

## Series TL

### **Ultraminiature «TO 5 transistor size» magnetic latching relays 28 V / 1 A**

APPLICATION SPECIFICATIONS)  
MIL-R-39016/12 -J29 -/30  
ESCC 3602-002

#### **General characteristics**

N° of pole	2 Pdt
Volume	0,4 cm <sup>3</sup>
Mass	2 g with leads 38 mm[1.500] length 1,6 g with leads 4,75 mm[.187] length 2 g with spreader pad, leads 4,75 mm[.187] length

#### **Switching characteristics**

Life at rated load	1 x 10 <sup>5</sup> operations mini
Nominal contact rating on power supply 28 V d c	1 A resistive load 0,2 A inductive load (inductance 320 mH) Lamp: 0,10 A at 28 Vdc
Latch and reset time at 25° C	2 ms max
Bounce time at 25° C	1,5 ms max
Overload (100 cycles )	2 Amperes

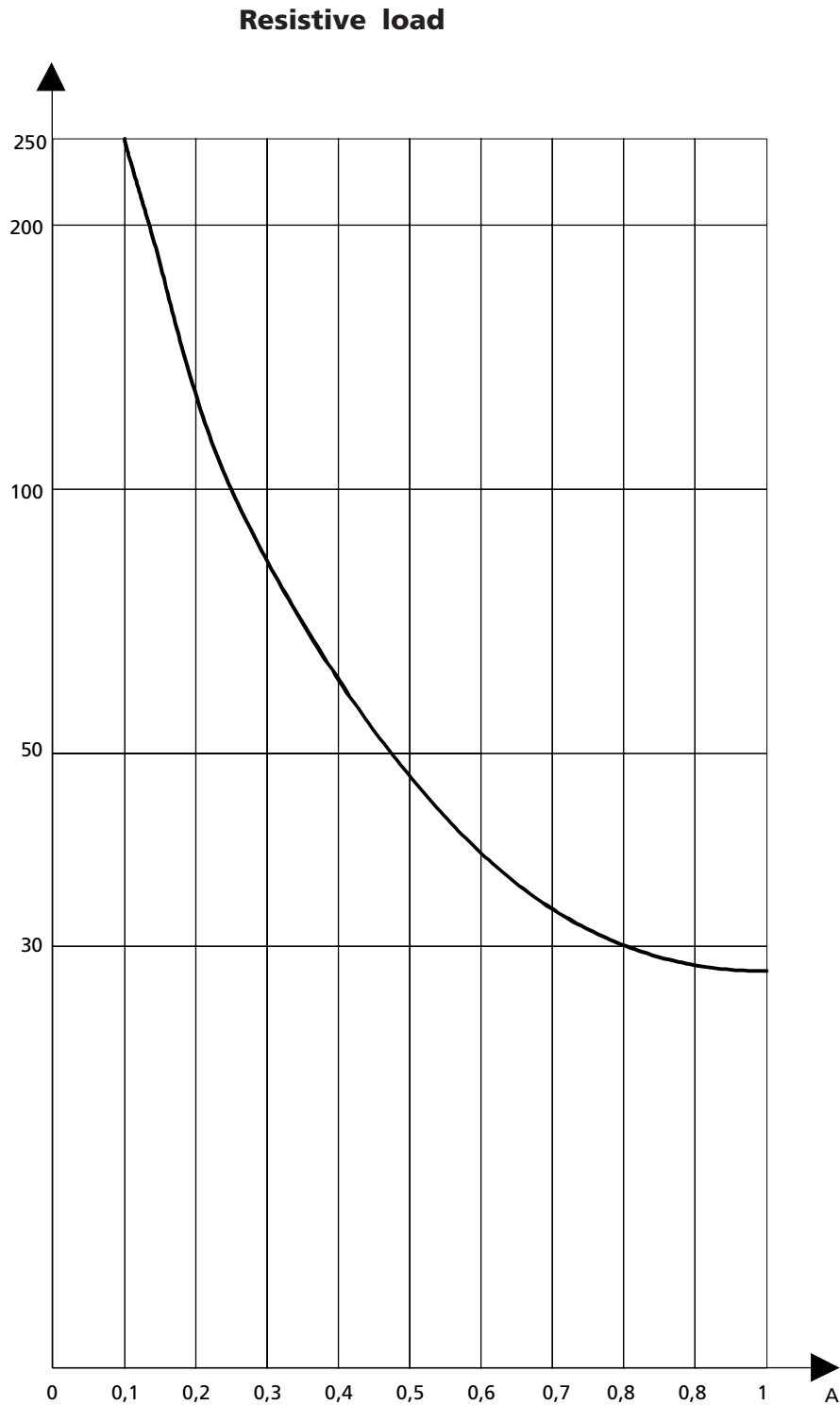
#### **Environmental characteristics**

Temperature range	- 65° C to + 125° C
Vibration	30 g 3 000 Hz
Shock	100 g 6 ms
Opening contact maxi	10 μs
Leak rate	≤ 1 x 10 <sup>-8</sup> atm . cm <sup>3</sup> / s

#### **Electrical characteristics**

Contact resistance ( measured at 3,2 mm from the header)	Relay with spreader pad	
- Initial	0,10 Ω max	0,12 Ω max
- After life	0,20 Ω max	0,22 Ω max
Dielectric strength (see level)		
Between contacts and case	500 V rms	
Between coil and case	500 V rms	
Between open contact	500 V rms	
Between terminals at 22 000 m altitude	125 V rms	
Insulation resistance		
(at 20°C, 50% relative humidity)	> 10 000 M Ω at 500 V dc	
Coil / case at 125 °C	> 1 000 M Ω	
Coil data	see page 4	

**Switching capacities for different life cycles as a function of voltage**



## Part numbering system

**\*\* TL \* 5 P \* \* \*\***

### VERSION

**RB** : Blue ribbon

### RELAY TYPE

### OPTION

without suffix: No suppressor network

**S** : with coil transient suppression device

**SS** : with coil transient suppression device and  
polarity reversal protection (consult us)

### COIL CODE

**5** , **6** , ... ( see page 4 )

### HEADER TERMINAL STYLE

without suffix: Gold plated leads, 38 mm[1.500] length

**P** : Leads, 4,75 mm [.187] length ( see page 5 )

**R** : Leads, 12,7 mm [.500] length

**E** : Spreader pad, leads, 4,75 mm [.187] length

**ER** : Spreader pad, leads, 9,4 mm [.370] length

**N** : Spacer pad, leads, 38 mm [1.500] length

**NR** : Spacer pad, leads, 12,7 mm [.500] length

**NP** : Spacer pad, leads, 4,75 mm [.187] length

### PLATED TERMINAL

without suffix: Gold plated leads

**B** : Tin plated leads

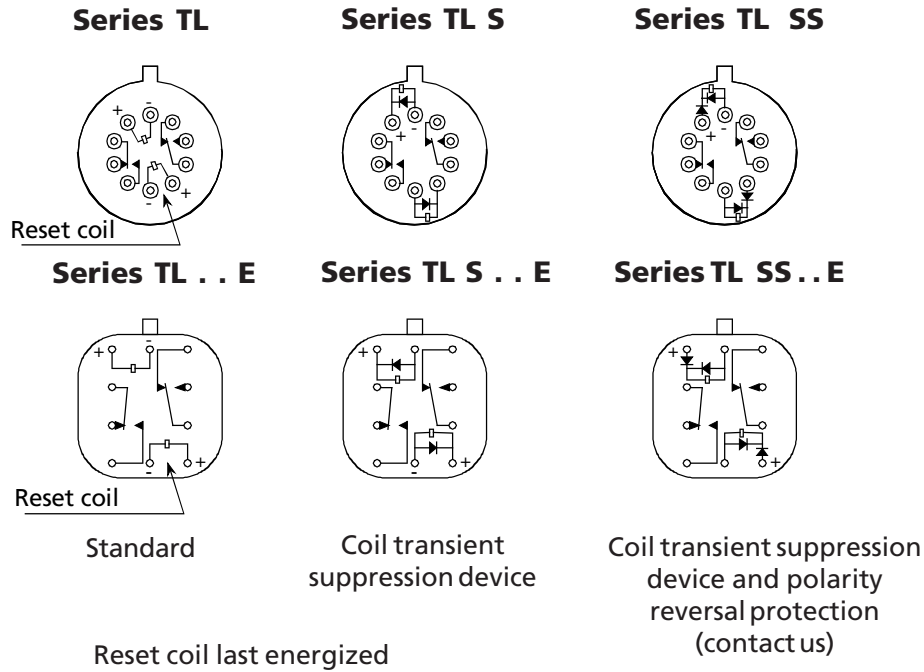
### LOW LEVEL TEST

**S** : Systematically included in «Blue Ribbon» version

### SPECIAL FEATURE

(Consult us)

**Connection diagram**

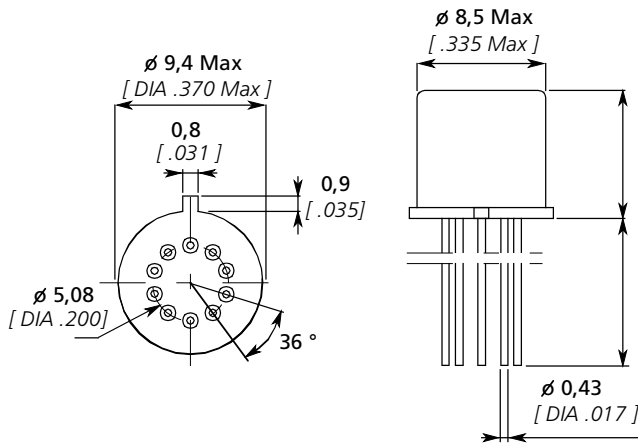


**Viewed from terminals side**  
(unenergized coil)

**Coil characteristics**

COIL CODE	Nominal coil voltage	Maximum voltage	Coil resistance of each coil Ohms $\pm 10\%$ at 20 °C	Maximum latch and reset	
				20 °C	125 °C
5	5	6	61	2,8	3,5
6	6	8	120	3,5	4,5
9	9	12	280	5,3	6,8
12	12	16	500	7	9
18	18	24	1 130	10,5	13,5
26	26	32	2 000	14,2	18

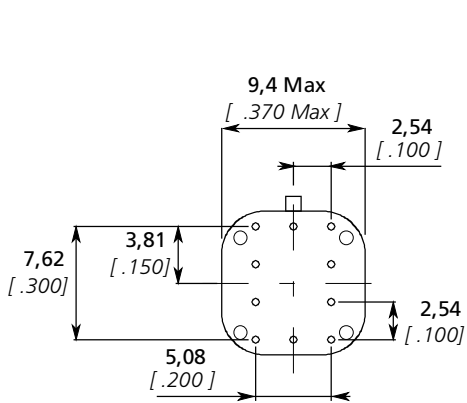
**Overall dimensions and header terminal styles**



without suffix L : 38 [ 1.500]

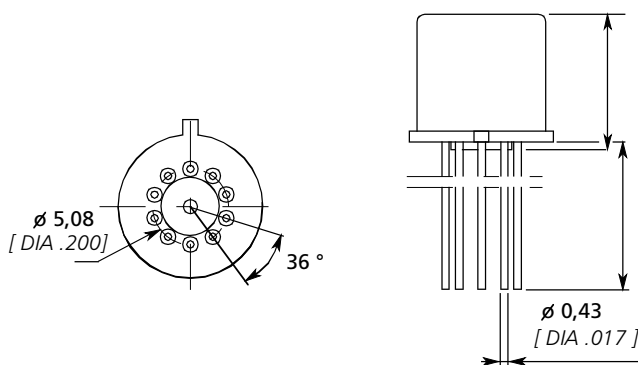
**P** L : 4,75 [ .187]

**R** L : 12,7 [ .500]



**E** L : 4,75 [ .187]

**ER** L : 9,4 mini [ .370 mini]



**N** L : 38 [ 1.500]

**NR** L : 12,7 [ .500]

**NP** L : 4,75 [ .187]