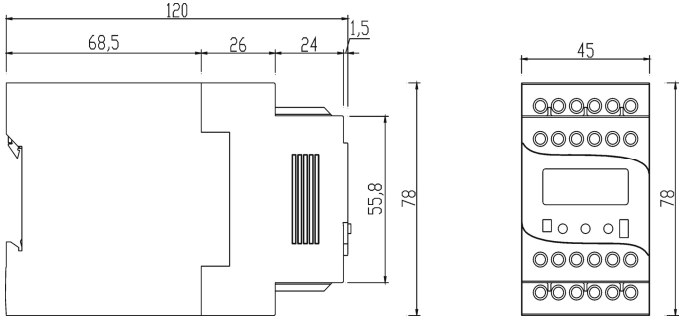
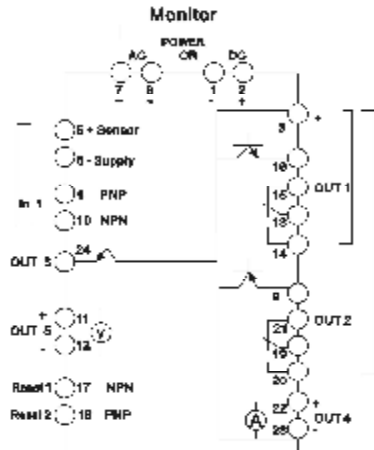


|                                                                                                                                                                                                                                                         |                     |                                                                                                                                                                                                                                                                   |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <p>SM1003</p> <p>Speed Monitor</p> <p>DIN rail mounting</p> <p>Two relays output</p> <p>three transistors output</p> <p>Current value output: 0/4...20mA</p> <p>Voltage value output: 0...10V</p> <p>Programmable</p> <p>No external frequency test</p> |                     |  <p>CE RoHS</p>                                                                                                                                                                 |  |
| Application                                                                                                                                                                                                                                             |                     | Equipment period for frequency, rotation rate, speed ,and pulse.                                                                                                                                                                                                  |  |
| Adjusting range (Rotation rate/Frequency)                                                                                                                                                                                                               |                     | 1...6000.0RPM / 0.1...1000.0Hz                                                                                                                                                                                                                                    |  |
| Rated voltage[V]                                                                                                                                                                                                                                        |                     | 110 AC(50...60HZ) / 24 DC                                                                                                                                                                                                                                         |  |
| Voltage tolerance[%]                                                                                                                                                                                                                                    |                     | 10%                                                                                                                                                                                                                                                               |  |
| Contact loading                                                                                                                                                                                                                                         |                     | 8A (1250VA / 250 VAC)                                                                                                                                                                                                                                             |  |
| Power consumption[VA]                                                                                                                                                                                                                                   |                     | 5/3W                                                                                                                                                                                                                                                              |  |
| Analogue output                                                                                                                                                                                                                                         |                     | Current: 0/4...20mA (500Ω); Voltage: 0...10V                                                                                                                                                                                                                      |  |
| Pulse output                                                                                                                                                                                                                                            |                     | <p>PNP/NPN</p> <p>Supply voltage: 24 V DC / 15mA</p> <p>Switch point for PNP sensor: &gt;12V On; &lt; 5V Off</p> <p>Switch point for NPN sensor: &gt;15V On; &lt; 5V Off</p> <p>Input frequency (Max.): 5kHz Corresponding min. pulse period / interval 0.1ms</p> |  |
| Transistor output                                                                                                                                                                                                                                       |                     | <p>PNP, NPN</p> <p>Switching voltage: 24 VDC / current: max. 15mA; Short-circuit protection</p>                                                                                                                                                                   |  |
| Accuracy of the frequency measurement                                                                                                                                                                                                                   |                     | <1%                                                                                                                                                                                                                                                               |  |
| Switching function                                                                                                                                                                                                                                      |                     | Two switch points required by the range of monitoring under speed / over speed                                                                                                                                                                                    |  |
| Max. relative air humidity[%]                                                                                                                                                                                                                           |                     | 75(35°C)                                                                                                                                                                                                                                                          |  |
| Operating temperature[°C]                                                                                                                                                                                                                               |                     | -20...60                                                                                                                                                                                                                                                          |  |
| Storage temperature[°C]                                                                                                                                                                                                                                 |                     | -25...80                                                                                                                                                                                                                                                          |  |
| Protection Housing / Terminals                                                                                                                                                                                                                          |                     | IP50 / IP20                                                                                                                                                                                                                                                       |  |
| Housing material                                                                                                                                                                                                                                        |                     | PBT+GF                                                                                                                                                                                                                                                            |  |
| Display                                                                                                                                                                                                                                                 | Switching State LED | Green (Light on under actuation of relay / connection of transistor )                                                                                                                                                                                             |  |
|                                                                                                                                                                                                                                                         | Input signal LED    | Red                                                                                                                                                                                                                                                               |  |
|                                                                                                                                                                                                                                                         | Function LED        | LCD Display; 7/14- Segment                                                                                                                                                                                                                                        |  |
| Connection                                                                                                                                                                                                                                              |                     | Dual-chamber terminals                                                                                                                                                                                                                                            |  |
| Dimension                                                                                                                                                                                                                                               |                     |                                                                                                                                                                               |  |

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          |                             |                          |                         |                                  |                         |                     |                            |                         |                |                         |                |                           |                             |                          |                         |                         |                         |                      |                                |                                 |                                |                                 |                            |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------|--------------------------|-------------------------|----------------------------------|-------------------------|---------------------|----------------------------|-------------------------|----------------|-------------------------|----------------|---------------------------|-----------------------------|--------------------------|-------------------------|-------------------------|-------------------------|----------------------|--------------------------------|---------------------------------|--------------------------------|---------------------------------|----------------------------|
| Wiring                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |                             |                          |                         |                                  |                         |                     |                            |                         |                |                         |                |                           |                             |                          |                         |                         |                         |                      |                                |                                 |                                |                                 |                            |
| Connection notice                | <table border="0"> <tr> <td>1.DC Supply voltage (L-)</td><td>13.Relay 1 (center contact)</td></tr> <tr> <td>2.DC Supply voltage (L+)</td><td>14.Relay 1 (NO contact)</td></tr> <tr> <td>3.Supply transistor outputs (L+)</td><td>15.Relay 1 (NC contact)</td></tr> <tr> <td>4.Sensor signal PNP</td><td>16.Transistor output 1 PNP</td></tr> <tr> <td>5.DC Sensor supply (L+)</td><td>17.Reset 1 NPN</td></tr> <tr> <td>6.DC Sensor supply (L-)</td><td>18.Reset 2 PNP</td></tr> <tr> <td>7.AC Supply voltage ( L+)</td><td>19.Relay 2 (center contact)</td></tr> <tr> <td>8.AC Supply voltage (L-)</td><td>20.Relay 2 (NO contact)</td></tr> <tr> <td>9.Transistor output NPN</td><td>21.Relay 2 (NC contact)</td></tr> <tr> <td>10.Sensor signal NPN</td><td>22.Analogue current output (+)</td></tr> <tr> <td>11.Analogue volatge output (L+)</td><td>23.Analogue current output (-)</td></tr> <tr> <td>12.Analogue volatge output (L-)</td><td>24.Transistor output-2 PNP</td></tr> </table> | 1.DC Supply voltage (L-) | 13.Relay 1 (center contact) | 2.DC Supply voltage (L+) | 14.Relay 1 (NO contact) | 3.Supply transistor outputs (L+) | 15.Relay 1 (NC contact) | 4.Sensor signal PNP | 16.Transistor output 1 PNP | 5.DC Sensor supply (L+) | 17.Reset 1 NPN | 6.DC Sensor supply (L-) | 18.Reset 2 PNP | 7.AC Supply voltage ( L+) | 19.Relay 2 (center contact) | 8.AC Supply voltage (L-) | 20.Relay 2 (NO contact) | 9.Transistor output NPN | 21.Relay 2 (NC contact) | 10.Sensor signal NPN | 22.Analogue current output (+) | 11.Analogue volatge output (L+) | 23.Analogue current output (-) | 12.Analogue volatge output (L-) | 24.Transistor output-2 PNP |
| 1.DC Supply voltage (L-)         | 13.Relay 1 (center contact)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                             |                          |                         |                                  |                         |                     |                            |                         |                |                         |                |                           |                             |                          |                         |                         |                         |                      |                                |                                 |                                |                                 |                            |
| 2.DC Supply voltage (L+)         | 14.Relay 1 (NO contact)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          |                             |                          |                         |                                  |                         |                     |                            |                         |                |                         |                |                           |                             |                          |                         |                         |                         |                      |                                |                                 |                                |                                 |                            |
| 3.Supply transistor outputs (L+) | 15.Relay 1 (NC contact)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          |                             |                          |                         |                                  |                         |                     |                            |                         |                |                         |                |                           |                             |                          |                         |                         |                         |                      |                                |                                 |                                |                                 |                            |
| 4.Sensor signal PNP              | 16.Transistor output 1 PNP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                          |                             |                          |                         |                                  |                         |                     |                            |                         |                |                         |                |                           |                             |                          |                         |                         |                         |                      |                                |                                 |                                |                                 |                            |
| 5.DC Sensor supply (L+)          | 17.Reset 1 NPN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          |                             |                          |                         |                                  |                         |                     |                            |                         |                |                         |                |                           |                             |                          |                         |                         |                         |                      |                                |                                 |                                |                                 |                            |
| 6.DC Sensor supply (L-)          | 18.Reset 2 PNP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          |                             |                          |                         |                                  |                         |                     |                            |                         |                |                         |                |                           |                             |                          |                         |                         |                         |                      |                                |                                 |                                |                                 |                            |
| 7.AC Supply voltage ( L+)        | 19.Relay 2 (center contact)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                             |                          |                         |                                  |                         |                     |                            |                         |                |                         |                |                           |                             |                          |                         |                         |                         |                      |                                |                                 |                                |                                 |                            |
| 8.AC Supply voltage (L-)         | 20.Relay 2 (NO contact)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          |                             |                          |                         |                                  |                         |                     |                            |                         |                |                         |                |                           |                             |                          |                         |                         |                         |                      |                                |                                 |                                |                                 |                            |
| 9.Transistor output NPN          | 21.Relay 2 (NC contact)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          |                             |                          |                         |                                  |                         |                     |                            |                         |                |                         |                |                           |                             |                          |                         |                         |                         |                      |                                |                                 |                                |                                 |                            |
| 10.Sensor signal NPN             | 22.Analogue current output (+)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          |                             |                          |                         |                                  |                         |                     |                            |                         |                |                         |                |                           |                             |                          |                         |                         |                         |                      |                                |                                 |                                |                                 |                            |
| 11.Analogue volatge output (L+)  | 23.Analogue current output (-)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          |                             |                          |                         |                                  |                         |                     |                            |                         |                |                         |                |                           |                             |                          |                         |                         |                         |                      |                                |                                 |                                |                                 |                            |
| 12.Analogue volatge output (L-)  | 24.Transistor output-2 PNP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                          |                             |                          |                         |                                  |                         |                     |                            |                         |                |                         |                |                           |                             |                          |                         |                         |                         |                      |                                |                                 |                                |                                 |                            |