



**Features**

- high life cycles
- robust design
- excellent linearity
- individual programmable angel, characteristic curve
- absolute angel measure as well after power outage

**Applications**

- Joysticks
- valve control
- steering angle fork lift
- servosystems
- shaft control



**Electrical Characteristics:**

|                                |                         |
|--------------------------------|-------------------------|
| Measuring range                | 0° ... 360°             |
| Independant Linearity          | +/- 1%                  |
| Resolution                     | 12 bit analog 14bit SPI |
| Output Signal                  | 10% ... 90% of Us       |
| Min. ohm load - output         | 10 kohm                 |
| Max. capacitive output load    | 10 nF                   |
| Sampling rate slow mode        | 800 us                  |
| Sampling rate fast mode        | 300 us                  |
| Supply voltage                 | 5 Vdc +/- 10%           |
| Current draw without slow mode | 10 mA typ.              |
| Current draw without fast mode | 16 mA typ.              |
| Inverse-polarity protection    | yes                     |
| Electrical connection          | Flatcable 6 pins        |

**Mechanical Characteristics:**

|                     |                          |
|---------------------|--------------------------|
| Mechanical angle    | Continous                |
| Life time (electr.) | 10 Years                 |
| Life time (mechan.) | 200 Mio. Shaft rotations |
| Bearing             | Plastic bearing          |
| Housing             | Plastic                  |
| Shaft               | Inox                     |

**Contactless rotative sensor**  
**Model HMS 16 Hall Sensor**  
**∅ 16 mm**



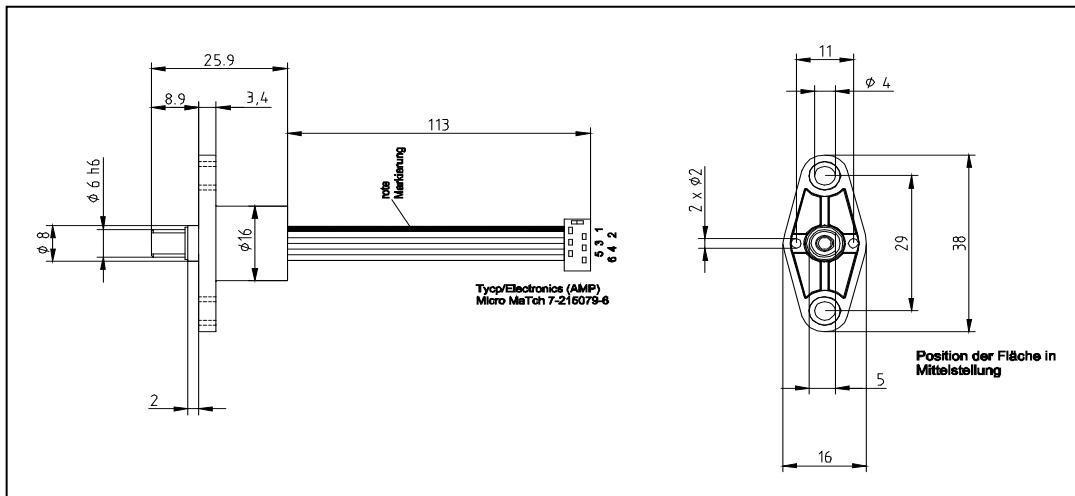
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**Environmental Characteristics:**

|                       |                  |
|-----------------------|------------------|
| Operating temperature | -40°C ... +105°C |
| Storage temperature   | -40°C ... +105°C |
| Climatic class        | 25/085/56        |
| Vibration             | 10G              |
| Shock                 | 30G              |

**Options:**

|                       |                        |
|-----------------------|------------------------|
| Electrical angle      | 0°...360° programmable |
| Output signal         | PWM or SPI (14bit)     |
| Redundancy            | yes                    |
| Slow mode/fast mode   | selectable             |
| Housing dimensions    | See drawing            |
| Length of strand      | 145 mm ... 800 mm      |
| Operating temperature | -40°C ... +125°C       |



Connections Analog Output  
 Pin 1 VDD 5 V  
 Pin 2 GND  
 Pin 3 Output analog

Connections SPI Output  
 Pin 1 VDD 5 V  
 Pin 2 GND  
 Pin 3 Output In/Out  
 Pin 4 Serial Clock  
 Pin 5 Slave select  
 Pin 6 n.c.

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Specifications subject to change without notice.