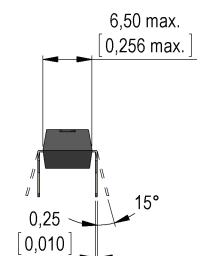
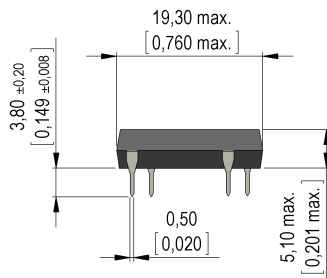


## Preliminary Datasheet

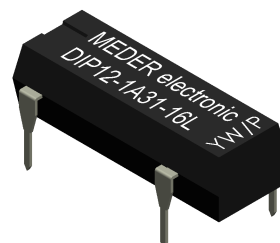
### Dimensions mm[inch]

tolerances acc. to DIN ISO 2768-m  
 Toleranzen gem. DIN ISO 2768-m



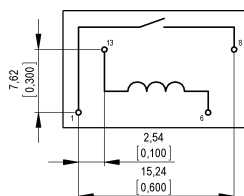
### Isometric

Scale 1:1  
 Maßstab 1:1



### Layout

Top view  
 Draufsicht



### Marking

according to EN60062/factory code  
 gem. EN60062/Fertigungsstätte



| Coil Data at 20 °C | Conditions | Min | Typ | Max | Unit |
|--------------------|------------|-----|-----|-----|------|
| Coil resistance    |            | 360 | 400 | 440 | Ohm  |
| Coil voltage       |            |     | 12  |     | VDC  |
| Rated power        |            |     | 360 |     | mW   |
| Coil current       |            |     | 30  |     | mA   |
| Thermal resistance |            |     | 105 |     | K/W  |
| Inductance         |            |     | 104 |     | mH   |
| Pull-In voltage    |            |     |     | 8,4 | VDC  |
| Drop-Out voltage   |            | 1,8 |     |     | VDC  |

| Contact data 31            | Conditions                                                          | Min         | Typ | Max | Unit |
|----------------------------|---------------------------------------------------------------------|-------------|-----|-----|------|
| Switching suitability      |                                                                     | bounce free |     |     |      |
| Contact rating             | Any DC combination of V & A up to 500V max. 50W, with 1000V max. 5W |             |     | 50  | W    |
| Switching voltage          | DC or Peak AC                                                       |             |     | 500 | V    |
| Switching current          | DC or Peak AC                                                       |             |     | 2   | A    |
| Carry current              | DC or Peak AC                                                       |             |     | 2   | A    |
| Contact resistance static  | Measured with 40% overdrive Start Value                             |             |     | 80  | mOhm |
| Contact resistance dynamic | Maximum value 1,5 ms after excitation Start Value                   |             |     | 130 | mOhm |
| Insulation resistance      | RH <45 %, 100 V test voltage                                        | 100         |     |     | GOhm |
| Breakdown voltage          | according to EN 60255-5                                             | 1.500       |     |     | VDC  |
| Release Time               | measured with no coil excitation                                    |             |     | 1   | ms   |
| Operate time, bounce free  | measured with nominal voltage at 20°C                               |             |     | 1,2 | ms   |
| Capacity                   | @ 10 kHz across open switch                                         |             | 0,3 |     | pF   |

| Special Product Data               | Conditions                         | Min                       | Typ | Max | Unit  |
|------------------------------------|------------------------------------|---------------------------|-----|-----|-------|
| Dielectric Strength Coil/Contact   | according to EN 60255-5            | 2                         |     |     | kV DC |
| Insulation resistance Coil/Contact | RH <45%, 200 VDC measuring voltage | 5                         |     |     | TOhm  |
| Capacity Coil/Contact              | @ 10 kHz                           |                           | 0,8 |     | pF    |
| Housing material                   |                                    | epoxy resin               |     |     |       |
| Connection pins                    |                                    | CuFe2P, tin plated        |     |     |       |
| Approval                           |                                    | UL-File No. NRNT2.E156887 |     |     |       |
| Approval                           |                                    | UL-File No. NRNT8.E156887 |     |     |       |
| Reach / RoHS conformity            |                                    | no                        |     |     |       |



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Item No.:  
**3212131016**  
Item:  
**DIP12-1A31-16L**

## Preliminary Datasheet

| Environmental data    | Conditions                         | Min          | Typ | Max | Unit |
|-----------------------|------------------------------------|--------------|-----|-----|------|
| Shock                 | 1/2 sine, duration 11ms, in 3 axis |              |     | 50  | g    |
| Vibration             | from 10 - 2000 Hz                  |              |     | 20  | g    |
| Operating temperature |                                    | -20          |     | 70  | °C   |
| Storage temperature   |                                    | -35          |     | 95  | °C   |
| Soldering temperature | wave soldering max. 5 sec.         |              |     | 260 | °C   |
| Washability           |                                    | fully sealed |     |     |      |

| General data | Conditions | Min              | Typ | Max | Unit |
|--------------|------------|------------------|-----|-----|------|
| Packaging    |            | 25 pcs. per tube |     |     |      |

Modifications in the sense of technical progress are reserved

Designed at: 13.09.07 Designed by: THAUKE  
Last Change at: 12.03.13 Last Change by: THAUKE

Approval at: 13.09.07 Approval by: RRIPPL  
Approval at: Approval by:

Version: 7