
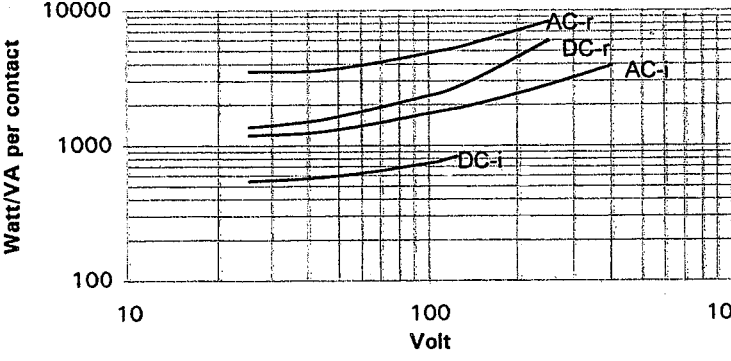


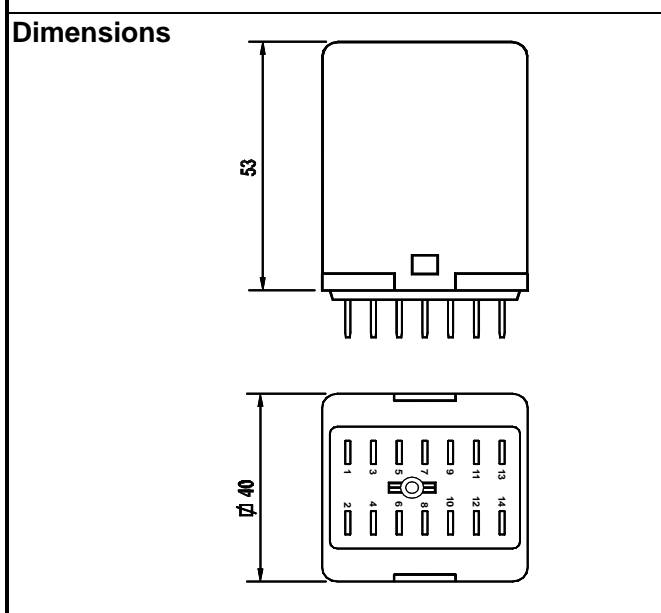
Datasheet															
Options for D relays	Brand name SMITT Country of Origin Holland														
Index:	<table border="0"> <tr><td>E</td><td>Gold plated contacts</td></tr> <tr><td>B</td><td>Magnetic arc blow-out</td></tr> <tr><td>T</td><td>Test button</td></tr> <tr><td>A</td><td>Trip indicator</td></tr> <tr><td>S</td><td>Position indicator</td></tr> <tr><td>R</td><td>Ultra rapid relay</td></tr> <tr><td>C</td><td>Low temperature</td></tr> </table>	E	Gold plated contacts	B	Magnetic arc blow-out	T	Test button	A	Trip indicator	S	Position indicator	R	Ultra rapid relay	C	Low temperature
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Po Box 7023 3502 KA Utrecht, Holland Tel: +31(0)30-2881311 Fax: +31(0)30-2898816															
Option	Gold plated contacts														
Type code	D-E														
Description															
Gold contacts ensure low contact resistance and good resistivity against corrosive atmosphere. Suitable for switching low level, dry circuit loads.															
Coil data	Dimensions														
As standard D relay	As standard D relay														
Contact data															
<table border="0"> <tr><td>Min. switching cap.</td><td>1 μA, 1 μV</td></tr> <tr><td>Max. switching cap.</td><td>60 V, 400 mA</td></tr> </table> At higher rating gold will evaporate, then standard contact rating is valid.		Min. switching cap.	1 μ A, 1 μ V	Max. switching cap.	60 V, 400 mA										
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Max. switching cap.	60 V, 400 mA														
Option	Magnetic arc blow-out														
Type code	D-B														
Description															
Magnetic arc blow-out ensures a high DC breaking capacity and long contact life.															
Coil Data	Dimensions														
As standard D relay	As standard D relay														
Contact data															
See hereunder and annex															
Contact data															
Max. Make Current	16 A														
Max. Cont. Current	10 A (AC1)														
Max. Switching Voltage	Isolation between open contacts														
DC	110 V, 7 A														
AC	440 V														
Min. Switching Voltage	12 V														
Max. Contact Resistance	15 m Ω														
Material	Ag														
Contactgap	0.8 mm														
Contactpressure	> 200 mN														
Maximum Switching Capacity															
 <table border="0" style="margin-left: 600px;"> <tr><td>— AC-r</td><td>: AC resistive</td></tr> <tr><td>— DC-r</td><td>: DC resistive, with arc blow out (max 250 V)</td></tr> <tr><td>— AC-i</td><td>: AC inductive (cosphi=0.7) or light bulbs</td></tr> <tr><td>— DC-i</td><td></td></tr> </table>		— AC-r	: AC resistive	— DC-r	: DC resistive, with arc blow out (max 250 V)	— AC-i	: AC inductive (cosphi=0.7) or light bulbs	— DC-i							
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— AC-i	: AC inductive (cosphi=0.7) or light bulbs														
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Option	Test button														
Type code	D-T														

Description			
D relay with push tot test button which mechanically operates the contacts			
Coil data As standard D relay		Dimensions As standard D relay	
		Contact data As standard D relay	
Option Trip indicator			
Type code		D-A	
Description			
D relay with trip indicator which indicates if the relay has been energized.			
Coil data As standard D relay		Dimensions As standard D relay	
		Contact data As standard D relay	
Option Position indicator			
Type code		D-S	
Description			
D relay with mechanical ON/OFF indicator. Indicates if the contacts are closed.			
Coil data As standard D relay		Dimensions As standard D relay	
		Contact data As standard D relay	
Option Ultra rapid relay			
Type code		D-R	
Description			
D relay with very short operating times. Especially suitable for energie controlling installations.			
Coil data			
Operating times at nominal voltage			
pull-in time	5 ms	release time	10 ms
bounce time NO contacts	6 ms	bounce time NC contacts	8 ms
Coil consumption on energizing hold-up	25 W/ VA 1 W/ VA		
Min. Hold-up voltage	DC: 0.1; AC: 0.3 at U_{nom}		
	Dimensions As standard D relay	Contact data Three CO contacts as standard.	
Option Low temperature			
Type code		D-C	
Description			
D relay with low temperature features.			
Low temperature	-40 °C		
Max. cont. Current	8 A (AC 1)		
Coil data As standard D relay		Dimensions As standard D relay	
		Contact data As standard D relay	

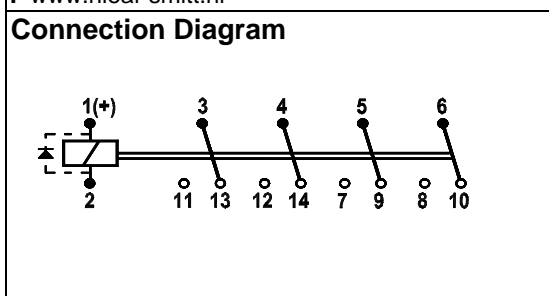
Datasheet INSTANTANEOUS RELAY

Product D relays

Country of Origin: The Netherlands



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Description

Plug-in relay with four change-over contacts.
 Equipped with LED indication and DC-types with back EMF protection.

Coil data

Operating times at nominal voltage					
Pull-in time	20 ms DC / 10ms AC		Release time	18 msDC/ 5msAC	
Bounce time NO contacts	4 ms		Bounce time NC contacts	8 ms	
Coil consumption	2 W/VA at U_{nom}		Inductance	Energized	11 ms
Min. Hold-up Voltage	DC 0.1 U_{nom}		L/R at U_{nom}	Released	8 ms
	AC 0.3 U_{nom}				

Nominal voltages DC

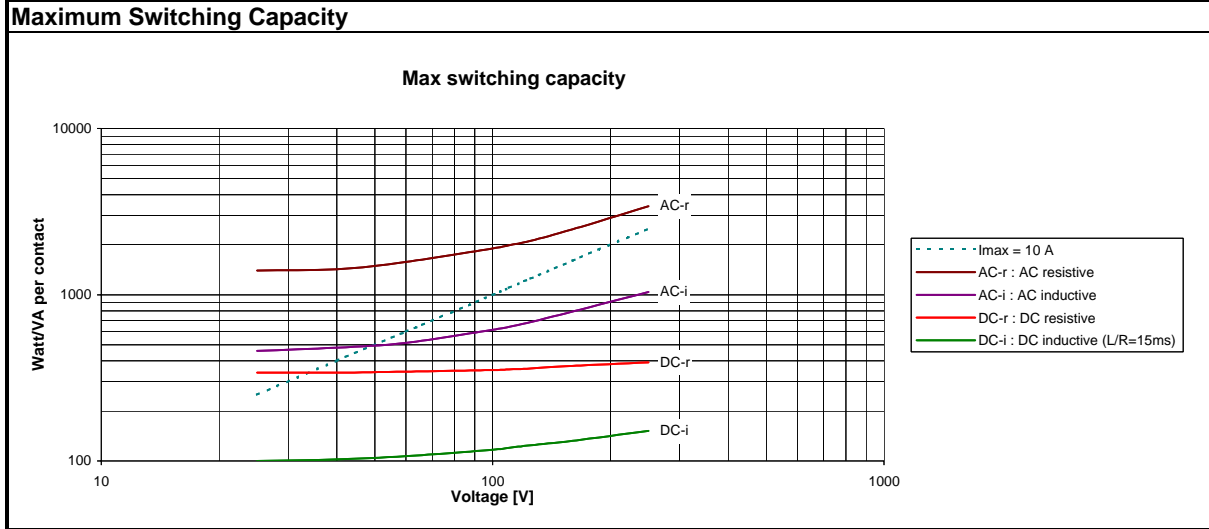
Type code	U_{nom}	$U_{pull\ in}$	$U_{hold\ up}$	$U_{max\ (40\ ^\circ C)}$	R_{coil}
D 12 VDC	12 V	9.6 V	1.2 V	13.2 V	72 Ω
D 24 VDC	24 V	19.2 V	2.4 V	26.4 V	290 Ω
D 48 VDC	48 V	38.4 V	4.8 V	52.8 V	1150 Ω
D 60 VDC	60 V	48.0 V	6.0 V	66.0 V	1840 Ω
D 110 VDC	110 V	88.0 V	11.0 V	121.0 V	6500 Ω
D 120/125 VDC	125 V	96.0 V	12	137.5 V	8400 Ω
D 220 VDC	220 V	176.0 V	22.0 V	242.0 V	25000 Ω

Nominal voltages AC 50 Hz

Type code	U_{nom}	$U_{pull\ in}$	$U_{hold\ up}$	$U_{max\ (40\ ^\circ C)}$	R_{coil}
D 12 V/ 50 Hz	12 V	9.6 V	3.6 V	13.2 V	10 Ω
D 24 V/ 50 Hz	24 V	19.2 V	7.2 V	26.4 V	44 Ω
D 42 V/ 50 Hz	42 V	33.6 V	12.6 V	46.2 V	133 Ω
D 115 V/50 Hz	115 V	92.0 V	34.5 V	126.5 V	1140 Ω
D 220 V/ 50 Hz	220 V	176.0 V	66.0 V	242.0 V	4400 Ω
D 230 V/ 50 Hz	230 V	184.0 V	69.0 V	259.0 V	4800 Ω
D 380 V/ 50 Hz	380 V	304.0 V	114.0 V	420.0 V	12500 Ω

Other voltages on request

Contact data			
Max. Make Current	16 A	Material	silver
Max. Cont. Current	10 A (AC1 ; IEC 60947)	Contactgap	0.7 mm
Max. Breaking Capacity		Insulation between open contacts	2.5 kV, 50 Hz, 1 min
	DC 110 V, 1 A AC 440 V	Contactforce	> 200 mN
Min. Switching Voltage	12 V, 10 mA		
Max. Contact Resistance	15 mΩ		



General Data			
Dielectric strength	Pole-Pole	IEC 60255-5	4 kV, 50 Hz, 1 min
	Cont-Coil		2.5 kV, 50 Hz, 1 min
Insulation Class		IEC 60255-5	serie C 380 V 50Hz/450 VDC
Pulse Withstanding		IEC 60255-5	5 kV (1.2/50 μs)
Vibration		IEC 60068-2-2	5 g at 50 Hz 2 g, 10-150 Hz
Shock		IEC 60068-2-2	15 g, 11 ms
Mechanical life			DC : 30*10 ⁶ ops AC : 10*10 ⁶
Max. Switching Frequency			1200 ops/h
Weight			125 g
Temperature	T _{amb,max}		+40 °C +55 °C, 1 cm detached Higher T on request
	T _{amb,min}		-25 °C
Humidity			90%, temporary permitted condensation
Protection			IP 40
Materials			Makrolon Polyester
Electronic Components			LED
			Back EMF protection diode (DC-types)