

## Miniature Power Relay N

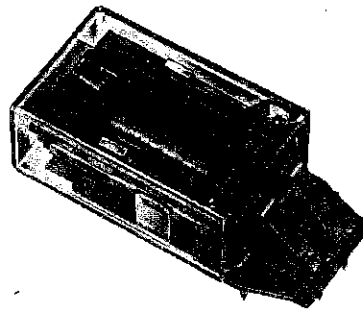
V23016-D0\*\*\*-A\*9\*

1 changeover or 1 twin make contact

Dust-protected

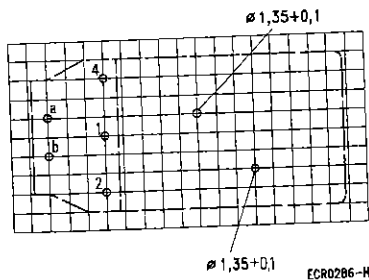
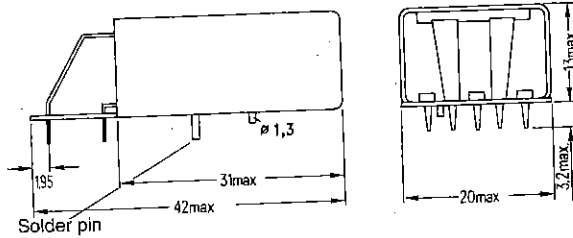
With additional solder pin  
for fixing

For printed circuit mounting,  
pin arrangement suits 2.5 mm grid  
in acc. with DIN 40801 and DIN 40803, fine



ECR0067-Y

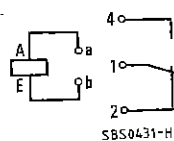
Illustration approx. original size  
Approx. weight 18 g



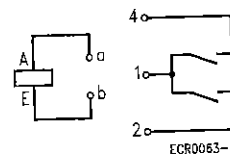
Mounting hole layout  
View onto the terminals

Base terminals

Changeover



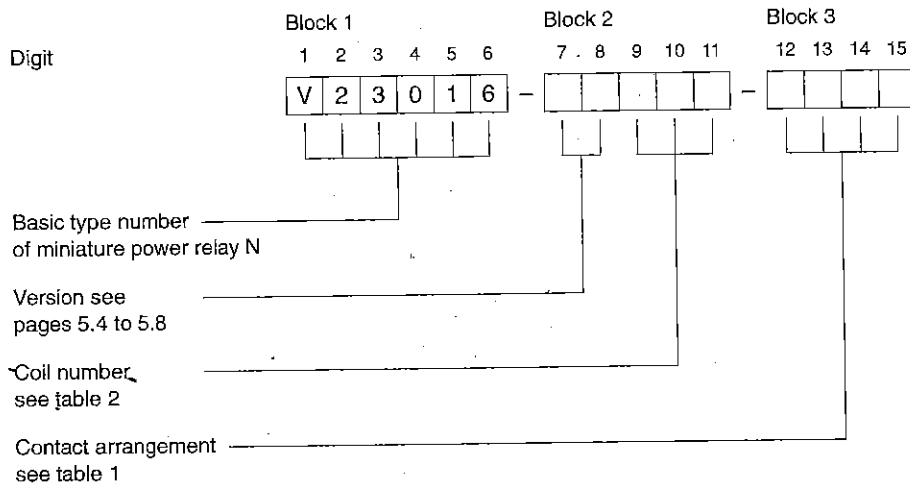
Twin make



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## Miniature Power Relay N

### Ordering code



Ordering example: V23016-B0006-A101

Miniature power relay N, for printed circuits (upright mounting), coil 24 V nominal voltage, 1 changeover, contact material silver, gold-flashed

**5**

### SCS - Preferred standard types

Relays: V23016-A0002-A101	V23016-A0006-A101	V23016-B0002-A101
-A0004-A101	-A0006-A201	-B0004-A101
-A0005-A101	-A0006-A401	-B0005-A101
	-A0013-A101	-B0005-A201
V23016-B0006-A101	V23016-C0002-A101	V23016-C0006-A101
-B0006-A102	-C0005-A101	-C0006-A201
-B0006-A201	-C0005-A201	-C0013-A101
-B0006-A401		
-B0013-A101		
V23016-D0002-A101	V23016-D0006-A101	
-D0004-A101	-D0006-A191	
-D0005-A101	-D0006-A192	
-D0005-A191	-D0006-A201	
-D0005-A201	-D0006-A291	
	-D0007-A291	

Screws: D00933-G0040-S001  
-G0060-S001

Nut: D00439-B0020-S001

# Miniature Power Relay N

**Table 1 Characteristics**  
**Energising side**

To be continued →

Operating voltages	V DC	see table 2		
Power consumption	W	approx. 0.6		
Maximum temperature	°C	110		
Continuous thermal load at 20 °C ambient temperature	W	2.1		
Thermal resistance	K/W	45		
<b>Contact side</b>				
Ordering code block 3	versions A0, B0 and C0	A101	A201	A401
	version D0 <sup>1)</sup>	A101, A191	A201, A291	A401, A491
Contact material		silver, gold-flashed	silver nickel	silver-cadmium oxide
Contact description		21		
Symbol (see also base terminals)				
Maximum switching voltage as per VDE 0110 group C	V DC	300		
	V AC	250		
Maximum switching current	A	15 <sup>2)</sup>		
Maximum power rating <sup>3)</sup> DC voltage	W	55 ... 420 see fig. 1 (voltage- dependent)	up to 24 V : 150	35 ... 400 see fig. 1 (voltage- dependent)
	W		30 V : 100	
	W		200 V : 30	
	W		250 V : 50	
AC voltage	VA	3750		
Maximum continuous current	A	7.5		
<b>General</b>				
Permissible ambient temperature	°C	- 40 ... + 70		
Operate time <sup>4)</sup>	ms	approx. 7		
Release time <sup>4)</sup>	ms	approx. 5		
Maximum switching rate	ops./s	40		
Test voltage	winding/frame	V AC <sub>rms</sub>	1500	
	contact/frame	V AC <sub>rms</sub>	2500	
	contact/winding	V AC <sub>rms</sub>	2500	
Electrical life <sup>5)</sup>	AC voltage	operations	see page 5.14	
	DC voltage 6 V, 15 A	operations	approx. 10 <sup>6)</sup>	
	DC voltage 15 V, 7.5 A	operations	approx. 4 × 10 <sup>6)</sup>	
	DC voltage 24 V, 4 A	operations	approx. 6 × 10 <sup>6)</sup>	
Mechanical life	operations	approx. 2 × 10 <sup>5)</sup>		

<sup>1)</sup> For type V23016-D0... insert into ordering block 3, digit 14:  
0 for version with fixing screw (see page 5.8)  
9 for version with solder pin (see page 5.7)

<sup>2)</sup> The power ratings listed are only valid when the contacts are bridge connected.  
When used as a twin make the values for the changeover contact apply.

<sup>3)</sup> The current of 15 A may flow for a maximum of 4 seconds up to 10% on-time.

<sup>4)</sup> The ratings apply to resistive or inductive load with appropriate spark suppression.

<sup>5)</sup> Measured at nominal voltage without series resistor

<sup>6)</sup> The ratings apply to silver contacts, resistive or inductive load with appropriate spark suppression and have been determined at 2 operations/s.

## Miniature Power Relay N

Table 2 Coil versions

Nominal voltage V DC	Operating voltage range at 20 °C		Resistance at 20 °C Ω	Coil number Ordering code block 2
	Minimum voltage $U_{I}$ V DC	Maximum voltage $U_{II}$ V DC		
6	4.2	11	65 ± 6.5	002
12	8.3	22	230 ± 23	005
24	16.8	44	970 ± 144	006
48	33.5	88	3150 ± 472	004
60	42.0	110	5000 ± 750	013

The operating voltage limits  $U_I$  and  $U_{II}$  depend on temperature and can be calculated by:

$$U_{I,t_u} = k_I \cdot U_{I,20^\circ\text{C}} \text{ and } U_{II,t_u} = k_{II} \cdot U_{II,20^\circ\text{C}}$$

$t_u$  = ambient temperature

$U_{I,t_u}$  = minimum voltage at ambient temperature  $t_u$

$U_{II,t_u}$  = maximum voltage at ambient temperature  $t_u$

$k_I$  and  $k_{II}$  = factors

$t_u$	20 °C	30 °C	40 °C	50 °C	60 °C	70 °C
$k_I$	1.0	1.04	1.085	1.13	1.17	1.21
$k_{II}$	1.0	0.95	0.88	0.79	0.70	0.60