



VARIOTEST



ROTATEST



CSG420

## Test devices

- VARIOTEST** The Condor-VARIOTEST is a universal test instrument featuring acoustic signals for:
- ROTATEST** The Condor-ROTATEST is a Phase-sequence indicator with optical display
- CSG420** The Condor-CSG420 is an adjustable sensor simulator 4-20 mA

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## Industries

- Testing technology
- Testing technology
- Testing technology



Multifunctions timer relay FMF



Multifunction timer relais IMF

## Multifunction timer relay

- FMF** Multifunction timer relay in compact industrial standard casing  
8 switchable time ranges  
universal current
- IMF** Multifunction timer relay featuring installation type dimensions  
4 switchable time ranges  
universal current

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## Industries

- Controls
- Controls

## VARIOTEST



The Condor-Variotest is a universal test instrument featuring acoustic signals for:

Continuity and/or resistance testing up to 20 kΩ



Direct and alternating voltage checking up to 500 V



Polarity test for D.C. from 6 V to 500 V



Phase checking (outer conductor) Mp conductor and protective conductor



Checking function of RCCB's with IΔN max. 30 mA



Semi-conductor testing

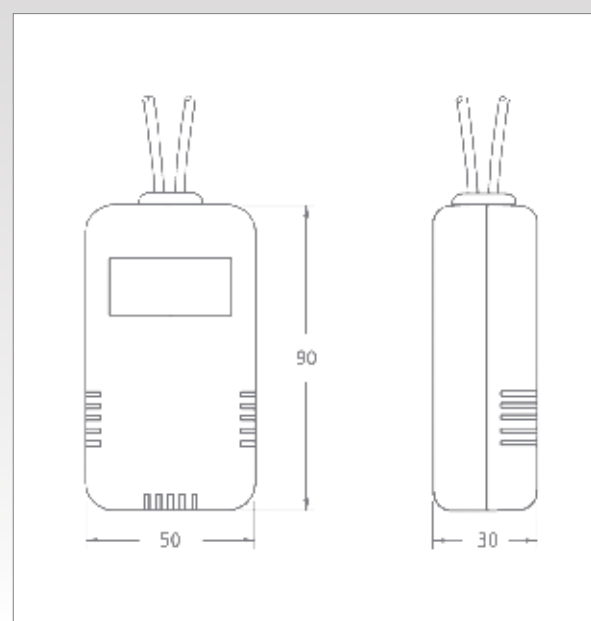
The Condor-VARIOTEST

- is protected against external voltages up to 500 V and limits the current input to max. 4 mA. Destruction as a result of incorrect handling is practically impossible.
- distinguishes between D.C. and A.C. voltages or a resistance value by sound pitch and frequency change respectively.
- is equipped with an ON-OFF switch.
- is supplied with the battery inserted and is ready for immediate use.
- Measuring probes and leads acc. to IEC 1010 Part 2-031.

Order reference	Packing (units)	Weight (in g)	Part No.
VARIOTEST	1	115	260301

## Technical Data / Dimensions

Technical Data Variotest	
Test range	0 – 20 kΩ 0 – 500 V
Audio frequency	up to 20 kHz
Leads	80 cm
Measuring probes	crush proof
Protection	protective double insulation
Clearance and creepage distances	acc. to VDE 0110
Power supply	Battery 9 V Block
Included in the scope of supply	IEC 6F22



## ROTATEST



The Condor-Rotatest indicates the phase sequence in a three-phase mains circuit and thus the direction of rotation for electromotive appliances.

The additional phase monitoring glow lamps also indicate whether all the outer conductors are live and ensure that the neutral and outer conductors have not been interchanged.

VDE 0100 stipulates:

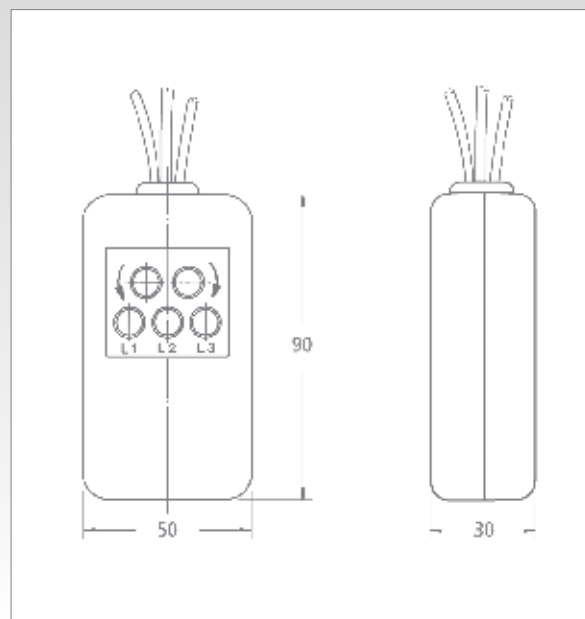
Three-phase sockets shall be connected in such a manner that a rotation field to the right is reached when looking at the front of the sockets clockwise.

Measuring probes and leads acc. to IEC 1010 Part 2-031.

Order reference	Packing (units)	Weight (in g)	Part No.
ROTATEST	1	195	260318

## Technical Data / Dimensions

Technical Data Rotatest	
Voltage range	250 V up to max. 650 V
Current consumption at 380 V	5 mA
Duty factor ED at 380 V	100 %
Leads	80 cm
Measuring probes	crush proof
Clearance and creepage distances	acc. to VDE 0110





## CSG420

The sensor simulator Condor-CSG420 is used to simulate a level sensor (4 – 20 mA) on an electronic control unit

### Functions:

Adjustable DC current 4 – 20 mA  
Measurement of the terminal voltage

### Features

LCD – Display  
Functions selector switch  
Potentiometer for current adjustment

### Applications

- Commissioning
- Repairs
- Trouble shooting

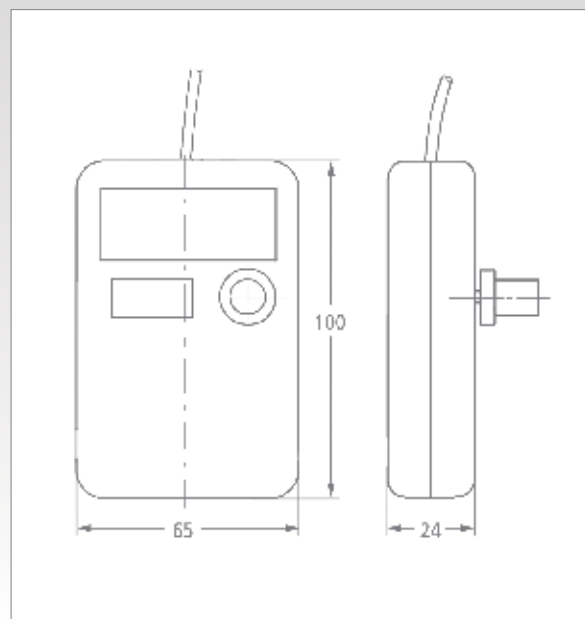
Operational after aiming of the supply-tension.



Order reference	Packing (units)	Weight (in g)	Part No.
CSG420	1	220	249634

## Technical Data / Dimensions

Technical Data CSG420	
Adjustable current range	3,5 mA up to 25,5 mA
Terminal voltage measuring range	8,5V up to 32 V
Display accuracy	2 % v. E. ± 1 Digit
Leads	ca. 100 cm
Clearance and creepage distances	acc. to VDE 0110
Power supply Included in the scope of supply	Battery 9 V Block IEC 6F22



## Multifunction timer relay FMF



- Multifunction relay in compact industrial standard casing
- 8 selectable time ranges
- Universal current
- 2 SPDT's
- Remote-control terminal
- Voltage activation

The multifunction timer relay FMF is specifically designed for rough industrial environments. All inputs and outputs are both interference free and non-destructive at voltage surges of up to 2 kV. Contact activation may be carried out not only by conventional means such as an isolated contact (between A1 and B1) but also by applying the operating voltage to B1. This helps to reduce wiring and contact requirements of the control and prevents destruction of the devices due to faulty wiring.

Adjustable functions:

- delay on make
- delay on break
- on-delay single shot
- flashing

Remote control:

A remote control can be realized with 2 wires connected to the terminals Z1 / Z2 and a 100 kΩ potentiometer, whereby the FMF potentiometer must be set to 0.

Order reference	Time	Operating voltage $U_B$ (V-AC/DC)	SPDT's	Part No.
FMF	0,1 s – ca. 7 h	22,5 – 240	2	230403

## Technical Data

Technical Data FMF	
Permissible operating voltage range	± 10%
Operating voltage influence at ± 10% operating voltage fluctuation	< 0,5 %
Duty factor ED	100%
Permissible ambient and media temperature	- 20°C up to +60°C
Permissible ambient humidity rel. humidity, non-condensing	10% up to 90%
Permissible storage temperature	- 40°C up to +80°C
Clearance and creepage distances	VDE 0110
Working position	any position
Power consumption	max. 2 VA

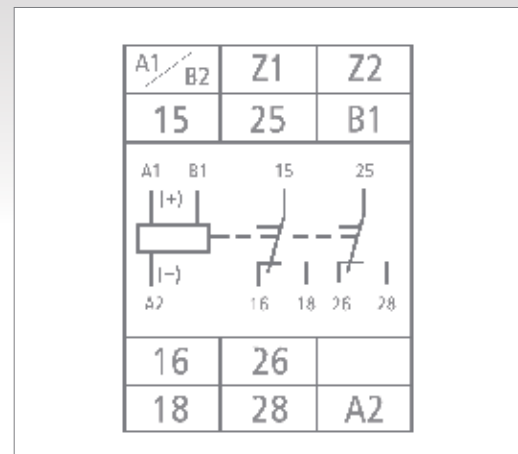
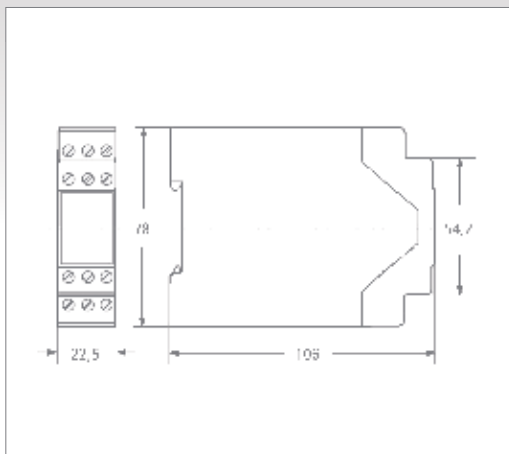
Output contacts FMF	
Series voltage acc. to VDE 0660 and VDE 0110 Group C	250 V-AC
Maximum continuous current 1-change-over, 2-change-over	6 A-AC
Maximum switching capacity per contact	1.500 VA (AC) 50 W (DC)
Mechanical life Cycles	approx. $1 \times 10^7$
Electrical life (max. load) Cycles	approx. $2 \times 10^5$
Resistance of remote-control Standard	100 kΩ

Enclosure data	
Material	ABS flameproof, UL-approved
Mounting	snap on 35 mm DIN-rail connector acc. to EN 50 035
Enclosure-protection	IP 40
Protection against shock	acc. VBG 4
Terminals	Screw terminals with self-lifting clamps
Cross-section	2 x 1,5 mm <sup>2</sup>
Weight	200 g

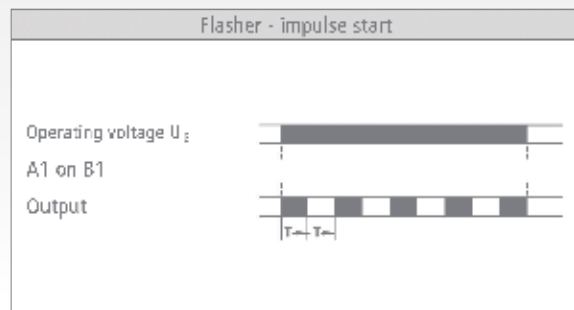
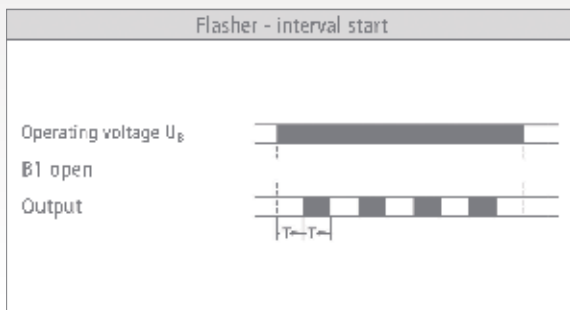
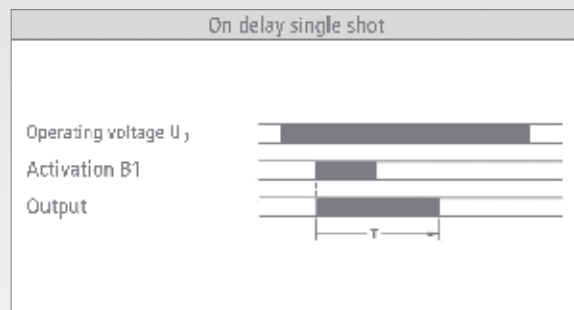
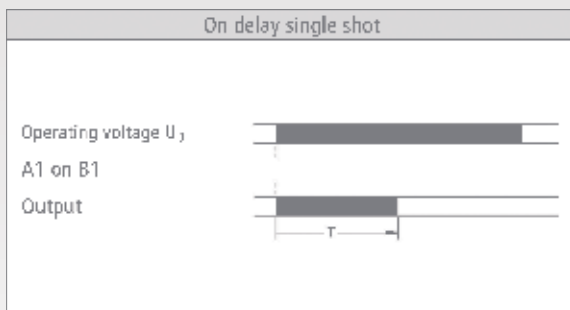
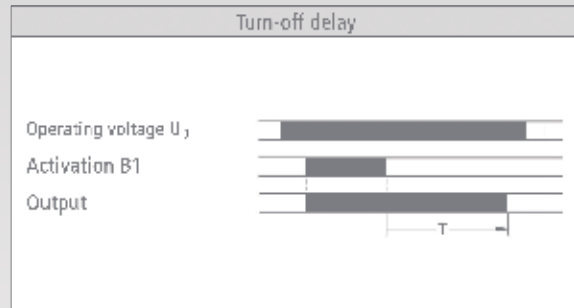
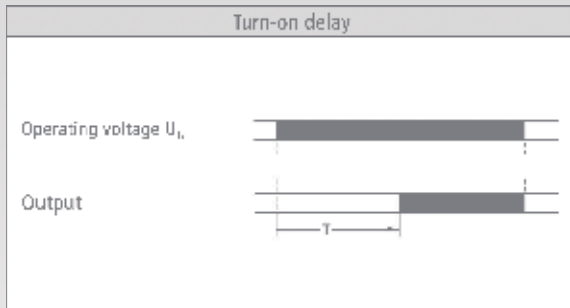
General data	
Tolerance range	± 10%
Repeatability	± 0,5 %
Temperature range	approx. 0,2 % / °C
Recovery time	< 100 ms

Time ranges	
Initial value	End value
0,05 s	1 s
0,2 s	4 s
1,6 s	32 s
12,5 s	250 s
5 s	100 s
20 s	400s
160 s ( ca. 2,7 min)	3200 s (ca. 53 min)
1250 s ( ca. 21 min)	25000 s (ca. 417 min)

## Dimensions- / Circuit Diagram FMF



## Functional Overview FMF





## Multifunction timer relay IMF

- Multifunction relay featuring installation type dimensions
- 4 selectable time ranges
- Universal current
- 1 SPDT
- Contact activation



The multifunction timer relay IMF is specifically designed for rough industrial environments. All inputs and outputs are both interference free and non-destructive at voltage surges of up to 2.000 V. Contact activation may be carried out not only by conventional means such as a voltage-free contact (between A1 and B1), but also by applying the operating voltage to B1. This helps to reduce wiring and contact requirements of the control and prevents destruction of the devices due to faulty wiring.

### Adjustable functions:

- delay on make
- delay on break
- on-delay single shot
- flashing

Order reference	Time	Operating voltage $U_B$ (V-AC/DC)	SPDT's	Part No.
IMF	0,6 s – 60 min	12 – 240 $\pm$ 10 %	1	230410

## Technical Data

Technical Data IMF	
Permissible operating voltage range	$\pm$ 10%
Operating voltage influence at $\pm$ 10% operating voltage fluctuation	< 0,5 %
Duty factor ED	100%
Permissible ambient and media temperature	- 20°C up to +60°C
Permissible ambient humidity rel. humidity, non-condensing	10% up to 90%
Permissible storage temperature	- 40°C up to +80°C
Clearance and creepage distances	VDE 0110
Working position	any position
Power consumption	max. 2 VA

Output contacts IMF	
Series voltage acc. to VDE 0660 and VDE 0110 Group C	250 V-AC
Maximum continuous current 1-change-over, 2-change-over	6 A-AC
Maximum switching capacity per contact	1.500 VA (AC) 50 W (DC)
Mechanical life Cycles	approx. $1 \times 10^7$
Electrical life (max. load) Cycles	approx. $2 \times 10^5$

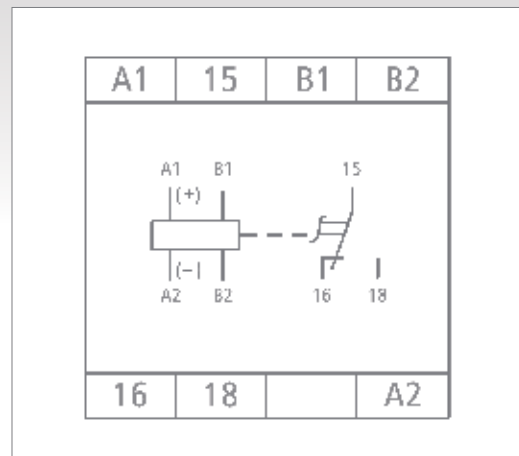
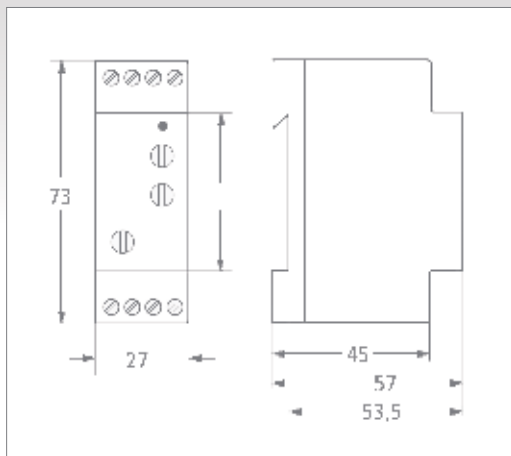
# Multifunction timer relay IMF

Enclosure data	
Material	ABS flameproof, UL-approved
Mounting	snap on 35 mm DIN-rail connector acc. to EN 50 035
Enclosure-protection	IP 40
Protection against shock	approx VBG 4
Terminals	elevator clamp
Cross-section	2,5 mm <sup>2</sup>
Weight	75 g

General data	
Tolerance range	± 10%
Repeatability	± 0,5 %
Temperature range	ca. 0,2 % / °C
Recovery time	< 100 ms

Time ranges	
Initial value	End value
0,6 s	6 s
6 s	60 s
0,6 min	6 min
6 min	60 min

## Dimensions- / Circuit Diagram IMF



## Functional Overview IMF

