



VEO

TIME RELAY / STAR-DELTA-TIMER

V2ZS20 12-240V AC/DC

Art.Nr.: 125300

V2ZS20P 12-240V AC/DC

Art.Nr.: 125310



- ✓ 4 time ranges
- ✓ 4 transition times
- ✓ Supply voltage 12-240V AC/DC
- ✓ 2 normally open contacts
- ✓ Width 22,5 mm

Control elements

- ✓ Fine adjustment star contactor
- ✓ Setting of time range star contactor
- ✓ Transit time

Status indication

- ✓ LED U/t: Time lapse star / delta contactor
- ✓ LED R: Relay status



TECHNICAL DATA

SUPPLY CIRCUIT

Terminals	A1-A2	
Supply voltage	12 ... 240 V AC/DC	
Supply voltage tolerance	-10 / +10 %	
Rated frequency	50 / 60 Hz or DC	
Rated frequency tolerance	48 ... 63 Hz	
Rated consumption	230 V AC	typ. 0,3 W / 0,5 VA
	24 V DC	typ. 0,18 W / 0,2 VA
Duty-cycle	100%	
Backup power time	< 30 ms	
Recovery time	> 200 ms	
Drop-out voltage	≥ 7 V	

TIMING CIRCUIT

Time ranges	4	0,5 ... 10 s
		1,5 ... 30 s
		3 ... 60 s
		9 ... 180 s
	4	40 ms
		60 ms
		80 ms
		100 ms



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RANGE OF FUNCTIONS

Functions	1	S
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STATUS INDICATION

Supply voltage / time lapse	LED U/t (green) flashes	star contactor is active
	LED U/t (green) on	delta contactor is active
Relay status	LED R (yellow) on	star contactor is active

OUTPUT CIRCUIT

Terminals		17-18-28
Kind of output		Relay
Number of contacts	normally open contact	2
Contact material		AgNi
Rated voltage (IEC 60947-5-1)		250 V
Maximum switching voltage		277 V AC
Minimum switching voltage / switching current		12 V / 10 mA
Rated current (IEC 60947-5-1)	AC-1	3 A / 250 V
	AC-15	0,75 A / 240 V (C300)
	DC-12	5 A / 24 V
	DC-13	0,1 A / 250 V
Endurance	mechanical	20 x 10 ⁶ switching cycles
	electrical (AC-1)	100 x 10 ³ switching cycles
Rated frequency of operation	with load	6/min
	without load	1200/min

ACCURACY

Base accuracy	< 1 % (of full scale)
Setting accuracy	< 5 % (of full scale)
Repeat accuracy	< 0,5 % or ±5 ms
Temperature influence	< 0,01 % / °C
Voltage influence	-
Frequency influence	-



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ENVIRONMENTAL CONDITIONS

Ambient temperature	operation	-25 ... +60 °C
	storage	-40 ... +70 °C
Relative humidity		5 ... 95 %
Vibration	EN 61812-1	10 ... 60 Hz: 0,15 mm; 60 ... 150 Hz: 20 m/s ²
	EN 60947-1	2 ... 13,2 Hz: 1 mm; 13,2 ... 100 Hz: 7 m/s ²
Shock	EN 60947-1	±150 m/s ² 11 ms

GENERAL DATA

Dimensions	W × H × D	22,5 × 67 × 76 mm
Mounting		DIN rail (EN60715)
Mounting position		any
Housing material		PA 66, self-extinguishing plastic, class V-0
Degree of protection	housing	IP40
	terminals	IP20
Electrical connection	V2ZS20	Screw terminal
Wire size	flexible with wire end ferrule	0,5 ... 2,5 mm ² (20 AWG ... 13 AWG)
	flexible without wire end ferrule	0,5 ... 4 mm ² (20 AWG ... 12 AWG)
	rigid	0,5 ... 4 mm ² (20 AWG ... 12 AWG)
Stripping length		8 mm
Tightening torque		max. 1Nm
Electrical connection	V2ZS20P	Push-in terminal
Wire size	flexible with wire end ferrule	0,25 ... 1,5 mm ² (24 AWG ... 16 AWG)
	flexible with plastic ferrule	0,25 ... 0,75 mm ² (24 AWG ... 19 AWG)
	flexible without wire end ferrule	0,2 ... 1,5 mm ² (24 AWG ... 16 AWG)
	rigid	0,2 ... 1,5 mm ² (24 AWG ... 16 AWG)
Stripping length		8 mm
Prospective current value		1000 A _{eff}
Fuse rating		5A fast acting
MTTF		-
Weight		82 g

ISOLATION DATA

Pollution degree (IEC 61812-1)		2
Overvoltage category (IEC 61812-1)		III



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ISOLATION DATA

Rated insulation voltage (IEC 61812-1)	supply circuit / output circuit	300 V
Rated impulse withstanding voltage (IEC 61812-1)	supply circuit / output circuit	4 kV
Insulation test voltage (IEC 61812-1)	supply circuit / output circuit	1600 V
Insulation	supply circuit / output circuit	protective separation

STANDARDS

Product standard	IEC 61812-1	
Interference immunity	IEC 61812-1	class A
Interference emmision	IEC 61812-1	class A
Approvals		



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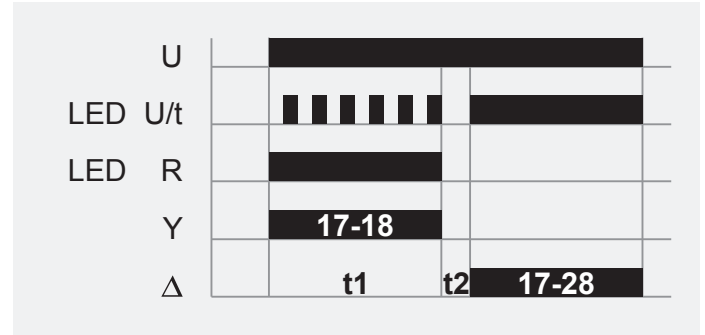
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FUNCTIONS

Star-Delta start-up (S)

When the supply voltage U is applied, the star-contact switches into onposition (yellow LED illuminated) and the set star-time t1 begins (green LED flashing). After the interval t1 has expired (green LED illuminated) the star-contact switches into off-position (yellow LED not illuminated) and the set transit-time t2 begins. After the interval t2 has expired the delta-contact switches into on-position. To restart the function the supply voltage must be interrupted and re-applied.





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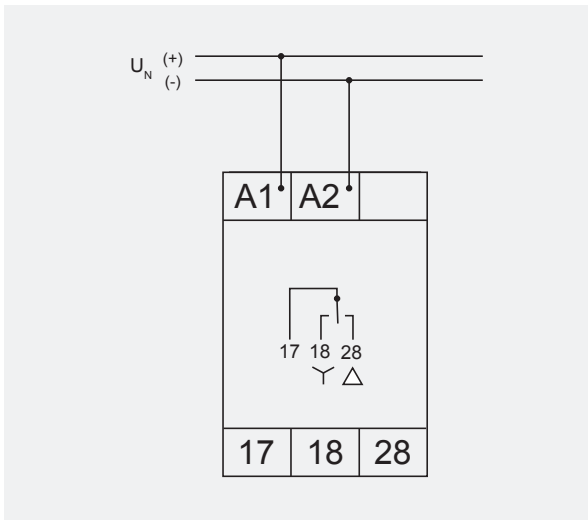
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CONNECTIONS





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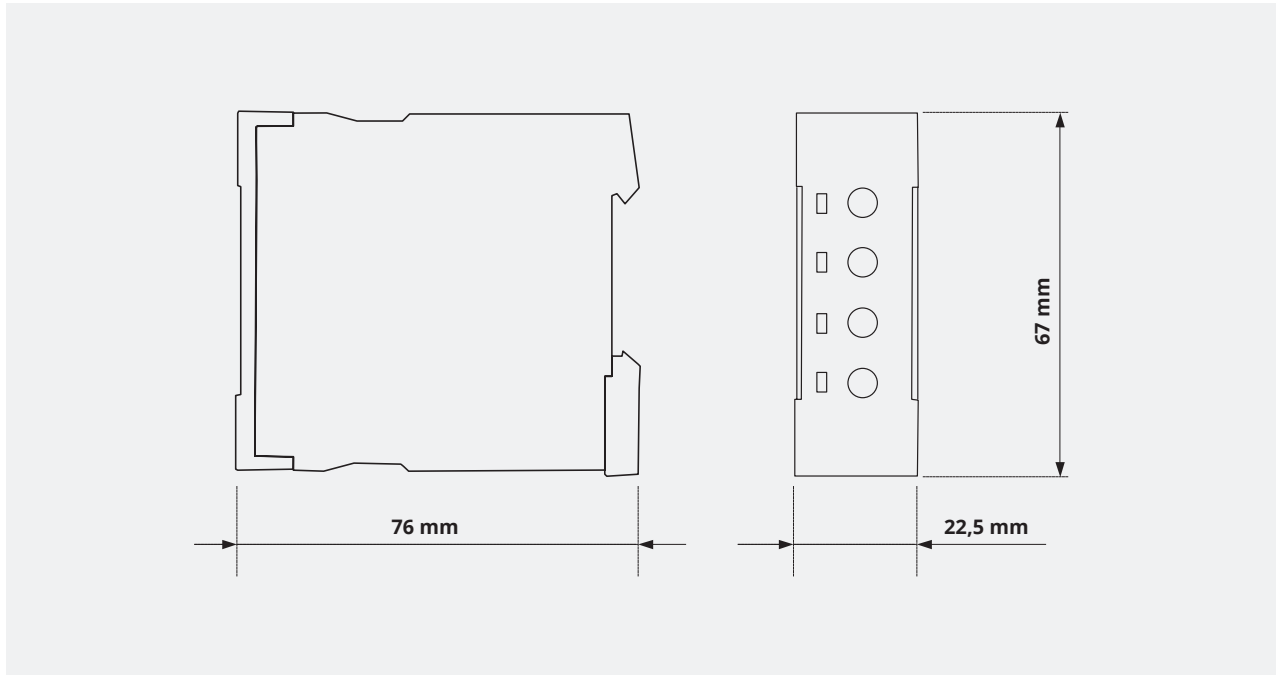
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DIMENSIONS



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