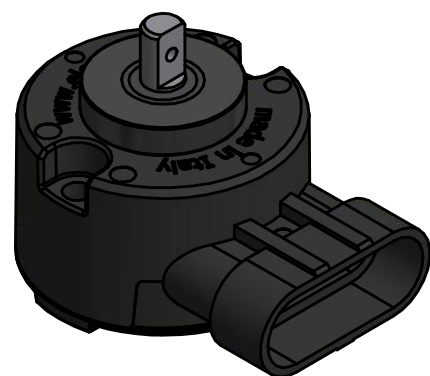
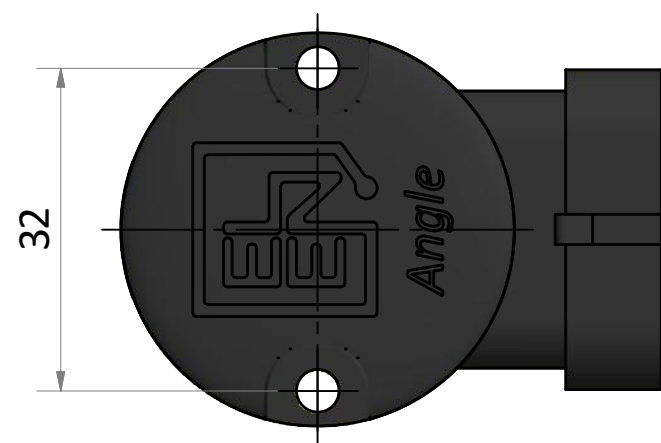
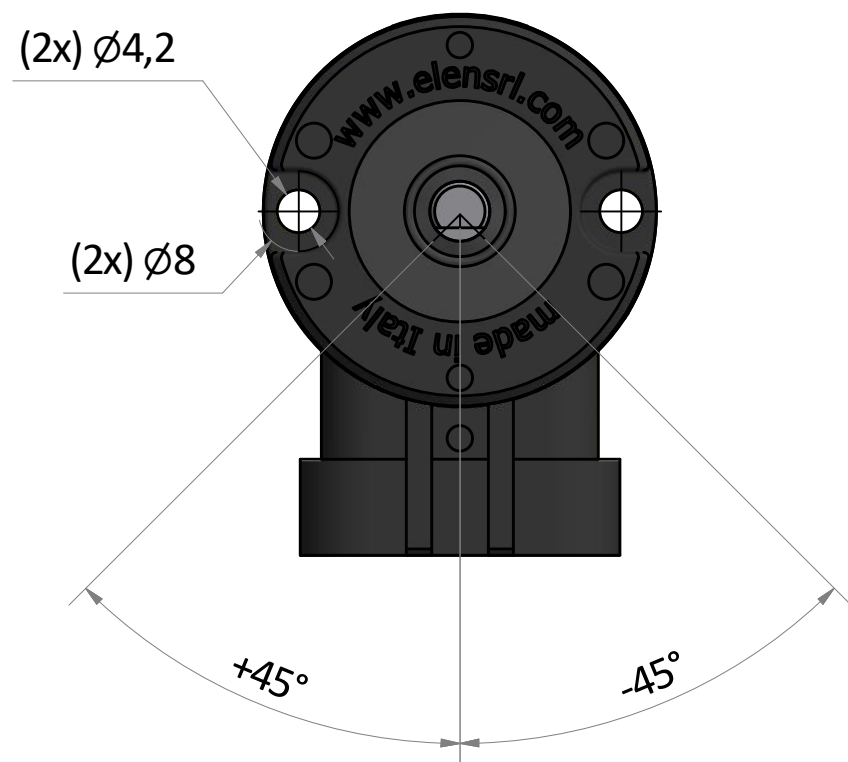
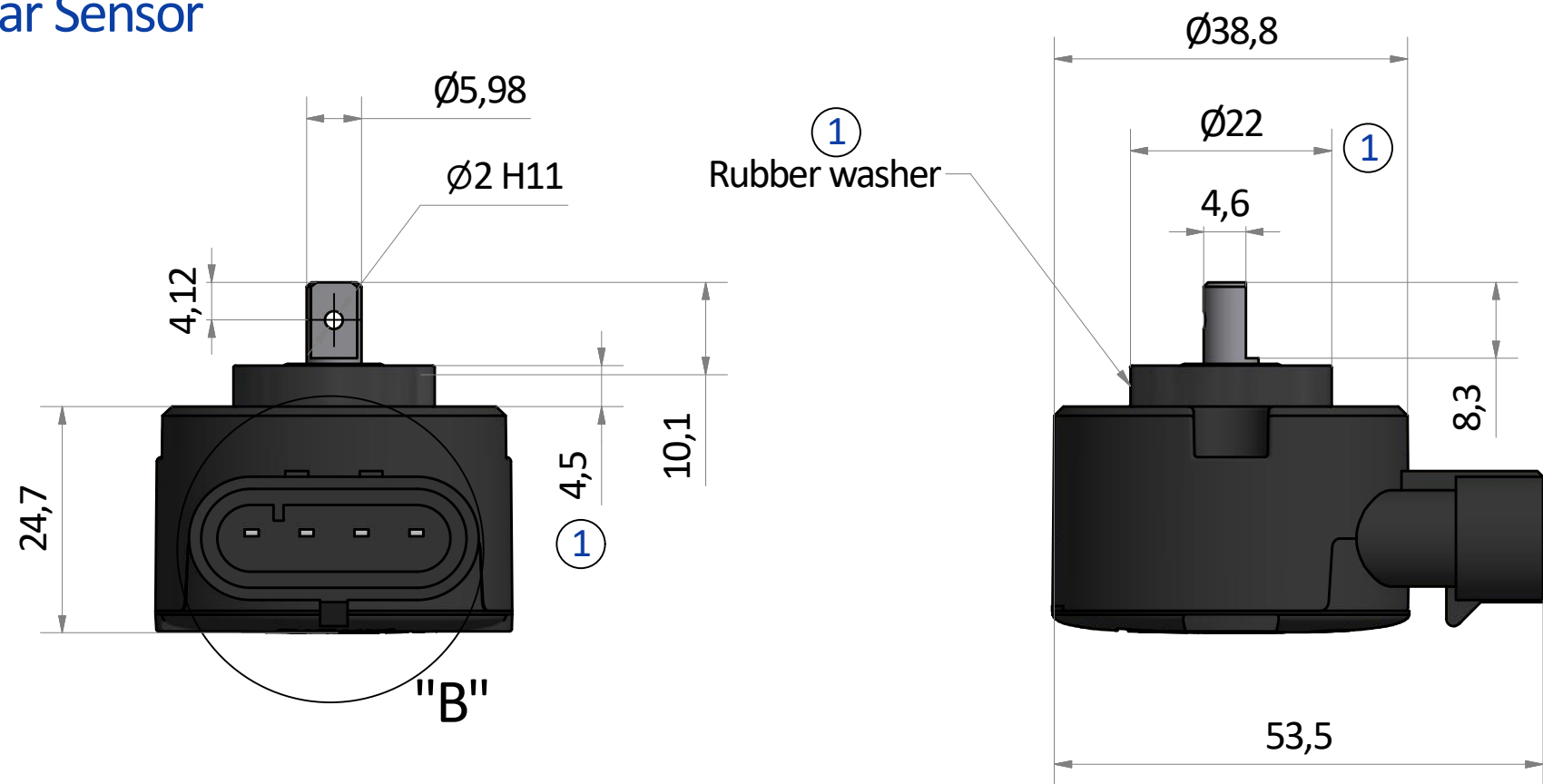
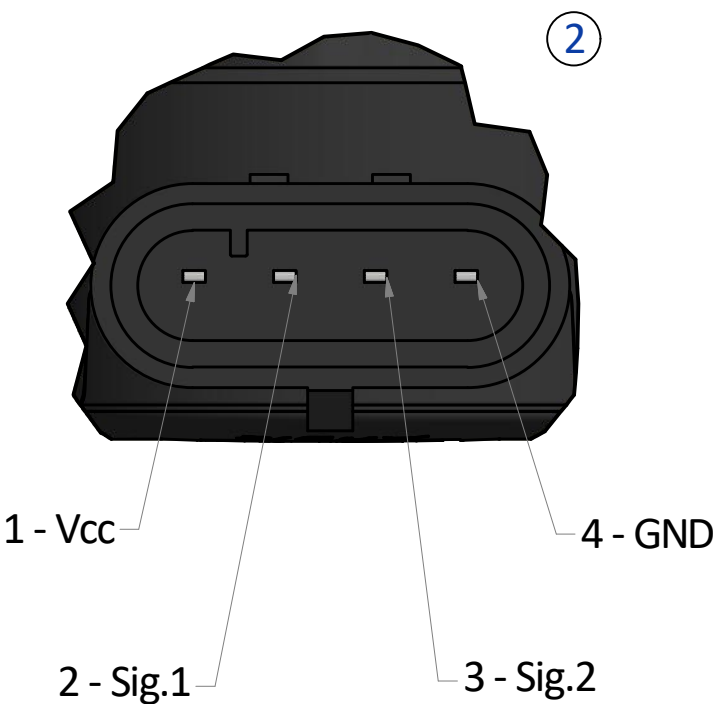


■ Angular Sensor



Details "B" ( 2 : 1 )



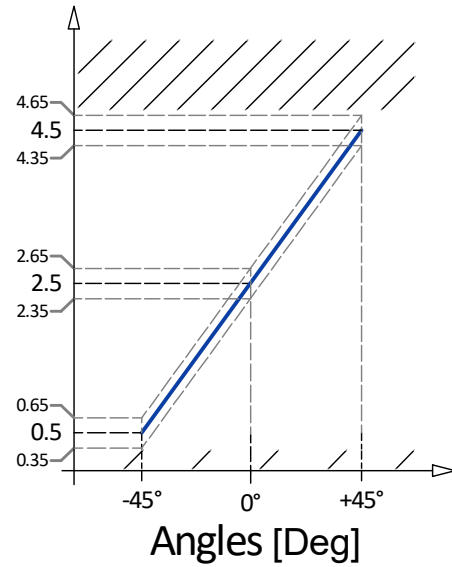
Mating with 4-way Tyco Superseal connector 282088-1

|                                                                                                                                  |            |       |                     |
|----------------------------------------------------------------------------------------------------------------------------------|------------|-------|---------------------|
|  <b>ELEN</b><br>industrial vehicles sensors |            |       |                     |
| Rev.                                                                                                                             | Date       | Sign. | Review Description  |
| 1                                                                                                                                | 03/06/2024 | M.M.  | Added Rubber washer |
| 2                                                                                                                                | 30/08/2024 | G.M.  | Updated Pin Out     |
|                                                                                                                                  |            |       |                     |
|                                                                                                                                  |            |       |                     |
|                                                                                                                                  |            |       |                     |
|                                                                                                                                  |            |       |                     |

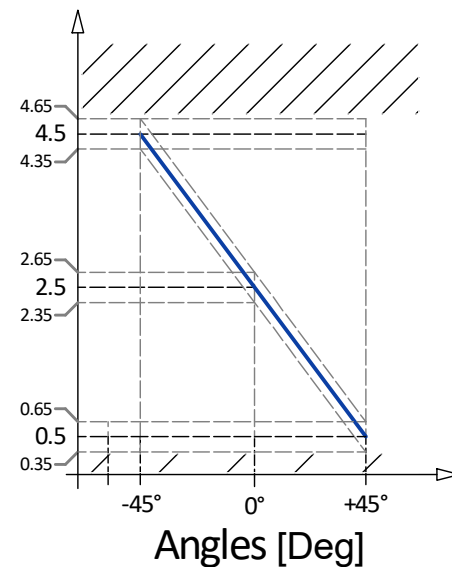
|                 |            |                                     |                                                          |
|-----------------|------------|-------------------------------------|----------------------------------------------------------|
| www.elensrl.com |            | Elen Srl - Garbagnate Milanese (MI) |                                                          |
| Part Number:    |            | AA302002-1                          |                                                          |
| Description:    |            | Angular Sensor 5V                   |                                                          |
| Designed        | 29/06/2021 | Giulia M.                           | Scale : 1 : 0.75 (A3 format)                             |
| Checked         | 29/06/2021 | Mauro Canavesi                      | Dimensions without tolerance indication:<br>ISO 2768 - m |
| Approved        | 29/06/2021 | Mauro Canavesi                      | Units<br>mm                                              |
|                 |            |                                     | Page 1 / 2                                               |

## ■ Output Signal

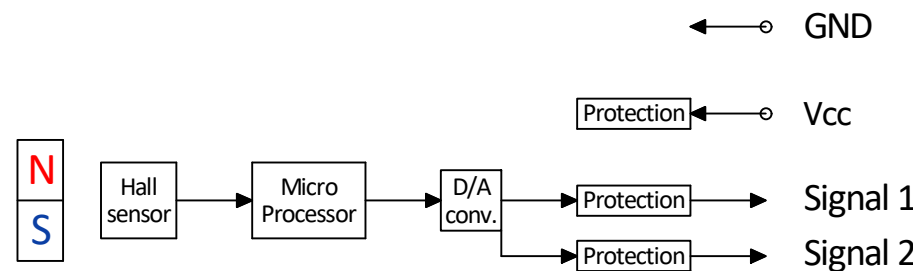
Signal 1 (V) @Vin = 5V



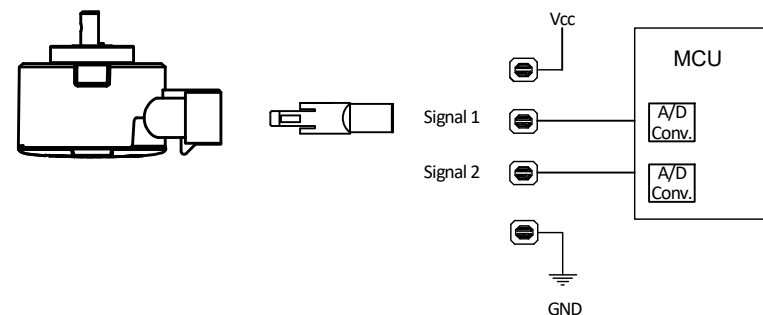
Signal 2 (V) @Vin = 5V



## ■ Functional Scheme



## ■ Typical Application



## ■ Technical Specifications

|               | Specific                                          | Value                                                                                                                      | Standard Reference                                             |
|---------------|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Electrical    | Supply voltage (Vcc)                              | Min 4.5V - Max 5.5V                                                                                                        | ELEN PDV Rev. 3 - 5.1                                          |
|               | Supply Current (No Load)                          | 15 mA Max                                                                                                                  | -                                                              |
|               | Output Signal 1                                   | 0.5V@-45° ÷ 4.5V@+45° (2.5V @0°)                                                                                           | -                                                              |
|               | Output Signal 2                                   | 4.5V@-45° ÷ 0.5V@+45° (2.5V @0°)                                                                                           | -                                                              |
|               | Output Current                                    | 1 mA Max                                                                                                                   | -                                                              |
|               | Resolution                                        | < 0.1°                                                                                                                     | -                                                              |
|               | Linearity error                                   | < 1%                                                                                                                       | -                                                              |
|               | Reverse Polarity Protection                       | -5.5V For 1h (-20V For 1h)                                                                                                 | ELEN PDV Rev. 3 - 5.3                                          |
|               | Overload Protection                               | 1,2mA For 1h (20mA For 1h)                                                                                                 | ELEN PDV Rev. 3 - 5.6                                          |
|               | Overvoltage Protection                            | 6.5V For 1h (20V For 1h)                                                                                                   | ELEN PDV Rev. 3 - 5.7                                          |
|               | Output Short Circuit Protection                   | To Ground For 5'<br>To VDC For 5'                                                                                          | ELEN PDV Rev. 3 - 5.4                                          |
|               | Dielectric Rigidity                               | 750V@50Hz For 60s                                                                                                          | ELEN PDV Rev. 3 - 5.11                                         |
|               | Insulation Resistance                             | 1000 MOhm@500V                                                                                                             | ELEN PDV Rev. 3 - 5.10                                         |
|               | Temperature Operating Voltage                     | 5.5V@105°C For 1h                                                                                                          | ELEN PDV Rev. 3 - 5.8                                          |
| Environmental | ESD Protection                                    | ±8kV Contact , ±15 kV Air                                                                                                  | EN 61000-4-2                                                   |
|               | EMC Compatibility                                 | BCI - Class "A" - 100mA ; 1~400 MHz                                                                                        | ISO 11452-4                                                    |
|               | EMC Compatibility - Magn.Field Imm.               | 15Hz ÷ 150 kHz                                                                                                             | ISO 11452-8 : 2007                                             |
|               | Operating Temperature (for Electronic Components) | -40°C ÷ +105°C                                                                                                             | IEC 60068-2-1 ; IEC 60068-2-2 ; IEC 60068-2-30 ; IEC60068-2-14 |
| Mech.         | Storage Temperature (for the Assembly)            | -40°C ÷ +115°C                                                                                                             | IEC 60068-2-1 ; IEC 60068-2-2 ; IEC 60068-2-30 ; IEC60068-2-14 |
|               | Degree Of Protection                              | IP 67                                                                                                                      | IEC 60529                                                      |
|               | Vibrations Resistance - Sine                      | (5÷12.87) Hz@dis±15mm ,(12,87÷200) Hz@dis<±15mm@5g, 1 Octave/min , 20 Sweep Cycles                                         | IEC 60068-2-6 ISO15998                                         |
|               | Vibrations Resistance - Random                    | f=10Hz@PSD=1.44 g2/Hz ; f=100Hz@PSD=3.85 g2/Hz ; f=1000Hz@PSD=3.85 g2/Hz ; f=2000Hz@PSD=0.96 g2/Hz ; 3 Axis - 24h For Axis | IEC 60068-2-64 ENS0310 Rev.J                                   |
| Mech.         | Body Material                                     | Nylon 6.6 + 30% G.F.                                                                                                       | -                                                              |
|               | Shaft Material                                    | Stainless Steel                                                                                                            | -                                                              |