

## DIL ET, ETR 4 Timing Relays

## Technical Data

				DIL ET-A	ETR 4-A	
<b>General</b>						
Standards				CSA, UL, IEC/EN 60 255, VDE 0435, IEC/EN 60 947, CE		
Mechanical lifespan						
AC operated	operations	$\times 10^6$		30	30	
DC operated	operations	$\times 10^6$		30	30	
Climatic proofing				Damp heat, constant, to IEC 60 068-2-3 Damp heat, cyclical, to IEC 60 068-2-30		
Ambient temperature						
open	min./max.	°C		-20/+60	-25/+60	
enclosed	min./max.	°C		-20/+45	-20/+45	
Mounting position				as required	as required	
Mechanical shock resistance (sinusoidal shock 20 ms)		N.O. contact	g	4	4	
Degree of protection		terminals		IP 20	IP 20	
Dimensions				→ page 02/060	→ page 02/059	
Weight			kg	0.09	0.1	
Terminal capacity			AWG	14 ... 18	14 ... 18	
<b>Contacts, IEC Data (EN 60 947)</b>						
Rated impulse withstand voltage $U_{imp}$			V AC	6000	6000	
Overvoltage category / pollution degree				III/2	III/3	
Rated insulation voltage $U_i$			V AC	600	600	
Rated operational voltage $U_e$			V AC	440	440	
Safe isolation to IEC 536 between coil and auxiliary contacts, and between the auxiliary contacts				V AC	250	250
Making capacity						
AC-14	$\cos \varphi = 0,3$	440 V	A	48	48	
AC-15	$\cos \varphi = 0,3$	220 V	A	50	50	
DC-11	$L/R \leq 40$ ms		$\times I_e$	1.1	1.1	
Breaking capacity						
AC-14	$\cos \varphi = 0,3$	440 V	A	3	3	
AC-15	$\cos \varphi = 0,3$	220 V	A	3	3	
DC-11	$L/R \leq 40$ ms		$\times I_e$	1.1	1.1	
Rated operational current $I_e$						
AC-14		440 V	A	3	3	
AC-15		220 V	A	3	3	
DC-11 <sup>1)</sup> Above 110V and at $L/R > 15$ ms: it is essential that an arc-quenching device (RC suppressor) be used in parallel with the contacts. C: 1 $\mu$ F, R: 0,5 $\Omega$ in series						
$L/R \leq 15$ ms: e.g. contactor coils, solenoid valves, DC motors						
		24 V	A	1.5	1.5	
$L/R \leq 50$ ms:				A	1.2	1.2
Conventional free air thermal current $I_{th}$				A	6	6
Short-circuit rating <sup>2)</sup> without welding						
Maximum fuse			A gL/gG	6	6	
<b>Contacts, UL/CSA Data</b>						
Pilot duty				B 300	B 300	

## Notes

<sup>1)</sup> Making and breaking conditions to DC-11,  $L/R$  time constant as stated

<sup>2)</sup> When taken directly from mains or transformer > 1000 VA

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<b>Magnet system</b>					
Voltage tolerance					
AC operated 50/60 Hz					
	pick-up		→ page 02/015	→ page 02/017	
DC operated when taken directly from mains or transformer > 1000 VA					
	pick-up		→ page 02/015	→ page 02/017	
Power consumption					
AC operated 50/60 Hz					
	pull-in	VA	2	2	
	sealing	VA	2	2	
DC operated					
	pull-in	W	1,8	1,8	
	sealing	W	1,8	1,8	
Duty factor					
		% DF	100	100	
Max. operating frequency					
		Ops./h	4000	4000	
Min. command time AC/DC					
		ms	50/30	50/30	
Voltage variation					
		% $\Delta U$	0.01	0.01	
Variation due to temperature fluctuation based on 20 °C					
			0.025	0.025	
Repetition accuracy					
		%	0.1	0.1	
Recovery time (after 100% time delay)					
		ms	70	70	
Contact changeover time $t_u$					
		ms	–	4 (50) <sup>1)</sup>	

Notes

<sup>1)</sup> ETR 4-51