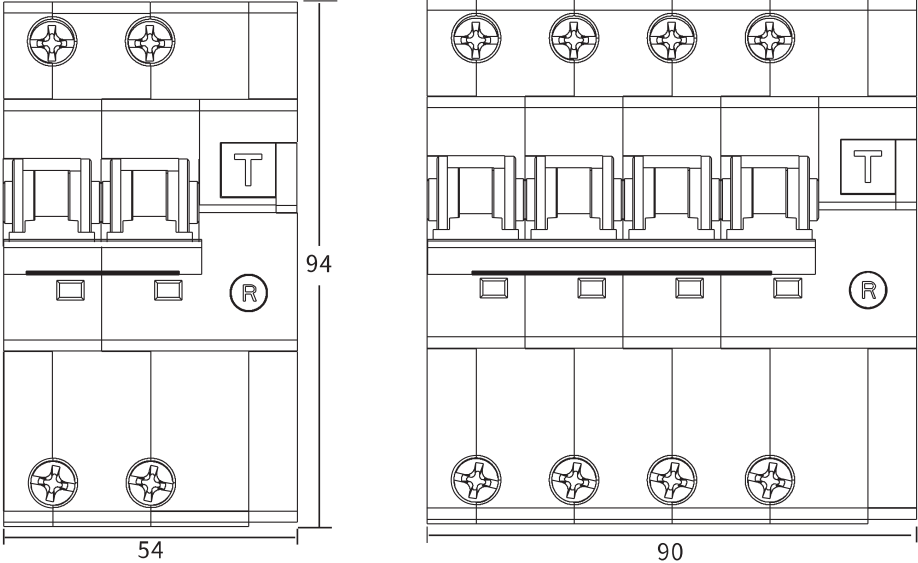
Type	Switch-On Current I_{Δ}/A
AC	$0.5I_{\Delta n} < I_{\Delta} < I_{\Delta n}$

IEC 60898	Thermal Switch-On			Magnetic Switch-On		
	No Switch-on	Switch-on Current I_2	Switch-on Time t	No Switch-on	Switch-on Current I_5	Switch-on Time t
C Type	$1.13I_N$		$\geq 1h$	$5I_N$		$\geq 0.1s$
		$1.45I_N$	$< 1h$		$10I_N$	$< 0.1s$

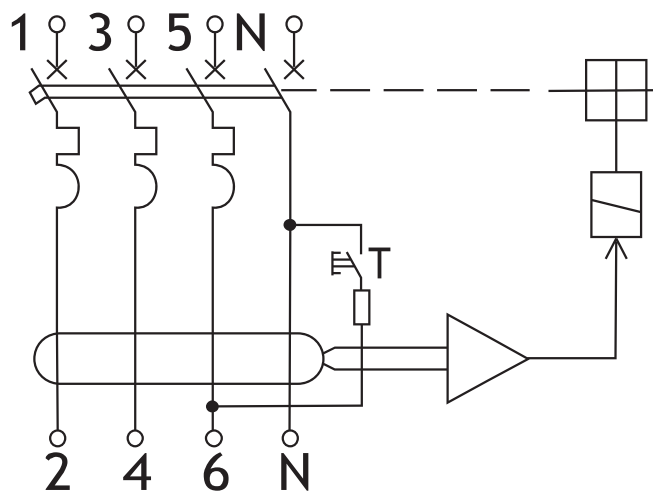
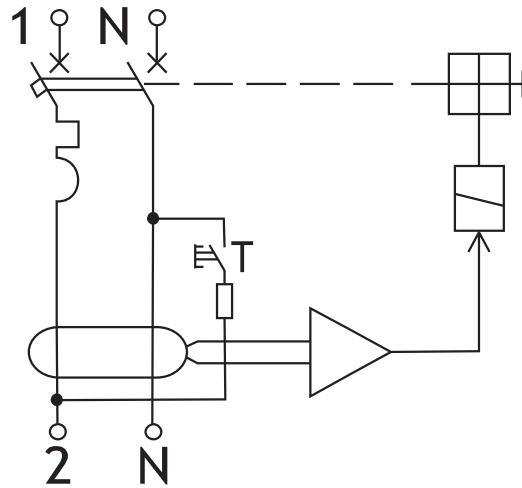


Residual Current Operated Circuit Breaker

Dimensions (mm)




Connection Diagram




Residual Current Operated Circuit Breaker

Product List

Number of Poles (P)	Leakage Current Threshold Value (I Δ n)	Nominal Current "In"(A)	Product Description	C Type Curve Product Code
 <p>2P</p>	30mA	6	Electronic RCBO 6kA 1P+N AC Type 6A	6VRBE-2C0630-AC
		10	Electronic RCBO 6kA 1P+N AC Type 10A	6VRBE-2C1030-AC
		16	Electronic RCBO 6kA 1P+N AC Type 16A	6VRBE-2C1630-AC
		20	Electronic RCBO 6kA 1P+N AC Type 20A	6VRBE-2C2030-AC
		25	Electronic RCBO 6kA 1P+N AC Type 25A	6VRBE-2C2530-AC
		32	Electronic RCBO 6kA 1P+N AC Type 32A	6VRBE-2C3230-AC
		40	Electronic RCBO 6kA 1P+N AC Type 40A	6VRBE-2C4030-AC
		50	Electronic RCBO 6kA 1P+N AC Type 50A	6VRBE-2C5030-AC
	63	Electronic RCBO 6kA 1P+N AC Type 63A	6VRBE-2C6330-AC	
	300mA	6	Electronic RCBO 6kA 1P+N AC Type 6A	6VRBE-2C06300-AC
		10	Electronic RCBO 6kA 1P+N AC Type 10A	6VRBE-2C10300-AC
		16	Electronic RCBO 6kA 1P+N AC Type 16A	6VRBE-2C16300-AC
		20	Electronic RCBO 6kA 1P+N AC Type 20A	6VRBE-2C20300-AC
		25	Electronic RCBO 6kA 1P+N AC Type 25A	6VRBE-2C25300-AC
		32	Electronic RCBO 6kA 1P+N AC Type 32A	6VRBE-2C32300-AC
		40	Electronic RCBO 6kA 1P+N AC Type 40A	6VRBE-2C40300-AC
50		Electronic RCBO 6kA 1P+N AC Type 50A	6VRBE-2C50300-AC	
63	Electronic RCBO 6kA 1P+N AC Type 63A	6VRBE-2C63300-AC		

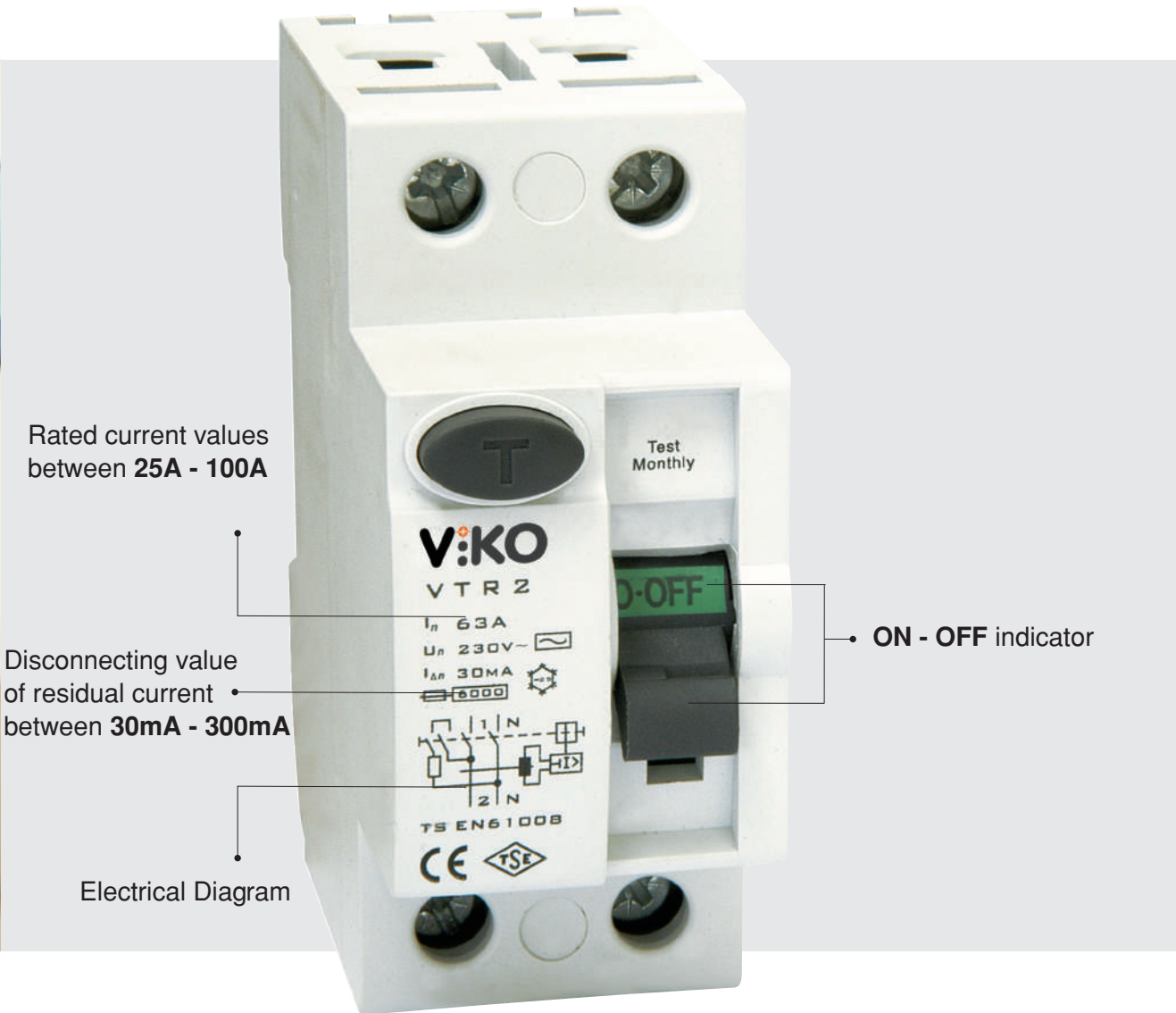
Product List

Number of Poles (P)	Leakage Current Threshold Value (I Δ n)	Nominal Current "In"(A)	Product Description	C Type Curve Product Code
 <p>4P</p>	30mA	6	Elektronik RCBO 6kA 3P+N AC Type 6A	6VRBE-4C0630-AC
		10	Elektronik RCBO 6kA 3P+N AC Type 10A	6VRBE-4C1030-AC
		16	Elektronik RCBO 6kA 3P+N AC Type 16A	6VRBE-4C1630-AC
		20	Elektronik RCBO 6kA 3P+N AC Type 20A	6VRBE-4C2030-AC
		25	Elektronik RCBO 6kA 3P+N AC Type 25A	6VRBE-4C2530-AC
		32	Elektronik RCBO 6kA 3P+N AC Type 32A	6VRBE-4C3230-AC
		40	Elektronik RCBO 6kA 3P+N AC Type 40A	6VRBE-4C4030-AC
		50	Elektronik RCBO 6kA 3P+N AC Type 50A	6VRBE-4C5030-AC
		63	Elektronik RCBO 6kA 3P+N AC Type 63A	6VRBE-4C6330-AC
		6	Elektronik RCBO 6kA 3P+N AC Type 6A	6VRBE-4C06300-AC
		10	Elektronik RCBO 6kA 3P+N AC Type 10A	6VRBE-4C10300-AC
		16	Elektronik RCBO 6kA 3P+N AC Type 16A	6VRBE-4C16300-AC
		20	Elektronik RCBO 6kA 3P+N AC Type 20A	6VRBE-4C20300-AC
		25	Elektronik RCBO 6kA 3P+N AC Type 25A	6VRBE-4C25300-AC
32	Elektronik RCBO 6kA 3P+N AC Type 32A	6VRBE-4C32300-AC		
40	Elektronik RCBO 6kA 3P+N AC Type 40A	6VRBE-4C40300-AC		
50	Elektronik RCBO 6kA 3P+N AC Type 50A	6VRBE-4C50300-AC		
63	Elektronik RCBO 6kA 3P+N AC Type 63A	6VRBE-4C63300-AC		

Deactivate residual current
before it causes damage...



- Simple and solid operating mechanism
- Connection terminals suitable for cable, pin and bifurcated busbar entry
- Monthly test button for regular controls
- Superior protection against electric shocks and fire
- Class IP20 connection terminals with high protection against manual contact
- Design compatible with VIKO circuit breakers



Rated current values
between **25A - 100A**

Disconnecting value
of residual current
between **30mA - 300mA**

Electrical Diagram

Test
Monthly

V:KO
VTR 2

I_n 63A

U_n 230V~

$I_{\Delta n}$ 30mA

6000



TS EN 61008

CE TSE

ON - OFF indicator

Residual Current Circuit Breakers provide superior protection both for your loved ones and your places.





30mA is aimed for protecting human life, it must be connected to the secondary distribution boxes and sockets at the entrance of houses and workplaces.

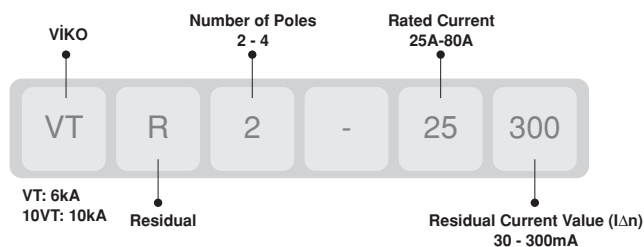


300mA is for fire protection, 300mA residual current circuit breakers should be used in main distribution boxes.

Residual Current Circuit Breaker

Technical Information

	6kA				10kA			
Model	VTR2		VTR4		10VTR2		10VTR4	
Protection	Residual Current							
Standards	IEC/EN 61008-1 TS EN 61008-1				IEC/EN 61008-1 TS EN 610098-1			
Quality Certificates								
Type	AC				A-SI			
Rated Voltage	230V AC		230V/400V AC		240V		410V AC	
Rated Frequency	50/60Hz							
Number of Poles	1P + N		3P + N		1P + N		3P + N	
Residual Current	30mA	300mA	30mA	300mA	30mA	300mA	30mA	300mA
Disconnecting Capacity	6kA				10kA			
Rated Current Values								
	25A	✓	✓	✓	✓	✓	✓	✓
	40A	✓	✓	✓	✓	✓	✓	✓
	63A	✓	✓	✓	✓	✓	✓	✓
	80A	✓	✓	✓	✓	✓	✓	✓
	100A			✓	✓		✓	✓
Protection Class	IP20							
Connection Section	25A-80A 25 mm ² , 100A 35 mm ²				35 mm ²			
Mounting Type	DIN EN 50 022 - 35 mm				DIN EN 60 715 - 35 mm			

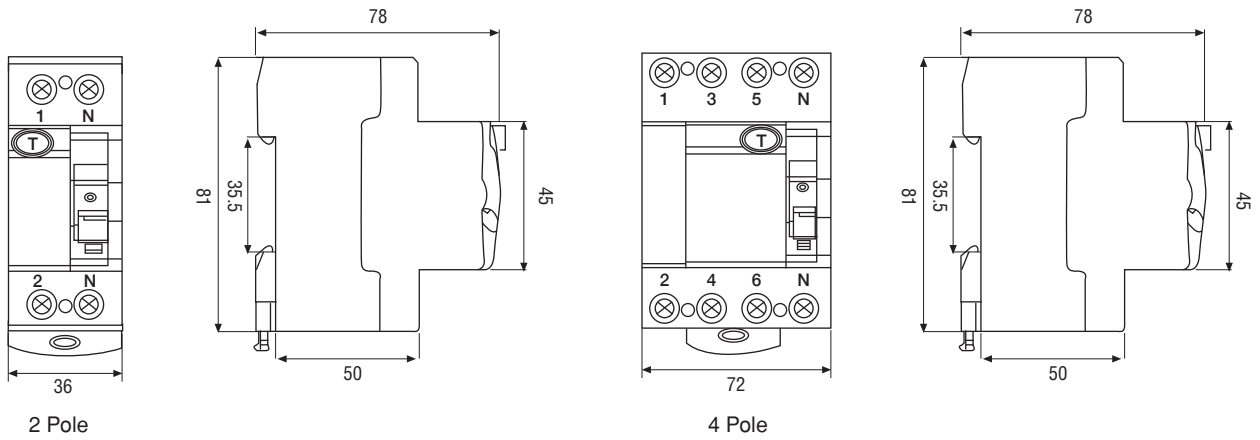


WARNING!

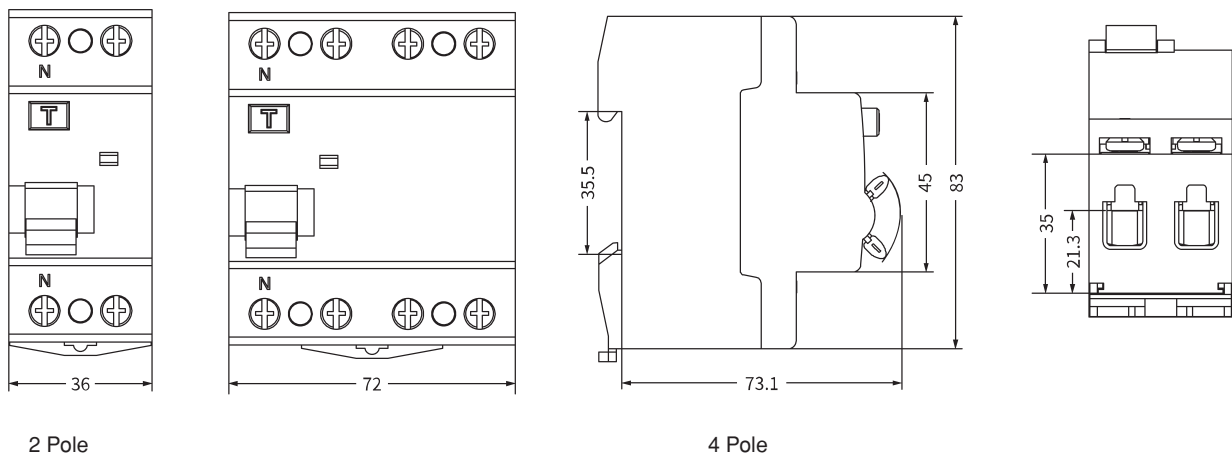
Residual Current Circuit Breaker are products used compulsorily in order to protect people against direct or indirect contact, and devices against insulation faults and fire hazard. Delivers the function of protecting life at 30mA (Human Protection) and Installation at 300mA (Fire Protection). Residual Current Relays provide superior protection both for your loved ones and your places. Residual Current Relays must be used as complementary to the system, along with grounding system and circuit breakers.

Dimensions (mm)

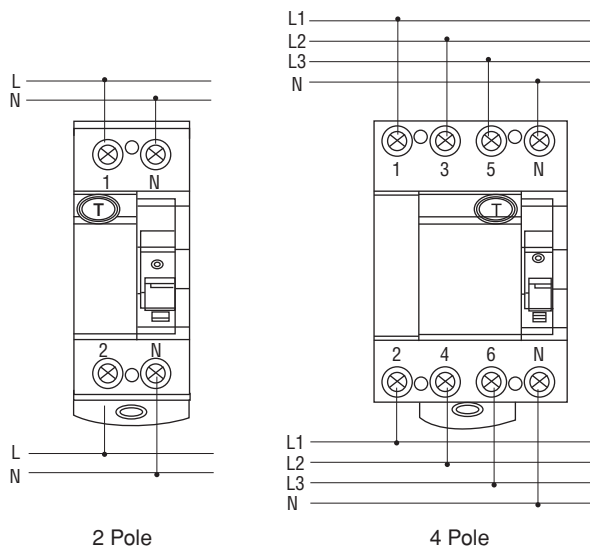
VTR



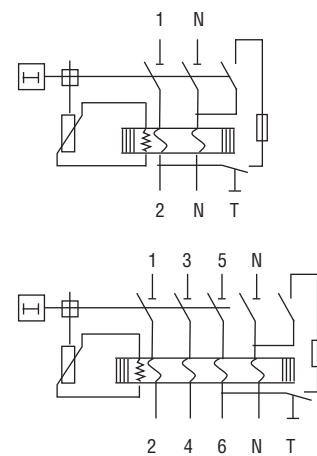
10VTR



Connection Diagram

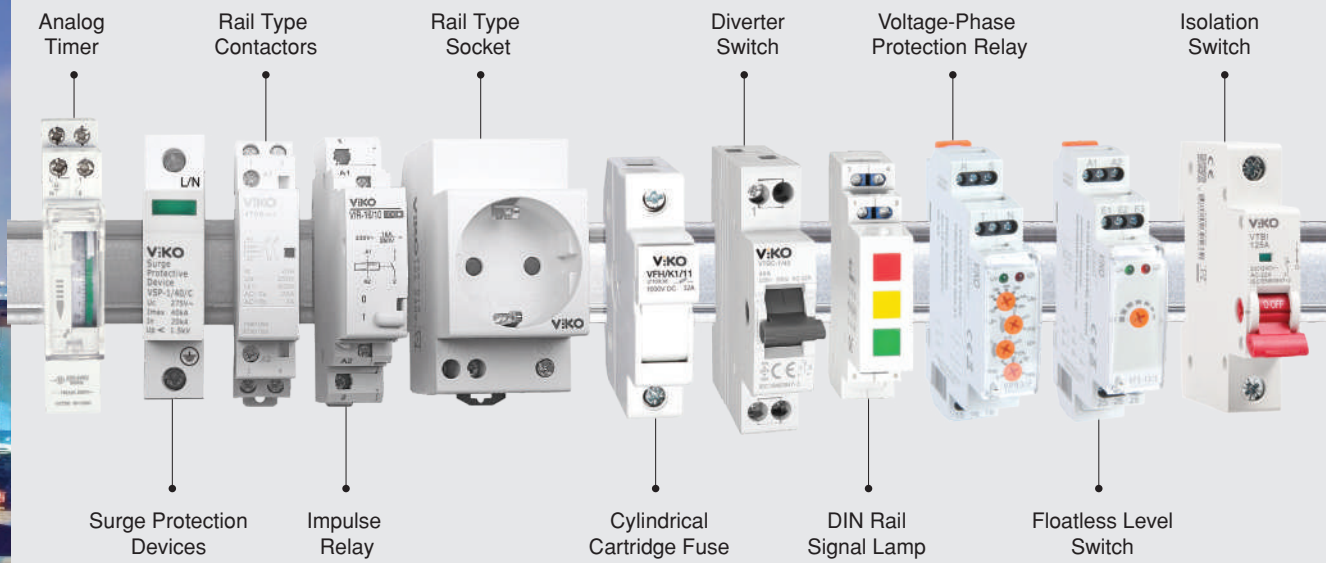


Electrical Diagram



Full protection, full trust at
all times and places...





- Simple and solid operating mechanisms
- Mounting suitable for DIN rail
- Compatible with panel applications

Modular Products

Low Voltage Surge Protectors



VIKO Low Voltage Surge Protection Devices enables protection of power lines from potential direct or indirect electromagnetic effects of lightning. They attenuate suddenly formed overcurrents by transmitting them to the ground. Provides full protection and safety in your installation, in order to hold electronic and electrical devices harmless.

- Simple and solid operating mechanism
- Protection of electric / electronic devices against lightning impulses, in industrial and commercial building
- Maximum Discharge Current (I_{max}) : 100kA - 50kA - 40kA - 20kA
- Effective lightning protection in all classes (B, B+C, C, D Types)

Technical Informations

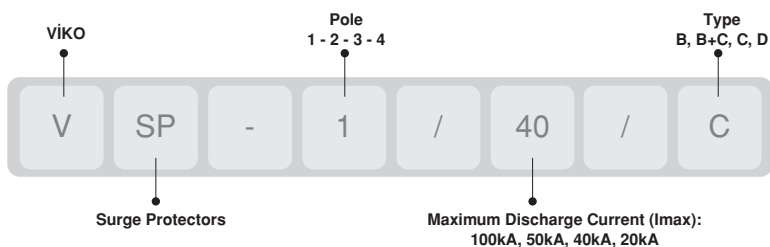
Model	VSP-1/100/B	VSP-2/100/B	VSP-3/100/B	VSP-4/100/B
Number of Pole	1P	2P	3P	4P
Rated Voltage (U_n)	230V, 50/60 Hz		230/400V, 50/60 Hz	
Continuous voltage (U_c)	300V AC			
Earthing system	TN, TT	TN, TT	TN, TT	TN, TT
Maximum discharge current (I_{max})	100kA			
Nominal discharge current (I_n 8/20 μ s) (L-N)	50kA	50kA	50kA	50kA
Nominal discharge current (I_n 8/20 μ s) (N-PE)	50kA			
Maximum discharge current (I_{imp})	25kA			
Voltage Protection level (U_p)	0,9 /1,5kV			
Response time	≤ 25 ns			
Operation temperature range	-40°C...+55°C			
Working status indication	Red indication means fault status			
Installation method	35 mm DIN Rail			
Wire connection method	Minimum: 2,5 mm ² Maximum: 35 mm ²			
Auxiliary Contact Status	Internal(1 Normally Open)			
Protection level	IP20			
Flammability Classification	UL94-V0			

Model	VSP-1/50/B+C	VSP-2/50/B+C	VSP-3/50/B+C	VSP-4/50/B+C
Number of Pole	1P	2P	3P	4P
Rated Voltage (U_n)	220/230V AC			
Continuous voltage (U_c)	275V AC	320V AC	385V AC	420V AC
Earthing system	TN, TT, IT			
Maximum discharge current (I_{max})	50kA			
Nominal discharge current (I_n 8/20 μ s)	25kA	25kA	25kA	25kA
Maximum discharge current (I_{imp})	8kA			
Voltage Protection level (U_p)	1,5kV	1,6kV	1,7kV	1,8kV
Response time	≤ 25 ns			
Operation temperature range	-40°C...+75°C			
Working status indication	Red indication means fault status			
Installation method	35 mm DIN Rail			
Wire connection method	Minimum: 6 mm ² Maximum: 35 mm ²			
Protection level	IP20			
Flammability Classification	UL94-V0			

Technical Informations

Model	VSP-1/40/C	VSP-2/40/C	VSP-3/40/C	VSP-4/40/C
Number of Pole	1P	2P	3P	4P
Rated Voltage (Un)	230V, 3x230/400V			
Continuous voltage (Uc)	385/440V			
Earthing system	TN, TT, IT			
Maximum discharge current (Imax)	40kA			
Nominal discharge current (In 8/20µs)	20kA	20kA	20kA	20kA
Maximum discharge current (Iimp)	10kA			
Voltage Protection level (Up)	1,8kV			
Response time	<=25ns			
Operation temperature range	-40°C...+55°C			
Operation temperature range	Red indication means fault status			
Working status indication	35 mm DIN Rail			
Installation method	Minimum: 6 mm ² Maximum: 35 mm ²			
Protection level	IP20			
Flammability Classification	UL94-V0			

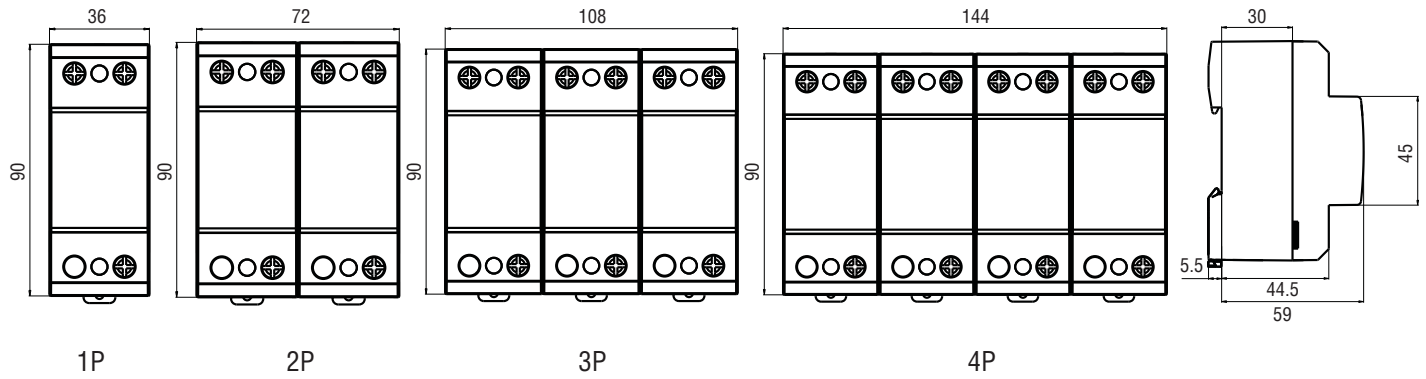
Model	VSP-1/20/D	VSP-2/20/D	VSP-3/20/D	VSP-4/20/D
Number of Pole	1P	2P	3P	4P
Rated Voltage (Un)	230V, 3x230/400V			
Continuous voltage (Uc)	385/440V			
Earthing system	TN, TT, IT			
Maximum discharge current (Imax)	20kA			
Nominal discharge current (In 8/20µs)	10kA	10kA	10kA	10kA
Maximum discharge current (Iimp)	10kA			
Voltage Protection level (Up)	1,5kV			
Response time	<=25ns			
Operation temperature range	-40°C...+55°C			
Operation temperature range	Red indication means fault status			
Working status indication	35 mm DIN Rail			
Installation method	Minimum: 6 mm ² Maximum: 35 mm ²			
Protection level	IP20			
Flammability Classification	UL94-V0			



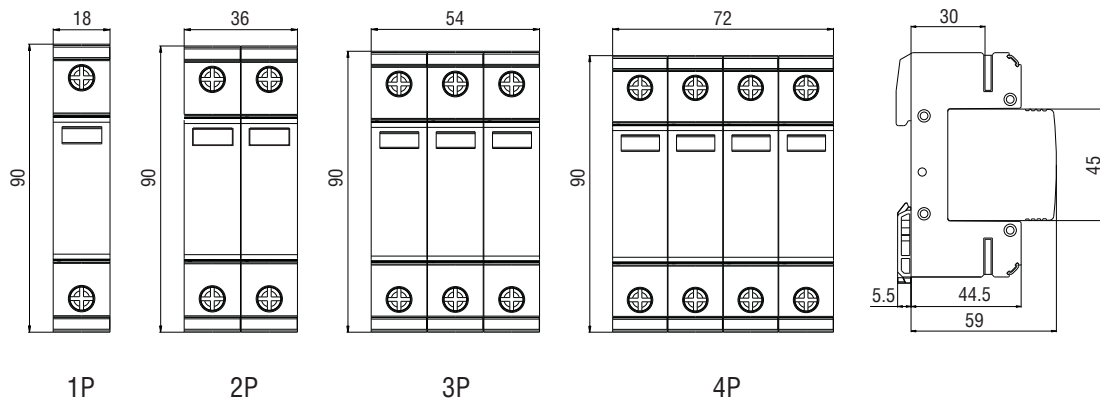
Modular Products

Dimensions (mm)

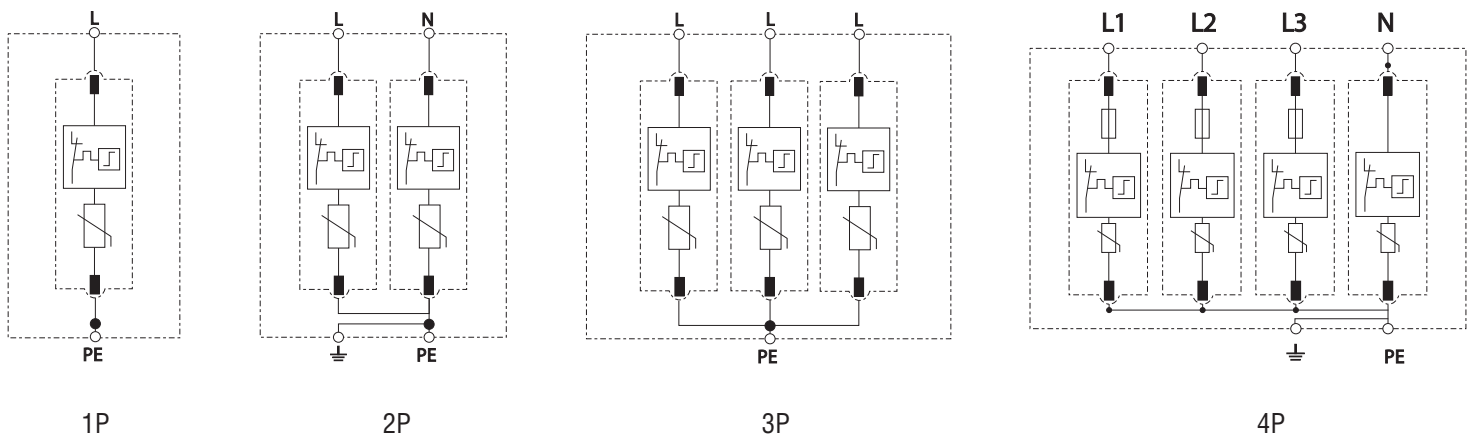
B TYPES



B+C, C, D TYPES



Connection Diagram



Impulse Relays



VIKO impulse relay enable remote control of the lighting circuit and multiplying control points.

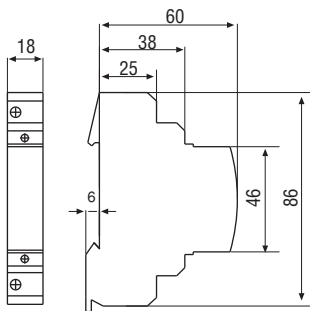
Rated Current (In): 16A (cos : 0.6)

Rated Voltage (Un): 250V AC

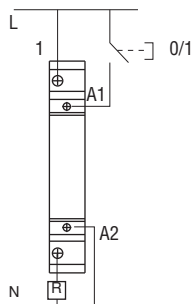
Auxiliary Contact Block: 1NO

Product Code: VIR-16/10

Dimensions (mm)



Connection Diagram



Modular Products

Analog Time Switches



VIKO timers are time relays which control lighting systems at intervals of choice, without need for sensors such as photocell and it is also used in applications involving agricultural activities such as garden irrigation. They enable lighting control at determined time intervals and save energy by preventing energy loss to be formed in unnecessary time intervals thanks to lighting control.



Technical Specifications

- **Feeding:** 230V AC \pm %10 50Hz
- **Load capacity:** 16(4)A/250V
- **Power consumption:** 0.5W
- **Timer accuracy:** \pm 1 sec/day 22°C
- **Battery life:** Daily model: 100 hours
- **Dial type:** Daily: 96 pins
- **Minimum switching time:** Daily: 15 minutes
- **Operating temperature:** -10°C - +50°C
- **Protection against electric shocks:** "Class II"
- **Protection class:** IP20
- Manually controllable, 2-position selector

🕒 = Automatic

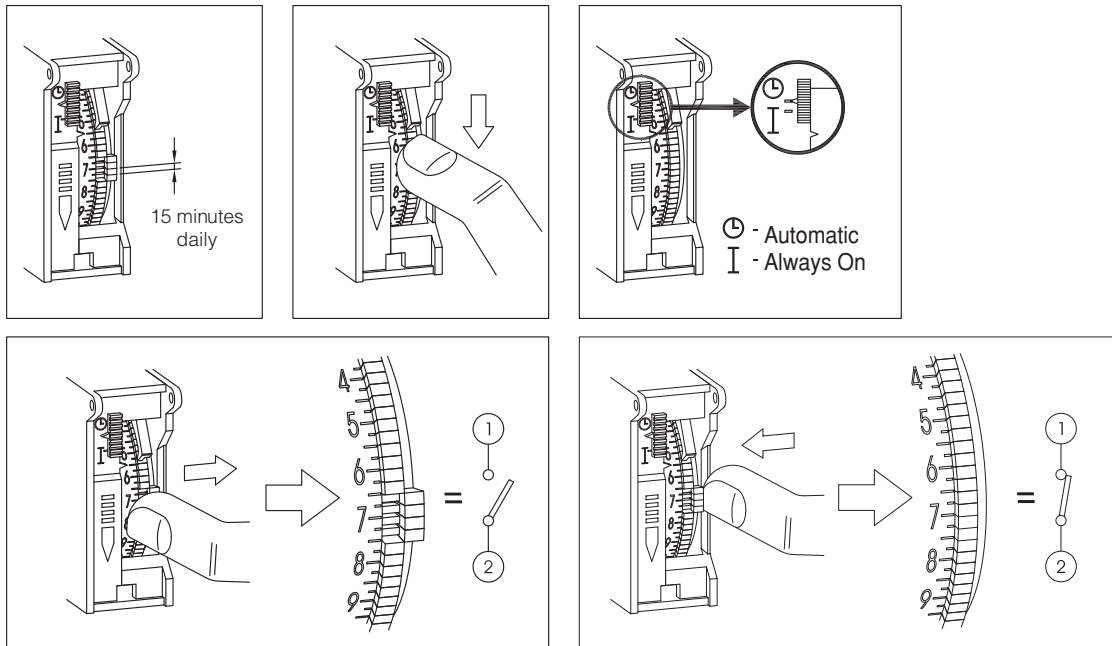
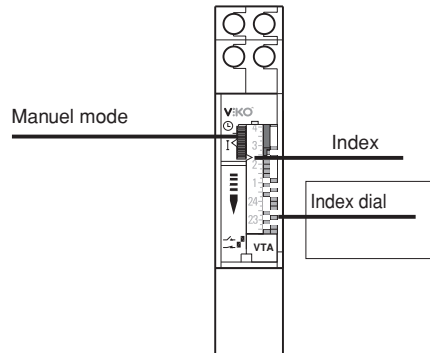
I = On (Contact no. 1 & 2 are always off)

- Mounting to 1 DIN rail

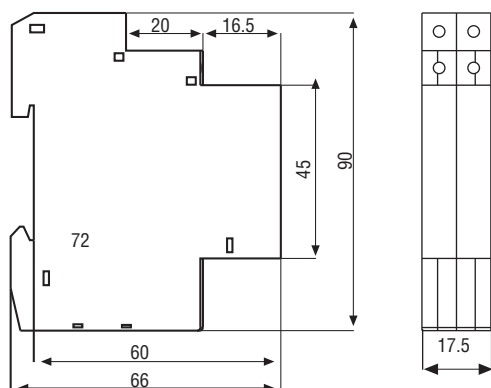


Model	Description
VTA-24H/R100	Daily analog time switch

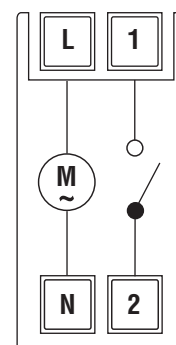
Programming



Dimensions (mm)



Connection Diagram



Modular Products

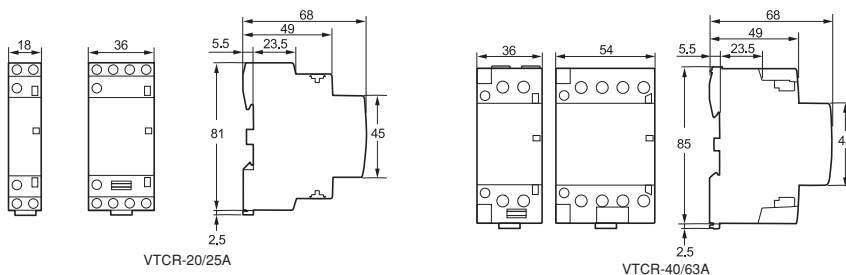
Modular Contactors



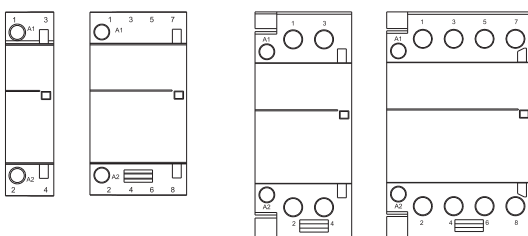
VIKO Modular Contactors rail contactors are used in order to check electric circuit, trip and close the circuit or enable flow through automation circuit, in places such as hotel rooms, residences, hospitals. Modular Contactors are also known as silent contactors.

Parameter		20A	25A	40A	63A	
Rated Current In (A)	AC-7a	20	25	40	63	
	AC-7b	7	9	18	25	
Conventional Free Air Thermal Current Ith (A)		25	25	63	63	
Rated Insulation Voltage Ui (V)		500				
Rated Voltage Ue (V)		250V (2P) 400V (4P)				
Ambient Temperature		-5°C ~ +60°C				
Making and Breaking Capacity(AC-7a)		1,5 Ie				
Main Contacts	2P	1NO+1NC				
	4P	4NO				
Controlled Power	AC-7a	230V	4,5	5,5	9	14
		400V	8	10	16	25
	AC-7b	230V	1,6	2	3,5	4,5
		400V	2,8	3,4	6	8
Electrical Durability (times)		10 x 10 ⁴				
Mechanical Durability (times)		10 x 10 ⁵				
Operation Frequency / 1h		100				
Coil Voltage Us (V)		AC24V 50/60Hz , AC230VAC 50/60Hz				
Wiring Ability (mm ²)	Control Circuit	Rigid Wire	1,5 ~ 2,5 mm ²		2x1,5 mm ²	
		Flexible Wire	1,5 ~ 2,5 mm ²		2x1,5 mm ²	
	Main Circuit	Rigid Wire	1,5 ~ 6 mm ²		6 ~ 25 mm ²	
		Flexible Wire	1 ~ 4 mm ²		6 ~ 16 mm ²	
Fastening Torque (N-m)	Main Circuit Terminal	0,8		35		
	Control Circuit Terminal	0,8				

Dimensions (mm)



Connection Diagram



Cylindrical (Cartridge) Fuses



How Do Cylindrical Cartridge Fuses Work?

Due to short circuit or overload current occurring at any point of the circuit, the wire in the cartridge fuse melts and breaks due to the heat effect of the electric current. The sand in the cartridge fuse body fills the gaps in the melting points and breaks the contact of the broken wires with each other, as a result, the current transmission of the circuit is interrupted.

Cylindrical (Cartridge) Fuses - GPV Type (DC Type)

Rated Current In (A)	Number of Poles	Cartridge Size mm x mm	Ref. No
16	1	10x38	VFH/S1/GP/01/16
20	1	10x38	VFH/S1/GP/01/20
25	1	10x38	VFH/S1/GP/01/25

Cylindrical (Cartridge) Fuse Holder

Rated Current In (A)	Number of Poles	Cartridge Size mm x mm	Ref. No
32	1	10x38	VFH/K1/11/32

Rail Type Socket



With its case fit to DIN rail, V:KO rail socket can be chosen at panel applications.

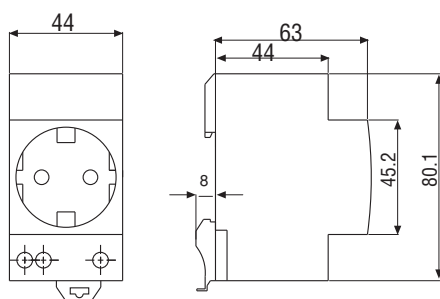
German Type

Rated Voltage (Un): 250V AC

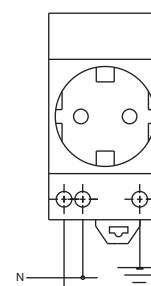
Rated Current (In): 16A

Rated Current (In): VSR-G16

Dimensions (mm)



Connection Diagram



Modular Products

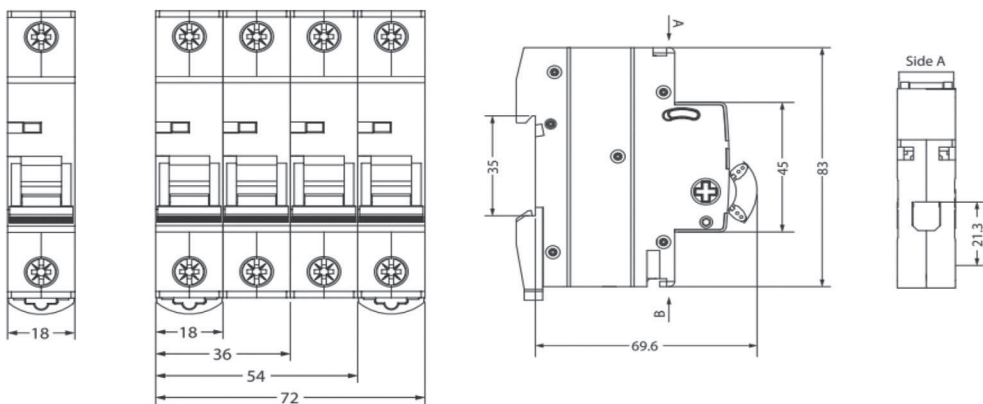
Isolation Switch



Modular isolation switches provide on-off switching in electrical installations. VIKO modular isolation switches are manufactured as 32, 40, 63, 80, 100 and 125 A in accordance with 1, 2, 3 and 4 pole EN IEC 60947-3 standards.

Electrical Properties	
Nominal	32, 40, 50, 63, 80, 100, 125 A
Poles	1P, 2P, 3P, 4P
Nominal Voltage U_e	240 / 415 ~
Isolation Voltage U_i	500V
Nominal Frequency	50 / 60 Hz
Nominal Short-Term Standby Current Low	12I _e , 1s
Nominal Closing and Breaking Capacity	3I _e , 1.05U _e , cos= 0.65
Nominal Short Circuit Closing Capacity	20I _e , t= 0.1s
Nominal Impulse Withstand Voltage (1.5/50) U _{imp}	4000V
Dielectric Test Voltage at Ind. Frequency, 1 min	2.5 kV
Mechanical Properties	
Electrical Life	4.000 Cycles
Mechanical Life	10.000 Cycles
Ignition Position Indicator	Yes
Degree of Protection	IP20
Quality Certificates	EN IEC 60947-3

Dimensions (mm)



Diverter Switch

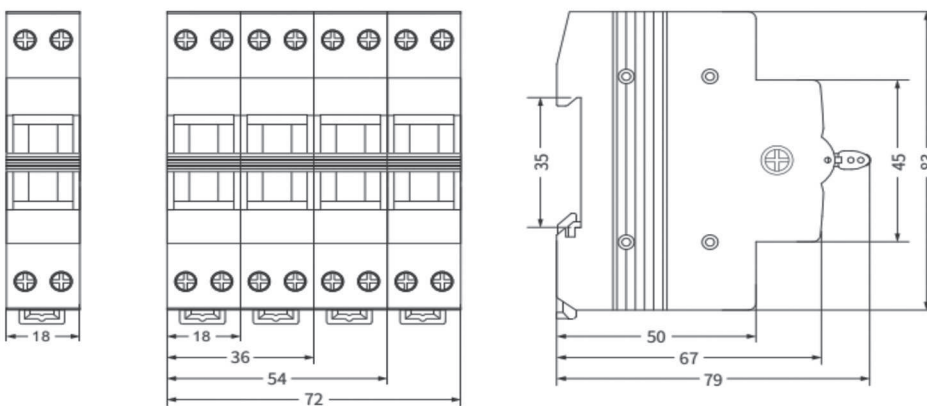


Diverter switches are used to provide control between two power supplies, rail type I - 0 - II provides positioning.

- Rated Current: 16A, 20A, 32A, 40A

Technical Data	
Rated Voltage	240 / 415 ~
Rated Current	16, 25, 32, 40 A
Rated Frequency	50 / 60 Hz
Number of Poles	1, 2, 3, 4P
Contact Form	1-0-2
Electrical Properties	
Electrical Life	1.500 Cycles
Mechanical Life	8.500 Cycles
Protection degree	IP20
Ambient Temperature	-5°C +40°C
Terminal/Cord Size	16 mm ²
Type of Assembly	On DIN EN60715 (35 mm) by means of fast clip device.
Quality Certificates	IEC 60947-1

Dimensions (mm)



Relays

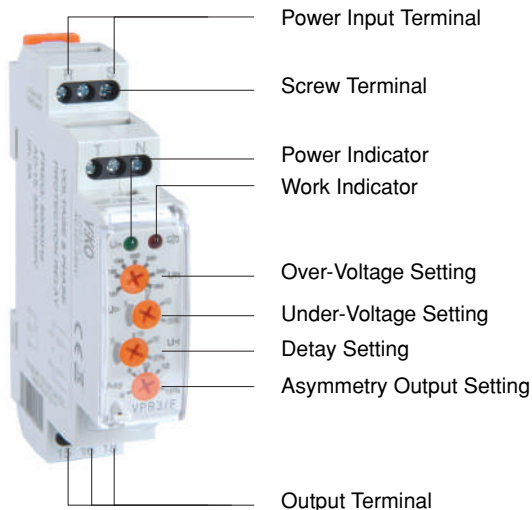


Phase Voltage Relay

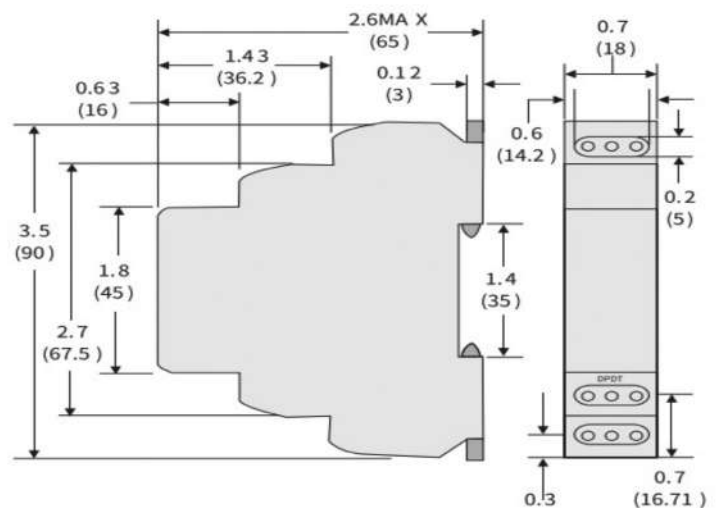
The voltage protection relay uses a high-speed and low-power processor as the core. When there is over-voltage, under-voltage, phase error or reverse phase on the power supply line, the relay quickly and safely breaks the circuit to prevent accidents caused by abnormal voltage sent to the terminal device. When the voltage returns to normal value, the relay automatically switches the circuit to the terminal to ensure the normal operation of electrical appliances.

Monitoring Type	Single Phase (VPR1/S)	Three Phase (VPR3/F)
Output Characteristics	SPDT	SPDT
Over Voltage	0 ~ %20	%15
Under Voltage	0 ~ %20	%15
Time Delay	0.1 ~ 10S	3S
Phase Sequence	-	√
Phase Failure	-	√
Working Voltage	AC110V veya 220V	AC220V, 380V, 400V, 415V, 440V
Frequency	50/60 Hz	50/60 Hz
Response Time of Relay	0.5s	0.5s
Contact Rating	AC-15:3A / 250VAC	AC-15:3A / 250VAC
Ambient Temperature	-10°C ~ +55°C	-10°C ~ +55°C
Voltage Error	± %2 Maks.	± %2 Maks.
Temperature Error	± %2 Maks.	± %2 Maks.
Quality Certificate	IEC/EN 60947-5-1	IEC/EN 60947-5-1

Product Functions



Dimensions (mm)



Relays

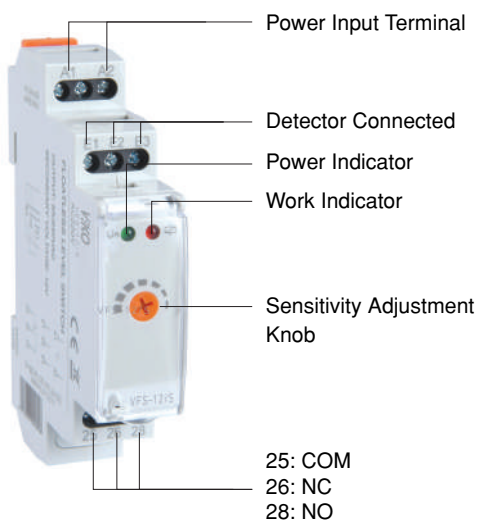


Floatless Level Relays

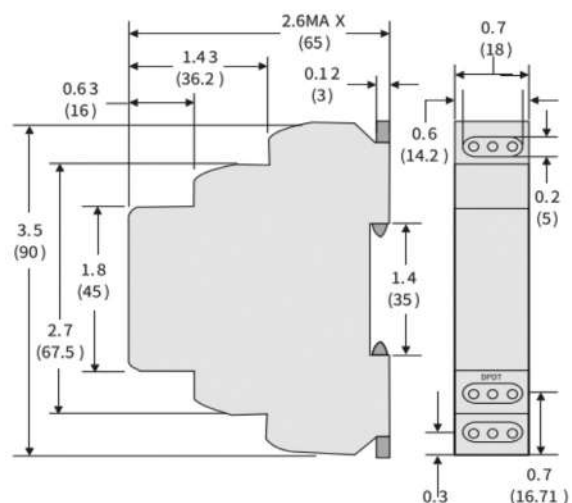
The Floatless Level Relay is a kind of circuit element that controls the height of the liquid level in the container. When the liquid level reaches a certain height, it uses the conductivity of the liquid to open or close the contact output, and automatically controls the start or stop of the water pump to control the amount of liquid in the container.

Output Characteristics	SPDT
Rated Current	5A
Working Voltage	AC110V, AC220V
Output Voltage	12V
Applicable Environment	Used for normal purified water and sewage
Quality Certificate	IEC/EN 60947-5-1

Product Functions



Dimensions (mm)

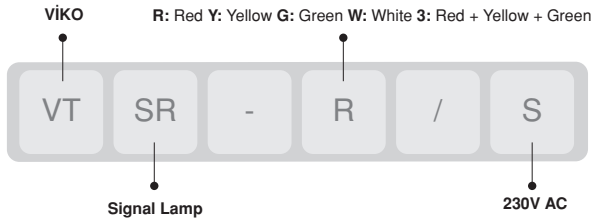


Modular Products

DIN Rail Signal Lamps

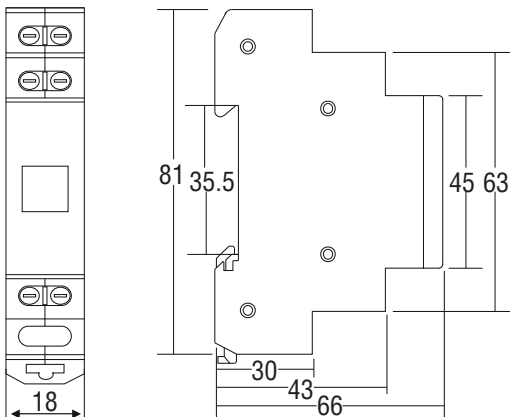


VIKO DIN Rail Type Signal Lamps, with their DIN Rail mountable structure, are used to indicate the presence of voltage in the electrical circuit with LEDs.



DIN Rail Signal Lamps		
Colour	Supply Voltage (V)	Ref. No
Blue	230V AC	VTSR-B/S
Green	230V AC	VTSR-G/S
Red	230V AC	VTSR-R/S
Yellow	230V AC	VTSR-Y/S
White	230V AC	VTSR-W/S
Red + Yellow + Green	230V AC	VTSR-3/S

Dimensions (mm)



Panel Type Signal Lamps



Panel type signal lamps, produced suitable for mounting on the electrical panel cover, show the status of the electrical circuit.

Colours: Red, Yellow, Green, Blue, White

Rated Voltage Options: 230V AC & 24V DC



Panel Type Signal Lamps		
Colour	Supply Voltage (V)	Ref. No
Blue	24V DC	VTSP-B/B
Green	24V DC	VTSP-G/B
Red	24V DC	VTSP-R/B
Yellow	24V DC	VTSP-Y/B
White	24V DC	VTSP-W/B
Blue	230V AC	VTSP-B/S
Green	230V AC	VTSP-G/S
Red	230V AC	VTSP-R/S
Yellow	230V AC	VTSP-Y/S
White	230V AC	VTSP-W/S

Moulded Case Circuit Breaker

High efficiency, maximum flexibility and performance...

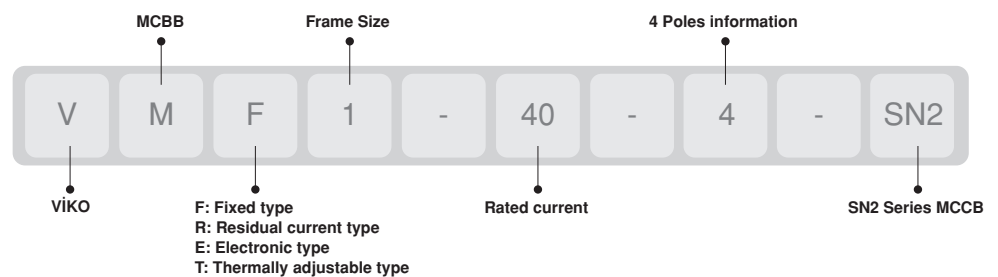


- Compact dimensions
- Simple and strong operating mechanism
- Rapidly, easily and safely mountable accessories
- Easy installation
- Short circuit breaking capacity suitable for all options



SN2 Series
Moulded case circuit
breaker

- Fixed Type
- Thermal Adjustable Type
- Electronic Type
- Residual Current Type



Moulded Case Circuit Breaker

Fixed Type SN2 Series

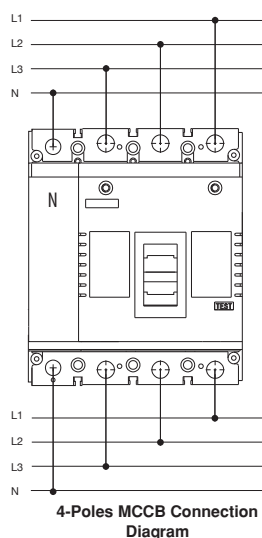
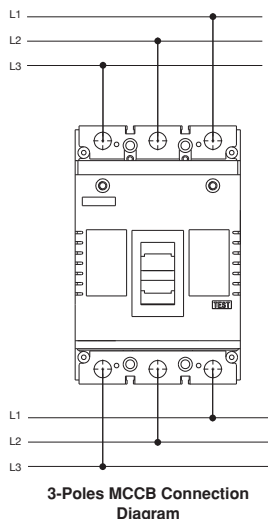


VMF-SN2 series MCCBs provide thermal-magnetic protection at high current breaking capacities, within the range of 40A to 800A rated current values. Thermal and magnetic adjustment fields are fixed.

Technical Information

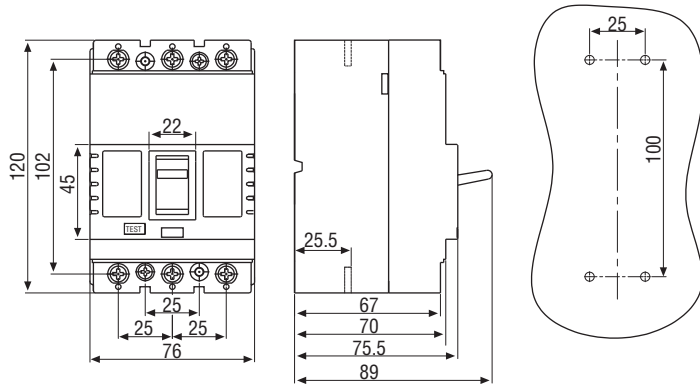
VMF Series		VMF1-SN2	VMF2-SN2	VMF3-SN2	VMF4-SN2	VMF5-SN2	
Model		VMF1-SN2	VMF2-SN2	VMF3-SN2	VMF4-SN2	VMF5-SN2	
Rated Current In (A)		40 - 50 - 63 - 80 - 100 - 125A	40 - 50 - 63 - 80 - 100 - 125 - 160A	200 - 250A	315 - 400A	500 - 630 - 800A	
Rated Insulation Voltage Ui		750V	750V	750V	750V	750V	
Rated Service Voltage Ue		400V	400/415V	400/415V	400/415V	400/415V	
Pole Option		3P / 4P	3P / 4P	3P / 4P	3P / 4P	3P / 4P	
Short-circuit Disconnecting Capacity Icu (kA)		25	35	35	50	50	
Service Short-circuit Disconnecting Capacity Ics (kA)		12,5	26,25	26,25	37,5	37,5	
Rated Voltage of Impact Resistance Uimp (V)		10000	8000	8000	8000	8000	
Dielectric Feature (V)		2500	3000	3000	3000	3000	
Service Performance	Total Installation	10000	8000	8000	5000	5000	
	Electrical Life	1000	1000	1000	1000	1000	
	Mechanical Life	7000	7000	7000	4000	4000	
Accessories	Under Voltage Coil	✓	✓	✓	✓	✓	
	Shunt Release Coil	✓	✓	✓	✓	✓	
	Alarm Contact	✓	✓	✓	✓	✓	
	Alarm Contact	✓	✓	✓	✓	✓	
	Extended Rotary Setup Handle	✓	✓	✓	✓	✓	
Quality Certificates	Motor Mechanism					✓	
		TSE 60947-2					
	E (mm)	3P	76	90	105	140	210
		4P	101	120	140	184	280
	Y (mm)	3P	120	120	170	254	268
		4P	120	120	170	254	268
	D (mm)	3P	70	70	103,5	103,5	103,5
		4P	70	70	103,5	103,5	103,5

Connection Diagram

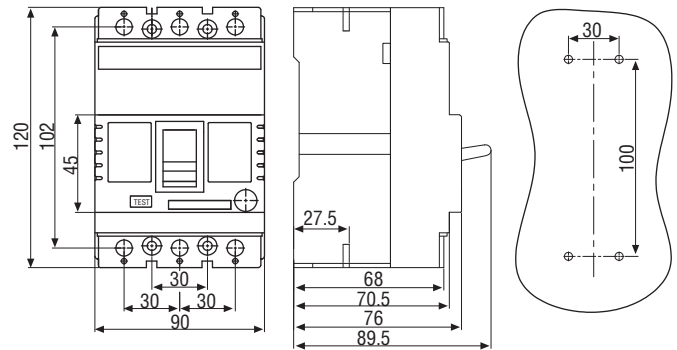


Dimensions (mm)

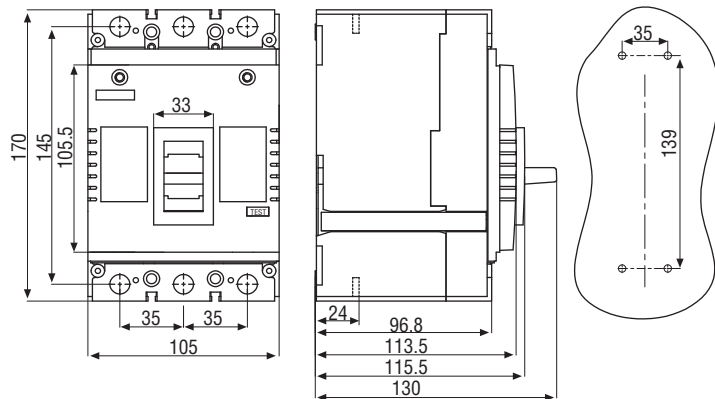
VMF1-SN2



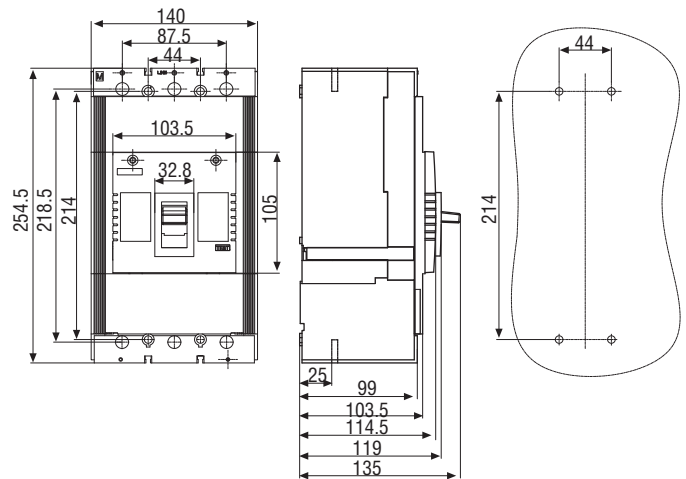
VMF2-SN2



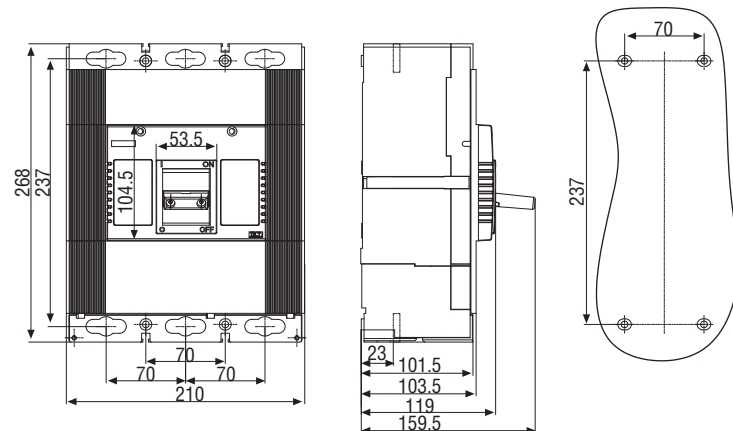
VMF3-SN2



VMF4-SN2



VMF5-SN2



Moulded Case Circuit Breaker

Thermal Adjustable Type SN2 Series

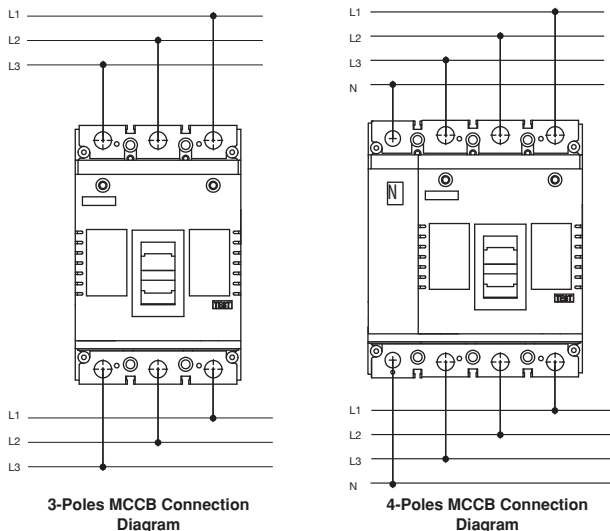


VMT-SN2 series MCCBs provide thermal-magnetic protection at high current breaking capacities in the range of 40A to 800A rated current values. With its thermal adjustment field feature, the thermal adjustment part can make adjustments at rated current values multiplied by 0,7 to 1 times.

Technical Information

VMT Series					
Model	VMT2-SN2	VMT3-SN2	VMT4-SN2	VMT5-SN2	
Rated Current In (A)	40 - 50 - 63 - 80 - 100 - 125 - 160A	200 - 250A	315 - 400A	500 - 630 - 800A	
Rated Insulation Voltage Ui	690V	690V	690V	750V	
Rated Service Voltage Ue	400/415V	400/415V	400/415V	400/415 V	
Pole Option	3 /4P	3P/4P	3P/4P	3P/4P	
Short-circuit Disconnecting Capacity Icu (kA)	35	35	50	50	
Service Short-circuit Disconnecting Capacity Ics (kA)	26,25	26,25	37,5	35	
Nominal Impact Resistance Voltage (V)	8000	8000	8000	8000	
Rated Voltage of Impact Resistance Uimp (V)	3000	3000	3000	3000	
Service Performance	Total Installation	8000	8000	5000	5000
	Electrical Endurance	1000	1000	1000	1000
	Mechanical Endurance	7000	7000	4000	4000
Accessories	Under Voltage Coil	✓	✓	✓	✓
	Shunt Release Coil	✓	✓	✓	✓
	Auxiliary Contact	✓	✓	✓	✓
	Alarm Contact	✓	✓	✓	✓
	Extended Rotary Setup Handle	✓	✓	✓	✓
	Motor Mechanism	✓	✓	✓	X
	Mechanical Lock	✓	✓	✓	X
Quality Certificates					
	E (mm)	3P: 90 4P: 120	105 140	140 184	210 280
	Y (mm)	3P: 120 4P: 120	170 170	254 254	268 268
	D (mm)	3P: 70 4P: 70	103,5 103,5	103,5 103,5	103,5 103,5

Connection Diagram



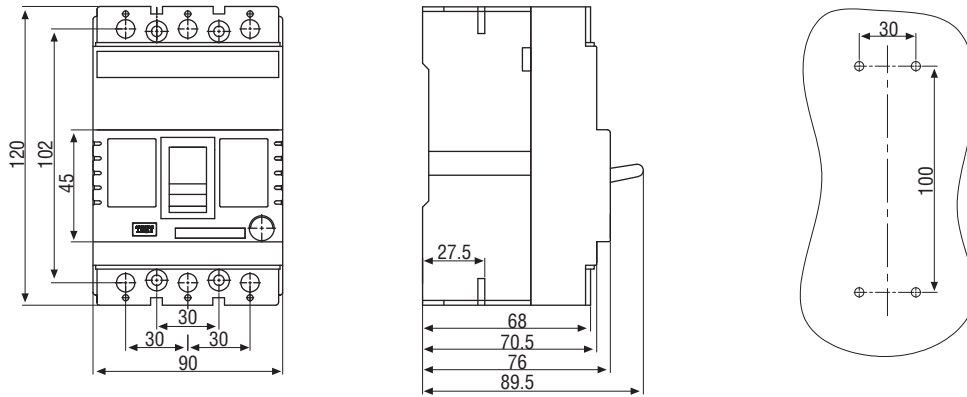
Adjustment Panel

0,7 In – 1 In aralığında termik ayar sahası

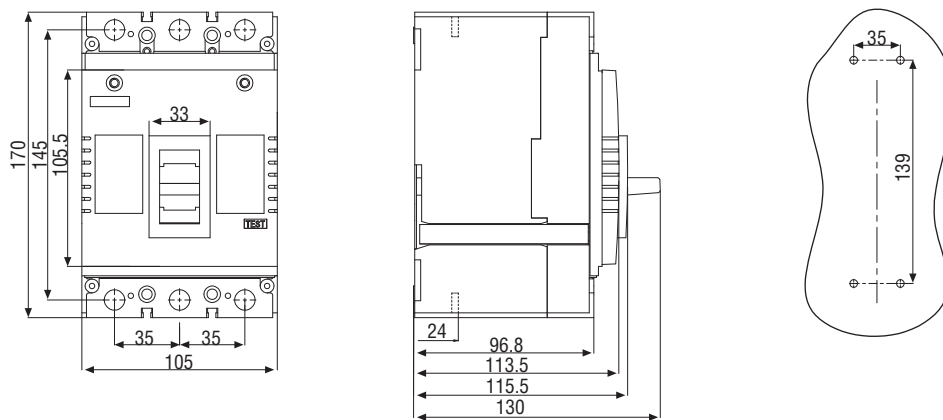


Dimensions (mm)

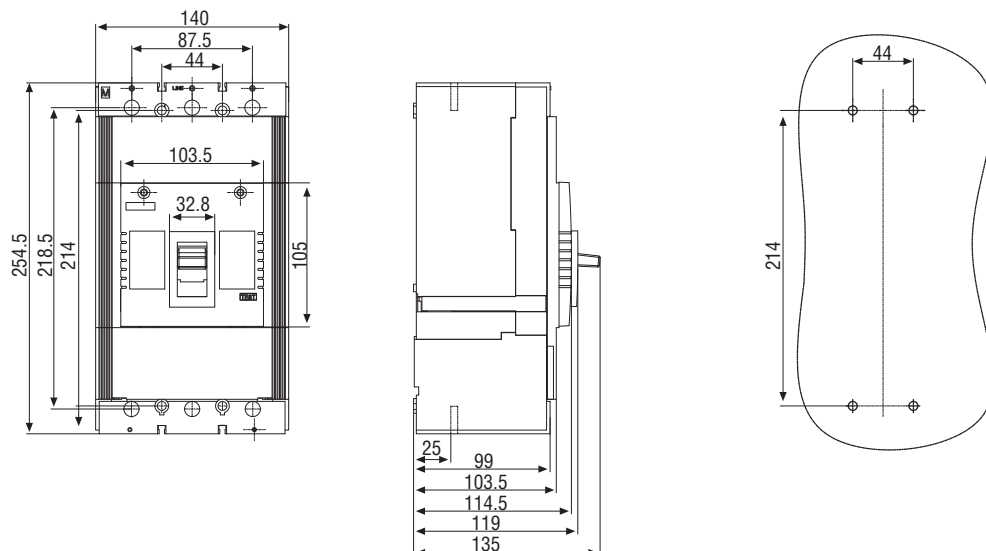
VMT2-SN2



VMT3-SN2



VMT4-SN2



Moulded Case Circuit Breaker

Residual Current Type SN2 Series

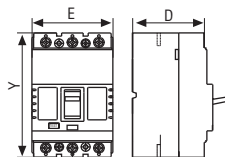


VMR series MCCBs provide thermal-magnetic as well as residual current protection at high current breaking capacities in the range of 50A to 500A rated current values. With its residual current adjustment feature offered in addition to fixed type switch, offers accuracy adjustment for residual currents at the residual current breaking values of 100, 300, 500mA. Provides full solution in installation thanks to its residual current protection feature in addition to thermal-magnetic protection. Adjustments on your device are carried out via switches located under your device.

Technical Information

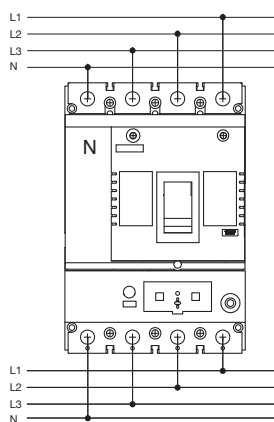
VMR Series				
Model	VMR2-SN2	VMR3-SN2	VMR4-SN2	
Rated Current In (A)	50 - 63 - 80 - 100 - 125 - 160A	200 - 250A	315 - 400 - 500A	
Rated Insulation Voltage Ui	690V	690V	690V	
Rated Service Voltage Ue	400/415V	400/415V	400/415V	
Pole Option	4P	4P	4P	
Short-circuit Disconnecting Capacity Icu (kA)	25	35	50	
Service Short-circuit Disconnecting Capacity Ics (kA)	18,75	26,25	37,5	
Rated Voltage of Impact Resistance Uimp (V)	8000	8000	8000	
Dielectric Feature (V)	3000	3000	3000	
Service Performance	Total Installation	8000	5000	
	Electrical Endurance	1000	1000	
	Mechanical Endurance	7000	4000	
Residual Current Threshold Value IΔn (mA)	100-300-500	100-300-500	100-300-500	
Residual Current Sensitivity Threshold IΔn (mA)	50-500-800	50-500-800	50-500-800	
Maximum Short-circuit Disconnecting Capacity at Residual Current (IΔm) kA/cosφ	9	16,25	16,25	
Accessories	Under Voltage Coil	✓	✓	✓
	Shunt Release Coil	✓	✓	✓
	Auxiliary Contact	✓	✓	✓
	Alarm Contact	✓	✓	✓
	Extended Rotary Setup Handle	✓	✓	✓
	Motor Mechanism	✓	✓	✓
	Mechanical Lock	X	X	X

TSE 60947-2



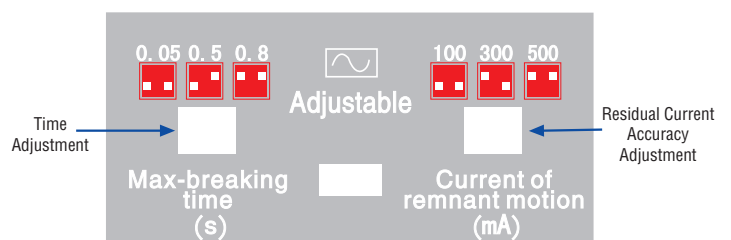
	3P	4P	4P	4P
E (mm)		120	140	184
Y (mm)		120	210	254
D (mm)		70	103,5	103,5

Connection Diagram



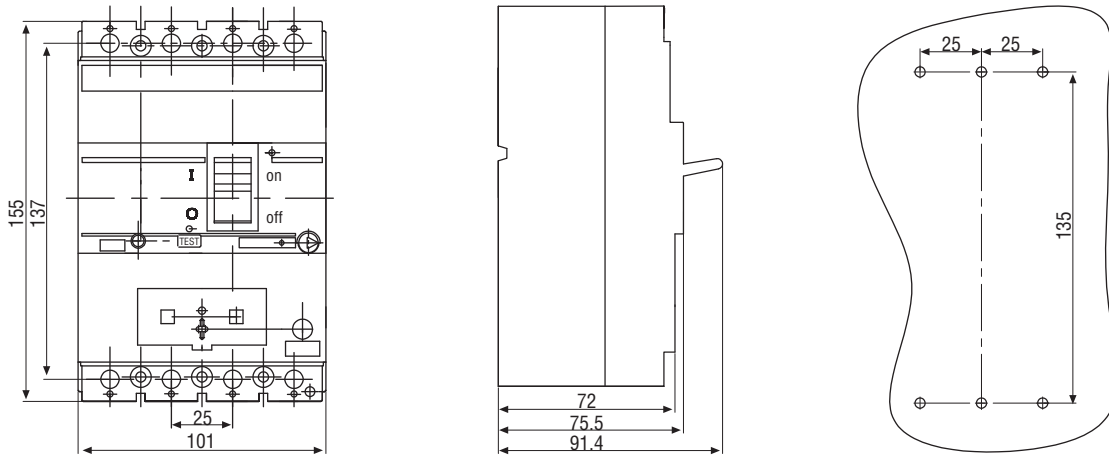
4-Poles Compact MCCB Diagram

Adjustment Panel

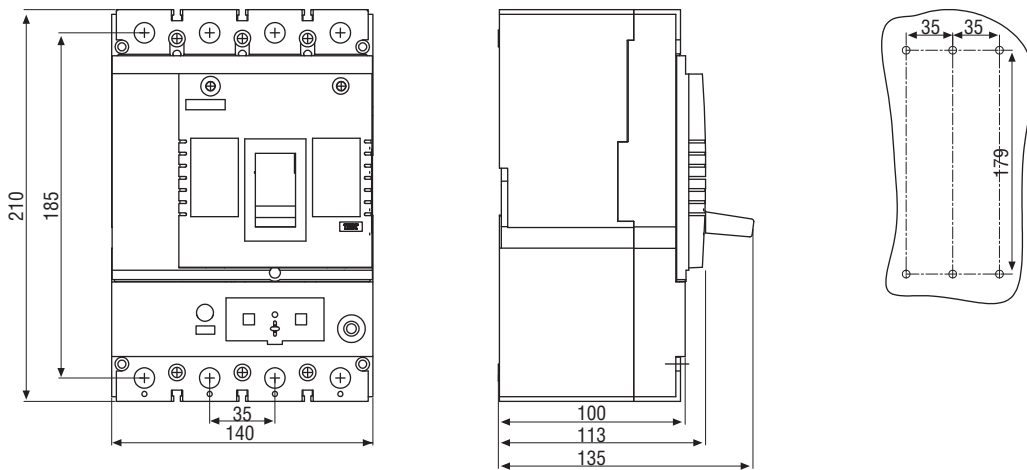


Dimensions (mm)

VMR2-SN2



VMR3-SN2



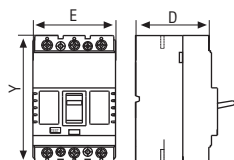
Moulded Case Circuit Breaker

Electronic Type SN2 Series

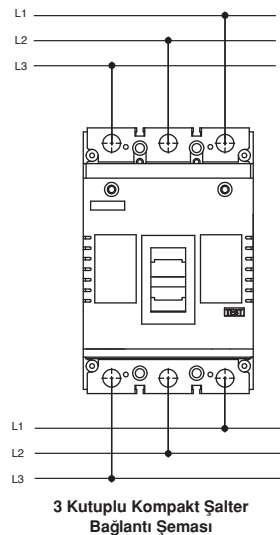


With VME-SN2 series MCCBs, superior protection is offered at high current breaking capacity values in the range of 800A to 1600A. Adjustments on your device are carried out via switches located under your device.

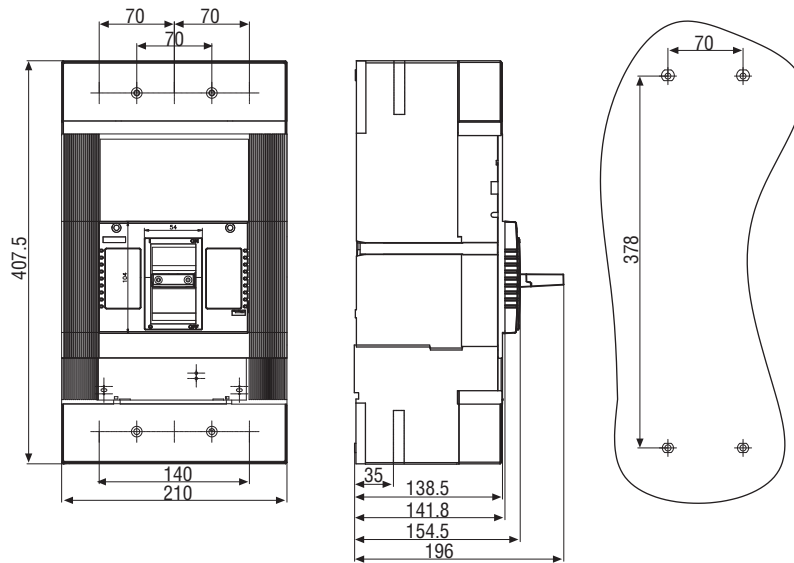
Technical Information

VME Series				
Model	VME5-SN2	VME6-SN2		
Rated Current In (A)	630 - 800A	800 - 1000 - 1250 - 1600A		
Rated Insulation Voltage Ui	750V	690V		
Rated Service Voltage Ue	400/415V	400V		
Pole Option	3P	3P		
Short-circuit Disconnecting Capacity Icu (kA)	65	70		
Service Short-circuit Disconnecting Capacity Ics (kA)	50	52,5		
Rated Voltage of Impact Resistance Uimp (V)	8000	8000		
Dielectric Feature (V)	3000	3000		
Service Performance	Total Installation	5000	3000	
	Electrical Endurance	1000	500	
	Mechanical Endurance	4000	2500	
Accessories	Under Voltage Coil	✓	✓	
	Shunt Release Coil	✓	✓	
	Auxiliary Contact	✓	✓	
	Alarm Contact	✓	✓	
	Extended Rotary Setup Handle	✓	✓	
	Motor Mechanism	✓	✓	
	Mechanical Lock	X	X	
Quality Certificates	TSE 60947-2			
	E (mm)	3P	210	210
		4P	280	280
	Y (mm)	3P	410	410
		4P	410	410
	D (mm)	3P	138,5	138,5
		4P	138,5	138,5

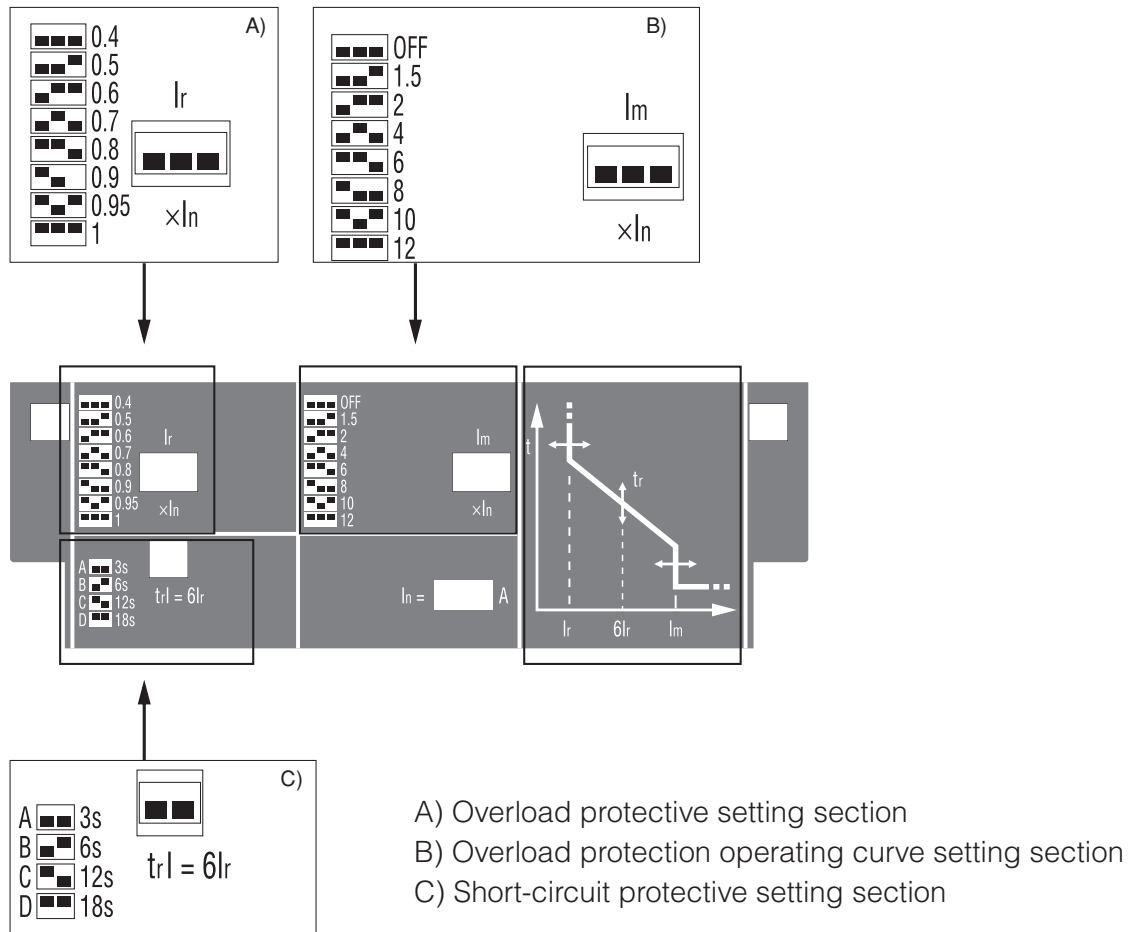
Connection Diagram



Dimensions (mm)

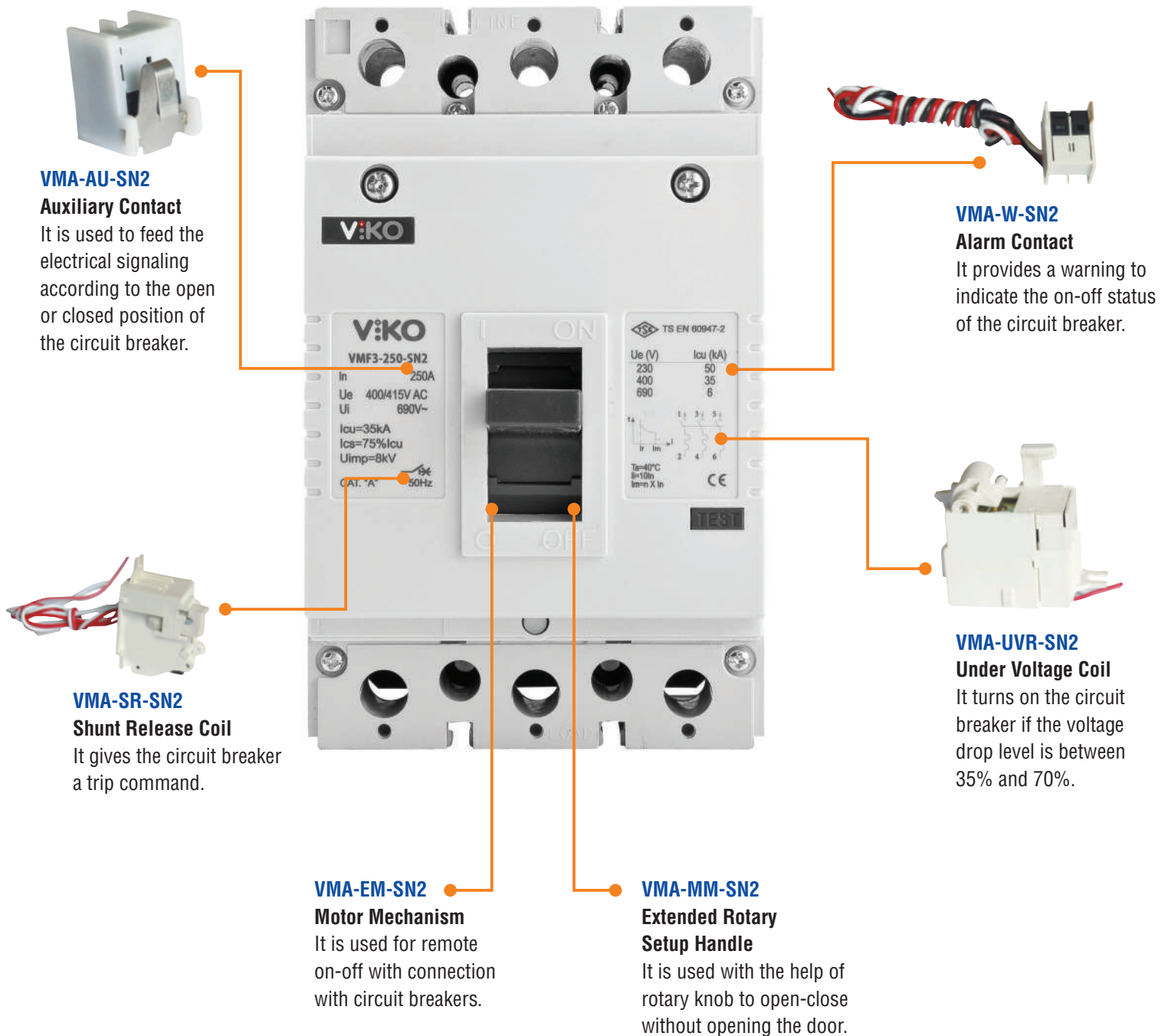


Adjustment Panel



Moulded Case Circuit Breaker

MCCB Accessories - SN2 Series



Shunt Release Coil	
Compact to Use It With	Ref. No
VMF1 - VMF2 - VMT2 - VMR2 / -SN2	VMA-SR1/2-SN2
VMF3 - VMF4 - VMT3 - VMT4 - VMR3 / -SN2	VMA-SR3/4-SN2
VMF5 - VME6 / -SN2	VMA-SR5/6-SN2

Under Voltage Coil	
Compact to Use It With	Ref. No
VMF1 - VMF2 - VMT2 - VMR2 / -SN2	VMA-URV1/2-SN2
VMF3 - VMF4 - VMT3 - VMT4 - VMR3 / -SN2	VMA-URV3/4-SN2
VMF5 - VME6 / -SN2	VMA-URV5/6-SN2

Auxiliary Contact Block	
Compact to Use It With	Ref. No
VMF1 - VMF2 - VMT2 - VMR2 / -SN2	VMA-AU1/2-SN2
VMF3 - VMF4 - VMT3 - VMT4 - VMR3 / -SN2	VMA-AU3/4-SN2
VMF5 - VME6 / -SN2	VMA-AU5/6-SN2

Alarm Contact Block	
Compact to Use It With	Ref. No
VMF1 - VMF2 - VMT2 - VMR2 / -SN2	VMA-W1/2-SN2
VMF3 - VMF4 - VMT3 - VMT4 - VMR3 / -SN2	VMA-W3/4-SN2
VMF5 - VME6 / -SN2	VMA-W5/6-SN2

Extended Rotary Setup Handle	
Compact to Use It With	Ref. No
VMF1 / -SN2	VMA-MM1-SN2
VMF2 - VMT2 - VMR2 / -SN2	VMA-MM2-SN2
VMF3 - VMT3 - VMR3 / -SN2	VMA-MM3-SN2
VMF4 - VMT4 / -SN2	VMA-MM4-SN2
VMF5 - VME6 / -SN2	VMA-MM5-SN2

Motor Mechanism	
Compact to Use It With	Ref. No
VMF1/-SN2	VMA-EM1-SN2
VMF2-VMT2-VMR2/-SN2	VMA-EM2-SN2
VMF3-VMT3-VMR3/-SN2	VMA-EM3-SN2
VMF4-VMT4/-SN2	VMA-EM4-SN2
VMF5-VMT5/-SN2	VMA-EM5-SN2
VME6/-SN2	VMA-EM6-SN2



Shunt Release Coil



Under Voltage Coil



Auxiliary Contact Block



Alarm Contact Block



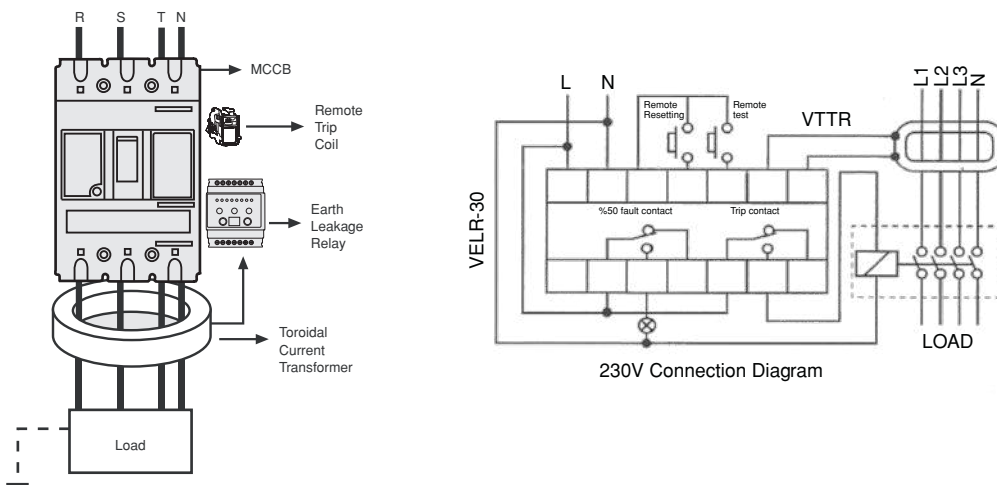
Extended Rotary Setup Handle

Residual Current Combinations

V:KO provides the option to establish a residual current set with MCCB up to 400A. Toroidal Current Transformer, shunt trip coil and earth leakage relay must be a part of the structure to be established. Therefore, this installation will establish a compact switch with thermally adjusted residual current protection up to 400 amperes. In order to create a Residual Current combination;

- MCCB
- VELR Series Earth Leakage Relay
- VTTR series Toroidal Current Transformer
- Shunt Trip Coil compatible with compact switch must be ordered all at once.

Connection Diagram



Compact Switches

Residual Current Detection Relay

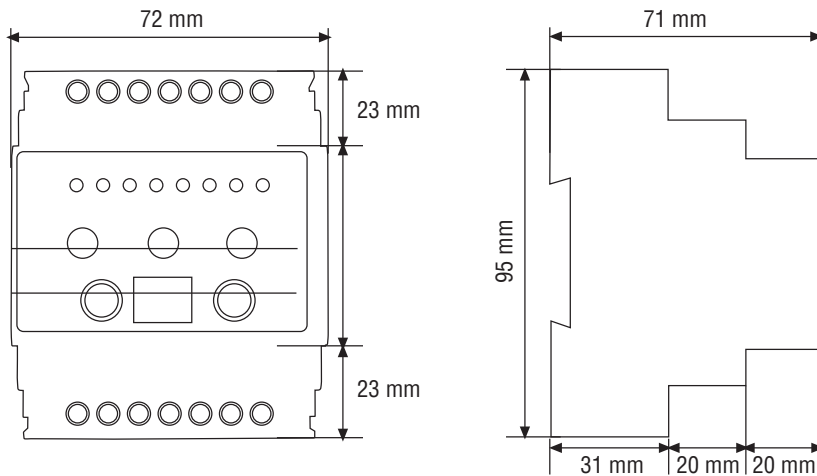


Sensitivity adjustment ($I_{\Delta n}$) of the VELR-30 series leakage current detection relays;

- Sensitivity selection in 9 different settings; 30mA, 50mA, 75mA, 100mA, 125mA, 150mA, 200mA, 250mA, 300mA.
- Multiplier setting with 3 different positions; 1*, 10*, 100*.
- Time setting for fault detection; Immediate (without delay), 50ms, 100ms, 150ms, 250ms, 350ms, 500ms, 1s, 3s.

Threshold Current	Feeding Voltage	Switch-on Time Setting	Reference Number
30mA - 30A	10V/220V A	0.05 sn - 5 sn	VELR - 30

Dimensions (mm)

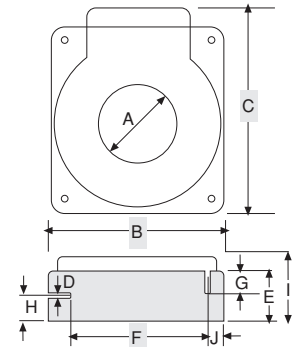


Toroid Current Transformer

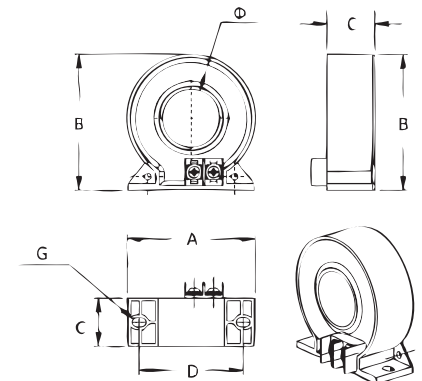


It calculates the difference between the currents entering and leaving the circuit and detects the leakage current that may occur in the system together with the leakage current detection relay.

Dimensions (mm)	Model		
	VTTR - 40	VTTR - 55	VTTR - 80
A	40.0	55.0	80.0
B	79.0	126.0	120.5
C	97.0	151.0	138.0
D	3.5	4.0	3.5
E	35.0	37.0	35.0
F	53.5	100.0	94.5
G	17.5	14.0	17.5
H	17.5	19.0	17.5
I	32.0	44.0	37.0
J	10.0	12.5	10.0



Model	VTTR - 100	VTTR - 150	VTTR - 200
X	100mm	150mm	200mm
A	135.5	189.5	239.5
B	141	196	246
C	26	27	30
D	114.5	171	221
G	M6	M6	M8



Power is under control...

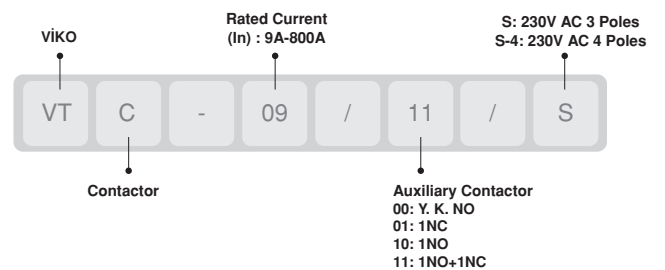
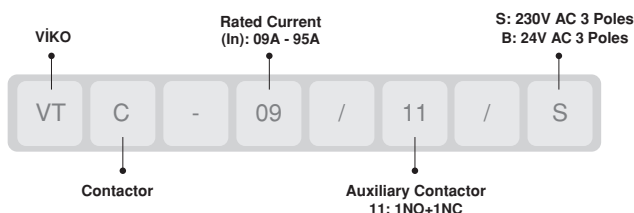
- From 9A to 800A
- In conformity with the EN 60947-4-1 standard
- Easy and safe installation
- Variety of options for accessories
- AC coil voltages 400V
- Maximum safety in installations when used together with VIKO branded compact switches and thermal relays



AC-Power Contactors 3 Pole



AC-Power Contactors 3-4 Pole

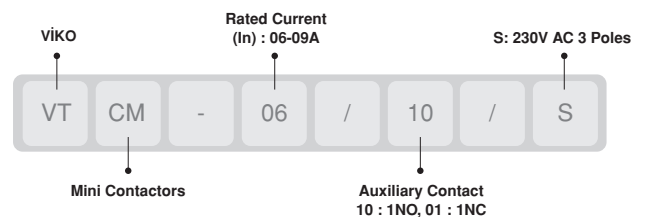
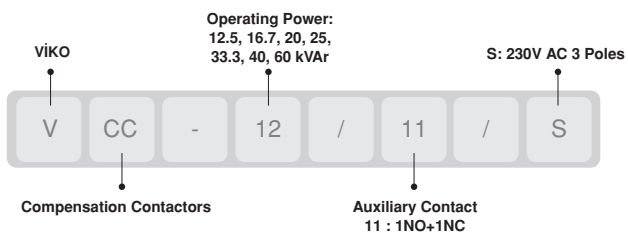




Compensation Contactors



Mini Contactors



Contactors

AC Contactors - (VTC/S), (VTC/S-4)



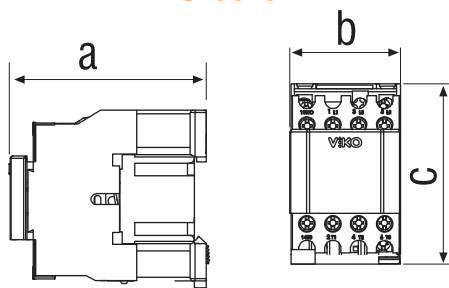
Type	VTC-09	VTC-12	VTC-18	VTC-25	VTC-32	VTC-40	VTC-50	VTC-65	VTC-80	VTC-95	
Nominal Power AC-3,400V-kW	380/400 V-A	4	5,5	7,5	11	15	18,5	22	30	37	45
Rated Service Current (Ie) AC3	660/690V-A	9	12	18	25	32	40	50	65	80	95
Contact		7	9	12	18	21	34	39	42	49	49
		1NO/1NC	1NO/1NC	1NO/1NC/1NO+ 1NC/2NO+2NC	1NO/1NC/1NO+ 1NC/2NO+2N	1NO/1NC/1NO+ 1NC/2NO+2NC	1NO+1NC	1NO+1NC	1NO+1NC	1NO+1NC	1NO+1NC
Rated Insulation Voltage (Ui)-V							690				
Thermal Current (Ith)-A		25	25	32	40	50	60	80	80	125	125
Compatible Thermal Relays				VRM-32A10 ~ VRM32A23			VRM-95A31 ~ VRM95A37,				
Coil	Control Voltage (Us)-V	AC (50/60Hz) : 24, 48, 110, 220, 380V									
	Tripping Voltage - V	%85 Us - %110 Us (AC)									
	Tensile Voltage - V	%20 Us - %75 Us (AC)									
Number of Poles				3 & 4 Pole Option							

VIKO branded contactors have a wide product variety ranging from 9 Amperes to 800 Amperes. Thanks to their easy and safe mounting, They provide maximum safety in installations with VIKO branded moulded case circuit breakers and thermal relays. AC coil voltage values from 24V up to 400V are available. Conform to EN 60947-4-1 standard and wide range of accessory options.

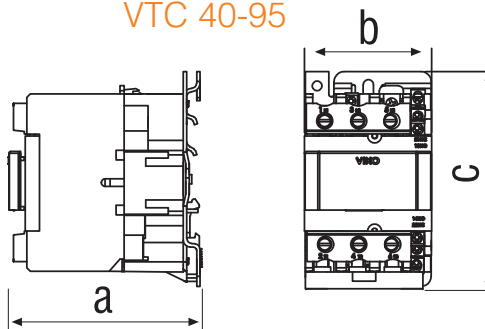
Contactors;

- **Power Contactors (3-pole);** AC coil voltages between 9A and 800A, from 24V up to 400V, AC3 Operating Class
- **Power Contactors (3-pole);** AC coil voltages between 9A and 95A, from 24V up to 400V, AC3 Operating Class
- **Mini Contactors;** At 6A and 9A current values, 24V AC and 230V AC coil
- **Compensation Contactors;** Rated Condenser Power (kVAr) at values 12.5 - 16.7 - 20 - 25 - 33.3 - 40 - 60

VTC 09-32



VTC 40-95



MODEL	A	B	C
VTC-09/12	80	44	75
VTC-18	85	44	75
VTC-25	95	58	84
VTC-32/38	100	58	84

MODEL	A	B	C
VTC-40/50/65 (3P)	112	77	128max
VTC-40/50/65 (4P)	112	85	128max
VTC-80/95 (3P)	124	85	128max
VTC-80/95 (4P)	124	96	128max



VTC-115	VTC-150	VTC-185	VTC-225	VTC-265	VTC-330	VTC-400	VTC-500	VTC-630	VTC-780	VTC-800
55	75	90	110	132	160	200	250	335	400	400
115	150	185	225	265	330	400	500	630	780	800
86	107	118	135	170	225	305	355	460	550	475
-	-	-	-	-	-	-	-	-	-	-
1000										690
200	250	275	315	350	400	500	700	1000	1500	850

AC (50/60Hz): 220V	
%85 Us-%110 Us (AC)	
%20 Us-%75 Us (AC)	
3/4P	3 Poles

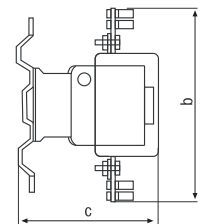
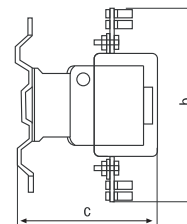
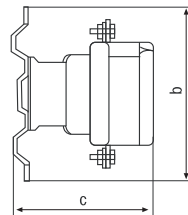
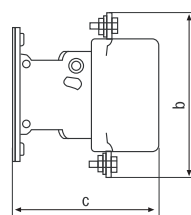
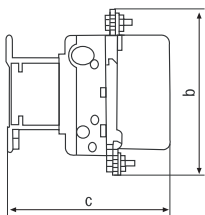
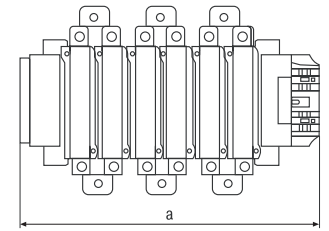
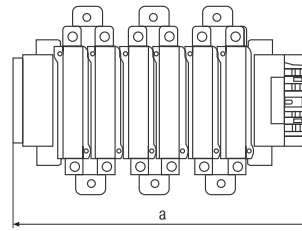
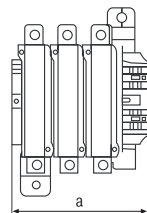
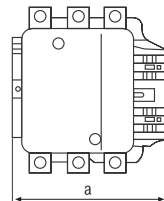
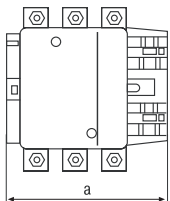
VTC 115-265

VTC 330-400

VTC 500-630

VTC 780

VTC 800



MODEL		A(mm)	B(mm)	C(mm)
VTC-115 ~ 265	115 (3P)	163,5	162	171
	115 (4P)	200,5	162	171
	150 (3P)	163,5	170	171
	150 (4P)	200,5	170	171
	185 (3P)	168,5	174	181
	185 (4P)	208,5	174	181
	225 (3P)	168,5	197	181
	225 (4P)	208,5	197	181
	265 (3P)	201,5	203	213
	265 (4P)	244,5	203	213

MODEL		A(mm)	B(mm)	C(mm)
VTC-330 ~ 400	330 (3P)	213	206	219
	330 (4P)	261	206	219
	400 (3P)	213	205	219
	400 (4P)	261	205	219
	500 (3P)	233	238	232
VTC-500 ~ 630	500 (4P)	288	238	232
	630 (3P)	309	304	255
	630 (4P)	389	304	255
VTC-780	780 (3P)	389	435	255
VTC-800	800 (3P)	389	304	255

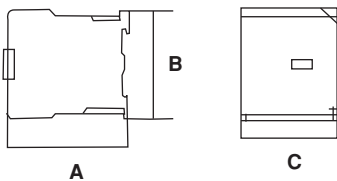
Contactors

Mini Contactors - (VTCM)



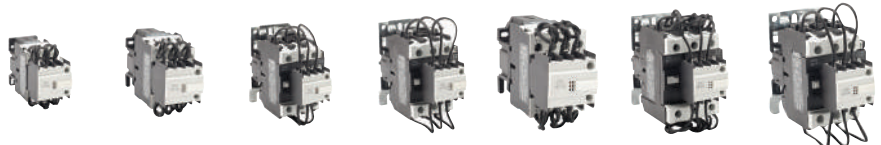
Type	Birimi	VTCM-06	VTCM-09	
Nominal Power	220/230V AC	kW	2,2	4,00
	380/400V AC	kW	2,2	4,00
Rated Service Current (Ie) AC-3	380/400V AC	A	6	9
Rated Insulation Voltage (Ui)		V	690	690
Thermal Current (Ith)		A	16	20
Contact			1NO/1NC	1NO/1NC

Dimensions (mm)



Model	a	b	c
VTCM-06	58	58	45,3
VTCM-09	58	58	45,3

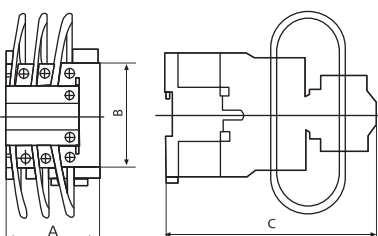
Compensation Contactors - (VCC)



Type			VCC-12	VCC-16	VCC-20	VCC-25	VCC-33	VCC-40	VCC-60	
Rated Condenser Power	200/240V	kVAr	6,7	8,5	10,0	15,0	20,0	25,0	40,0	
	400/440V		12,5	16,7	20,0	25,0	33,3	40,0	60,0	
Thermal Current (Ith)		A	32	40	50	60	80	80	125	
Rated Service Current (Ie) AC-6b	400V	A	18	25	32	40	50	65	95	
Contact			1NO+1NC	1NO+1NC	1NO+1NC	1NO+2NC	1NO+2NC	1NO+2NC	1NO+2NC	
Rated Insulation Voltage (Ui)		V	690							
Coil	Control Voltage (Us)	V	AC(50/60Hz) :24V,48V,110V, 220V,380V				AC(50/60Hz) :24V,48V,110V, 220V,380V			
	Tripping Voltage	V	%85Us-%110Us				%85Us-%110Us			
	Tensile Voltage	V	%30Us-%55Us				%30Us-%60Us			

Note: Voltage fluctuations cause an increase in condensers' rated current flow (In) by 1.3 times. Depending on the production tolerance -5%~+10%, condenser power can reach up to 1.1 times of the nominal power $1.3 \cdot 1.1 \cdot I_n = 1.43I_n$. Please be careful while ordering.

Dimensions (mm)

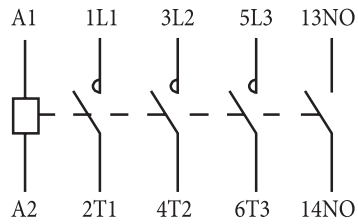


Model	a	b	c
VCC-12	46	66,3	121,5
VCC-20	56	77	135,5
VCC-25	75	75	150
VCC-40	75	95	150
VCC-60	84,5	101,8	157

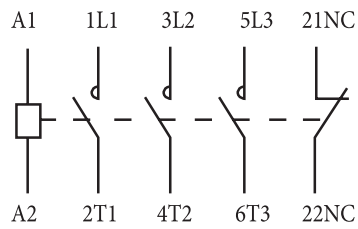
Connection Diagram and Auxiliary Contact Information

With Auxiliary Contact (3 Poles)

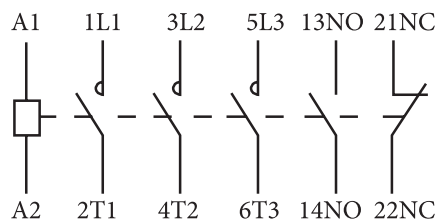
VTC-0910 ~ 3810



VTC 0901 ~ 3801



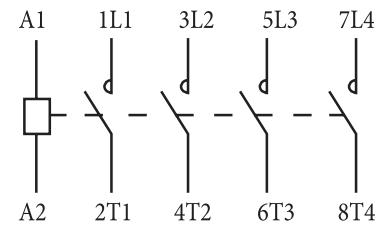
VTC-4011 ~ 9511



Without Auxiliary Contact (4 Poles)

VTC4-9, 12, 25

VTC4-40 ~ 95



Contactors

Accessories

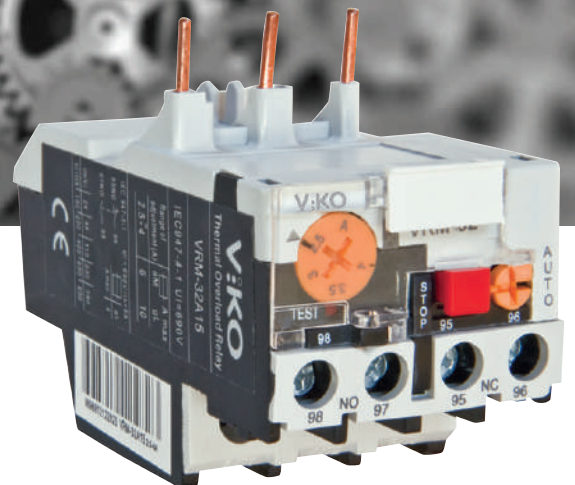


Compatible Contactors		VTC - 09 ~ 95	VTC - 115 ~ 330	VTC - 400 ~ 780
Auxiliary Contact Blocks	On top		VTCA-AU/11 (1NO + 1NC)	
			VTCA-AU/31 (3NO + 1NC)	
			VTCA-AU/13 (1NO + 3NC)	
			VTCA-AU/22 (2NO + 2NC)	
			VTCA-AU/20 (2NO)	
		VTCA-AU/02 (2NC)		
	To the side	VTCA-AU/11N (1NO + 1NC)	-	-
Coil	Control Voltage (Us)	AC (50/60Hz) : 24, 48, 110, 220, 380 V	-	-



Superior protection...



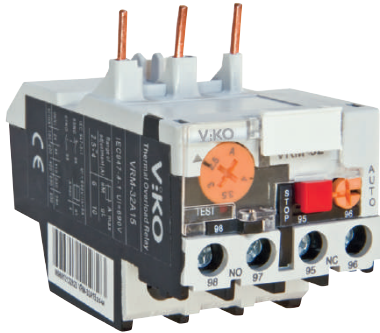


VRM Series Mechanical Thermal Relay

- Adjustment range from 0.4A to 93A
- Manual reset option
- Test button, stop button for emergencies
- Easy mounting to and aesthetical harmony with contactors

Thermal Relays

Mechanical Thermal Relay



In case of overload, they are used to prevent damage to engine. They are used with fuses or contactors. When the fuses provide protection at a certain current value, the thermal relays provide protection in the adjustable current interval.

Type	Electromagnetic		
Model	VRM-32A10~ VRM-32A23	VRM-32A24~ VRM-32A25	VRM-95A31~ VRM-95A37
Current Adjustment Range	0.25 ~ 25A	23 ~ 40A	23 ~ 93A
Standard	IEC EN 60947-4-1		
Pole	3P		
Frequency	50 / 60Hz		
Rated Service Voltage (Ue)	380V AC		
Rated Insulation Voltage (Ui)	750V		
Rated Voltage of Impact Resistance (Uimp)	6kV		
Category of Use	AC3		
Operating Temperature	-5°C ~ +40°C		
Auxiliary Contact	1NO-1NC		
Auxiliary Contact Rated Thermal Current (Ith)	5A		
Protection Class	IP20		

Compatible Contactors

Current Adjustment Range	Circuit Breaker Compatible with Selected Type of Relay		Contactor Used	Thermal Relay Reference	
	aM	gG			
	A	A			
0.25 ~ 0.4	1	2	VTC-09~32	VRM-32A10	
0.4 ~ 0.63	1	2		VRM-32A11	
0.63 ~ 1	2	4		VRM-32A12	
1 ~ 1.6	2	4		VRM-32A13	
1.6 ~ 2.5	4	6		VRM-32A14	
2.5 ~ 4	6	10		VRM-32A15	
4 ~ 6	8	16		VRM-32A16	
5.5 ~ 8	12	20		VRM-32A17	
7 ~ 10	12	20		VRM-32A18	
9 ~ 13	16	25		VRM-32A21	
12 ~ 18	20	35		VRM-32A22	
17 ~ 25	25	50		VRM-32A23	
23 ~ 32	40	63		VTC-25~32	VRM-32A24
30 ~ 40	40	63			VRM-32A25
23 ~ 32	40	63			VRM-95A31
30 ~ 40	40	100		VTC-40~95	VRM-95A32
37 ~ 50	63	100			VRM-95A33
48 ~ 65	63	100			VRM-95A34
55 ~ 70	80	125	VRM-95A35		
63 ~ 80	80	125	VRM-95A36		
80 ~ 93	100	160	VRM-95A37		

Accessories

VRMA-MA32

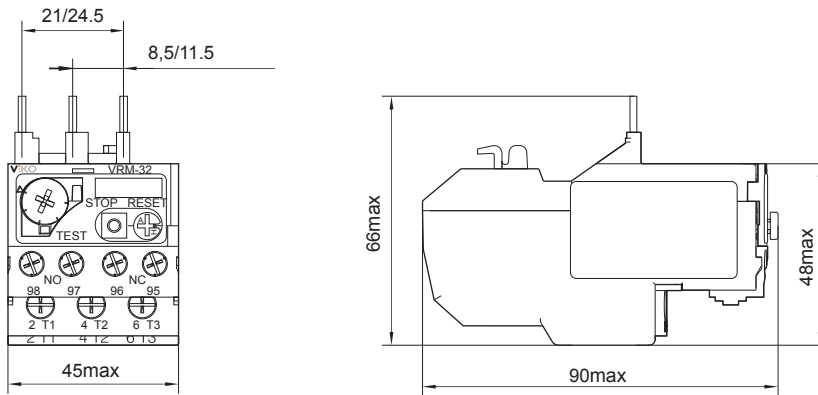
Mounting device compatible with 35 mm DIN rail for VRM32 Series Thermal Relays.

VRMA-MA95

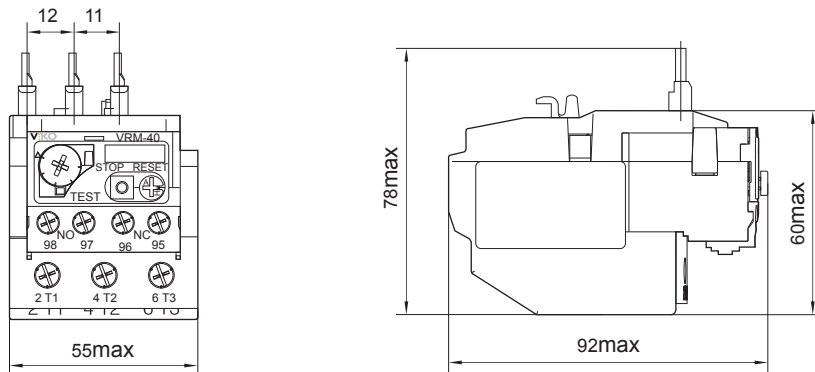
Mounting device compatible with 35 mm DIN rail for VRM95 Series Thermal Relays.

Dimensions (mm)

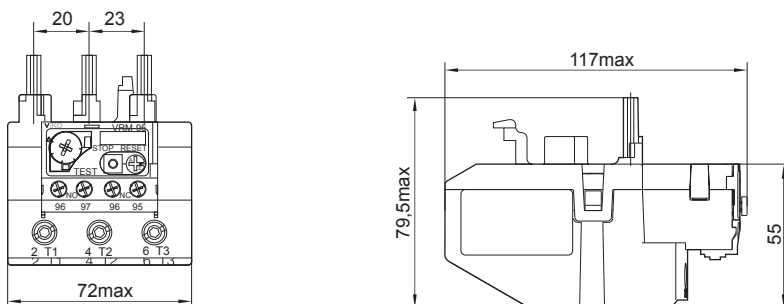
VRM-32A



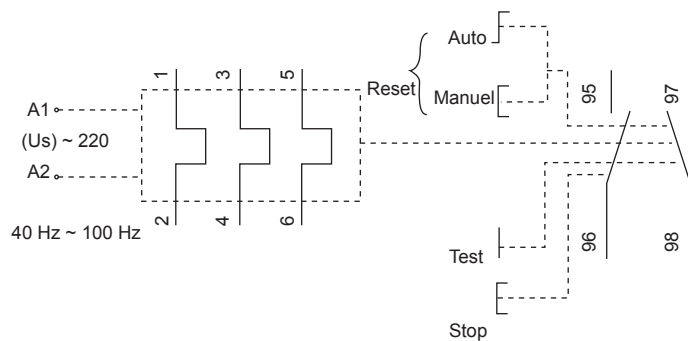
VRM-32A (22-24)



VRM-95A



Connection Diagram



Motor Protection Switches

Maximum protection,
maximum performance...





VMP2 Series

- Overload and short-circuit protection
- Thermal Adjustment field between 0.16-80A
- Sensitive protection against phase loss
- Easy and safe mounting to 35 mm DIN rail
- Great variety of easily mountable accessories
- Protection of electric motors up to 15kW (380/400V)
- High disconnecting capacity 15kA ~ 100 kA (400V/AC)
- ★ Fast connection

Motor Protection Switches

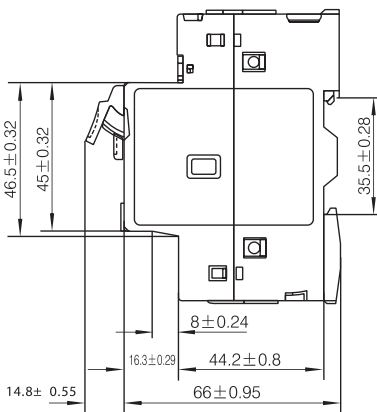
VMP2 Series



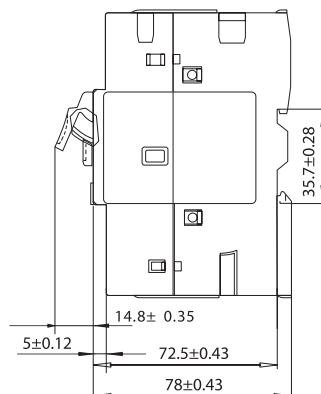
Technical Information

Model	VMP2
Protection	Thermal - Magnetic
Standard	TS EN 60947-4-1
Thermal Adjustment Field	0.1-0.16; 0.16-0.25; 0.25...0.40; 0.40...0.63; 0.63...1.00; 1.00...1.60; 1.60...2.50; 2.50...4.00; 4.00...6.30; 6.30...10.0; 9.00...14.0; 13.0...18.0; 17.0...23.0; 20.0...25.0; 25.0...32.0; 25.0...40.0; 40.0...63.0; 56.0...80.0
Rated Service Voltage (Ue)	690 V / AC
Thermal Tripping Current Range in case of Overcurrent (I)	$1.05 I_r < I \leq 1.2 I_r$: Adjustable Current Value
Magnetic Tripping & Closing	$11 I_n < I \leq 13 I_n \pm 20\%$ I_n : Maximum Value of Thermal Adjustment Field
Phase Loss Sensitivity	In conformity with IEC 60947-4-1
Mechanical Endurance	Switchable 100,000 times
Electrical Endurance	Switchable 100,000 times
Operating Temperature	-5 ~ +40 °C
Storage Temperature	-25 ~ +70 °C
Protection Class	IP20
Degree of Contamination	III / 3
Vibration Resistance (as per IEC 68-2-6)	5g (5 to 150 Hz)
Rated Insulation Voltage (Ui)	690 V
Impact Resistance Voltage (Uimp)	6kV
Trip Position (according to IEC/EN 60947-4-1)	10
Connection Section	Hard drawn conductor 0.75...10 mm ² - Flexible conductor 0.75...6 mm ²
Category of Use (according to IEC/EN 60947-4-1)	AC - 3
Category of Use (according to IEC/EN 60947-2)	A
Power Consumption (P)	2 - 2.5 W

Dimensions (mm)

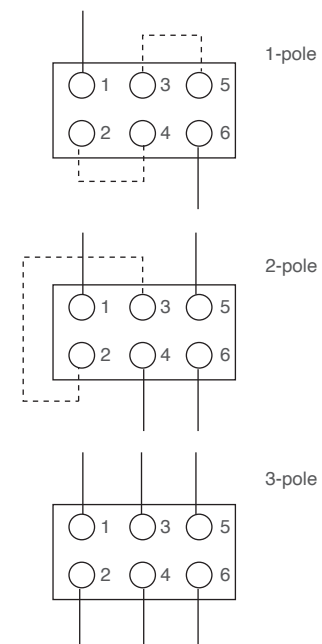


*Dimension information of motor protection switches from VMP2-0.16 to VMP2-32



*Dimension information of motor protection switch from VMP2-40 to VMP2-80

Connection Diagram



Accessories



Auxiliary Contact		
Contact	Mounting	Ref. No
1NO + 1NC	Near	VMPA-AU2/11N
2NO	Near	VMPA-AU2/20N
2NC	Near	VMPA-AU2/02N
1NO	Near	VMPA-AU2/10N
1NO+1NC	Near	VMPA-AN2/11N*
2NO	Near	VMPA-AN2/20N*
2NC	Near	VMPA-AN2/02N*
1NO	On top	VMPA-AU2/10
1NC	On top	VMPA-AU2/01

* VMPA-AN2/11N, VMPA-AN2/02N, VMPA-AN2/20N can be used for VMP2-40, VMP2-63 and VMP2-80

Alarm Contact		
Contact	Mounting	Ref. No
1NO	On top	VMPA-W2/10
1NC	On top	VMPA-W2/01
1NO + 1NC	On top	VMPA-W2/11

Enclosure Box Set (IP 55)	
Enclosure Box Set (IP 55)	VMPA-PB2/E
• Enclosure Box	
• Front Face Protection Frame	
• Padlock	
• Neutral Connection Wire	

Enclosure Box Set (with Emergency Button)	
Enclosure Box Set (with Emergency Button)	VMPA-PB2/B
• Enclosure Box	
• Front Face Protection Frame	
• Padlock	
• Neutral Connection Wire	
• Emergency Button	

Operating Voltage (V)	Ref. No
Shunt Trip Release	
220/240	VMPA-SR2S
Under Voltage Release	
220/240	VMPA-UVR2S

Selection Table

Reference	Thermal Adjustment Field	Short Circuit Breaking Capacity Icu(kA)			Service Short Circuit Breaking Capacity Ics(kA)			Power of Motor (kW) 3 Phase		
		230/240V	400/415V	660/690V	230/240V	400/415V	660/690V	230/240V	400/415V	660/690V
VMP2-0.16	0.1-0.16	100	100	100	100	100	100	-	-	-
VMP2-0.25	0.16-0.25	100	100	100	100	100	100	-	-	-
VMP2-0.40	0.25...0.40	100	100	100	100	100	100	-	-	-
VMP2-0.63	0.40...0.63	100	100	100	100	100	100	-	-	0,37
VMP2-1	0.63...1.00	100	100	100	100	100	100	-	-	0.55
VMP2-1.6	1.00...1.60	100	100	100	100	100	100	-	-	1.1
VMP2-2.5	1.60...2.50	100	100	3	100	100	2.25	0.37	0.75	1.5
VMP2-4	2.50...4.00	100	100	3	100	100	2.25	0.75	1.5	3
VMP2-6.3	4.00...6.30	100	100	3	100	100	2.25	1.1	2.2	4
VMP2-10	6.00...10.0	100	100	3	100	100	2.25	2.2	4	7.5
VMP2-14	9.00...14.0	100	15	3	100	7.5	2.25	3	5.5	9
VMP2-18	13.0...18.0	100	15	3	100	7.5	2.25	4	9	11
VMP2-23	17.0...23.0	100	15	3	50	6	2.25	5.5	11	15
VMP2-25	20.0...25.0	50	15	3	50	6	2.25	5.5	11	18.2
VMP2-32	24.0...32.0	50	15	3	50	6	2.25	7.5	12.5	22
VMP2-40	25.0...40.0	-	15	-	-	7.5	-	11	22	-
VMP2-63	40.0...63.0	-	15	-	-	7.5	-	15	33	-
VMP2-80	56.0...80.0	-	15	-	-	7.5	-	22	45	-