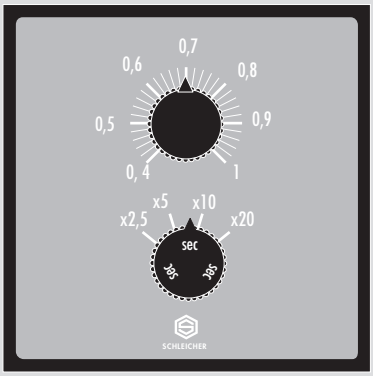
Electronic Interval ON Time Relays

DSYR 32 L, DSYR 42 L for single voltage

Function: interval ON (EW) for burning control system with TÜV Test Certificate
1 setting range, divided into 4 time ranges
Contact equipment: DSYR 32 L = 1 changeover for safety time and 1 changeover
DSYR 42 L = 1 changeover for safety time and 1 changeover

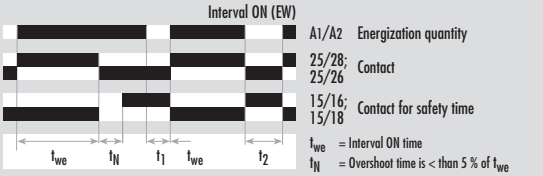
DSYR 32 L, ... 72 x 72



Function Diagram

FD 0063

DSYR 32 L, ...

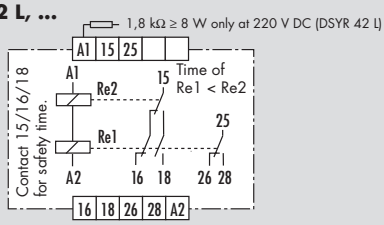


t_{we} = Interval ON time
t_N = Overshoot time is < than 5 % of t_{we}
t_1 = Break time must be > than recovery time 1
t_2 = Break time must be > than recovery time 2

Connection Diagram

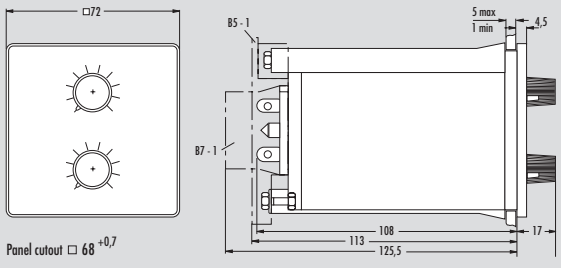
KS 0091/2

DSYR 32 L, ...



Dimensions

D 1-16



Function

Upon energization, the output contacts switch into their operating position. At the end of the selected time delay or in case of voltage interruption before the time has elapsed, the output contacts switch back into their off position.

The electronic time relays contain two different time circuits. Each of them has a relay that is switched according to VDE 0435 norm. The contact used for the safety time with the terminals 15/16/18 results from the internal serial connection of the switched contacts belonging to both relays. It is granted that in case of interruption of one of both time circuits, there is no parallel operation of both relays and that terminals 16 or 18 will not be triggered. This condition complies with the requirements of the TÜV according to the Vd TÜV Direction Sheet No.452.

Time setting: A step switch divides the interval time from 1 to 20s into 4 time ranges (see: Item Description). Infinitely variable time setting within a range is carried out with the aid of the potentiometer. The maximum operating time of the setting range results from the scala value multiplied by the corresponding factor of the preselected time range.

Note

- With a rated voltage of 220 V DC, an external series resistance of 1,8 kΩ ≥ 8 W has to be connected to the relay.
- According to the TÜV demands, the technical relay internal structure guarantees to shorten the selected interval time in case of failure.

Product Description

The electronic interval ON time relays DSYR ... are available with one setting range, divided into 4 time ranges.

Setting Range	Time Range
1 s to 20 s divided into 4 times:	1 to 2,5 s 2 to 5 s 4 to 10 s 8 to 20 s

Type	Standard Voltage	Price Code
DSYR 32 L 20 s	230 V AC 50 to 60 Hz	**D 3/77.1**
DSYR 42 L 20 s	48 V DC 110 V DC 220 V DC	**D 3/77.2**

Accessories

Socket connector	B 5	for panel and surface mounting
Pin holder	B 7	for panel mounting
Adaptor	BT 421	for DIN-rail mounting of the socket connector B 5
Cover	DA 1	for panel cutout
Lockable cover	V 4	
Seal	Z 1	for panel mounting

Price code for accessories (see page D 3/79).

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TECHNICAL DATA

		DSYR 32 L	DSYR 42 L
FUNCTION according to DIN VDE 0435 Part 110:04.89		Electronic interval ON time relay for single voltage	Electronic interval ON time relay for single voltage
	Point 3.9	Interval ON time relay, acc. to VdTÜV-Direction Sheet No. 452 tested for safety time	Interval ON time relay, acc. to VdTÜV-Direction Sheet No. 452 tested for safety time
Function display		–	–
Function diagram		FD 0063	FD 0063
POWER SUPPLY			
Rated voltage U_N	V AC	**230**	
Rated voltage U_N	V DC		**48** | **110** | **220**
Rated consumption at 50 Hz and U_N (AC)	VA	8,5	
Rated consumption at 50 Hz and U_N (AC)	W	3,5	
Rated consumption at U_N (DC)	W		2,8 | 5,3 | 9,7*
Starting current inrush	A/ms	--	– *with ext. series-resistance
Rated frequency	Hz	50 to 60	– 1,8 kΩ ≥ 8 W
Operating voltage range		0,8 to 1,1 x U_N	0,8 to 1,1 x U_N
TIME CIRCUIT			
Time setting/Number of time ranges		analog/4	analog/4
Setting range		divided into:	divided into:
	s	1 to 2,5; 2 to 5;	1 to 2,5; 2 to 5;
	s	4 to 10; 8 to 20	4 to 10; 8 to 20
Recovery time 1/2	s	ca. 10/ca. 10	ca. 10/ca. 10
Minimum switch-ON time	ms	–	–
Release value	% U_N	–	–
Permissible parallel load		yes	yes
Internal rectifier		no	no
Average of the error		–	–
Dispersion	% + ± 10 ms	≤ ± 1	≤ ± 1
Influence of the energizing quantity or supply voltage	%/% Δ U_N	≤ 0,1	≤ 0,1
Influence of the ambient temperature	%/K	≤ 0,15	≤ 0,15
OUTPUT CIRCUIT			
Contact equipment		2 changeover	2 changeover
Contact material		Ag Cu	Ag Cu
Switching voltage U_n	V AC/DC	250/300	250/300
Maximum continuous current I_n	A	5	5
Application category according to EN 60947-5-1:1991		AC-15 U_e 230 V AC, I_e 2 A DC-13 U_e 24 V DC, I_e 2 A	AC-15 U_e 230 V AC, I_e 2 A DC-13 U_e 24 V DC, I_e 2 A
Permissible switching frequency	switching cycles/h	6000	6000
Mechanical service life	switching cycles	30×10^6	30×10^6
Response time	ms	ca. 70	ca. 70
Release time	ms	–	–
GENERAL DATA			
Creepage and clearance distances between circuits according to DIN VDE 0110-1:04.97: rated surge voltage	kV	4	4
Over voltage category		III	III
Contamination level		3 outside, 2 inside	3 outside, 2 inside
Design voltage	V AC	250	250
Test voltage U_{eff} 50 Hz acc. to DIN VDE 0110-1, Table A.1	kV	2,21	2,21
Protection class: Housing front panel/housing rear panel/flat pin terminal		IP 50/IP 20/IP 00	IP 50/IP 20/IP 00
Radiated noise		EN 50081-1:03.93, -2:03.94	EN 50081-1:03.93, -2:03.94
Noise immunity		EN 50082-2:1995	EN 50082-2:1995
Ambient temperature, working range	°C	-20 to + 60	-20 to + 60
Dimensions		D 1-16	D 1-16
Connection diagram		KS 0091/2	KS 0091/2
Weight	kg	0,45	0,45
Accessories		cover DA 1, lockable cover V 4, seal Z 1, socket connector B 5, pin holder B 7, adaptor BT 421	cover DA 1, lockable cover V 4, seal Z 1, socket connector B 5, pin holder B 7, adaptor BT 421
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GENERAL TECHNICAL SPECIFICATIONS		page i.5	page i.5