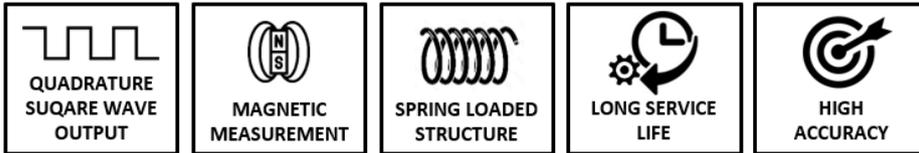


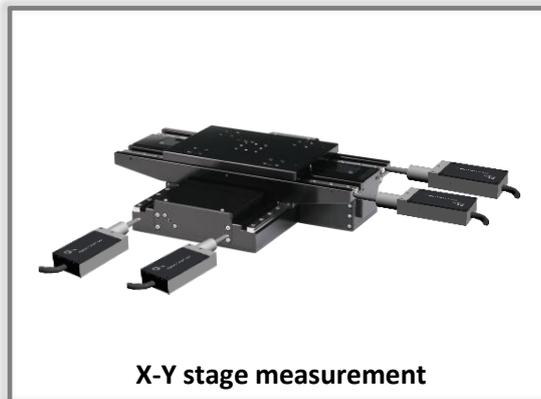
## MLG 112

“Magnetic Measurement, Compact and Spring Loaded System, High Resolution”

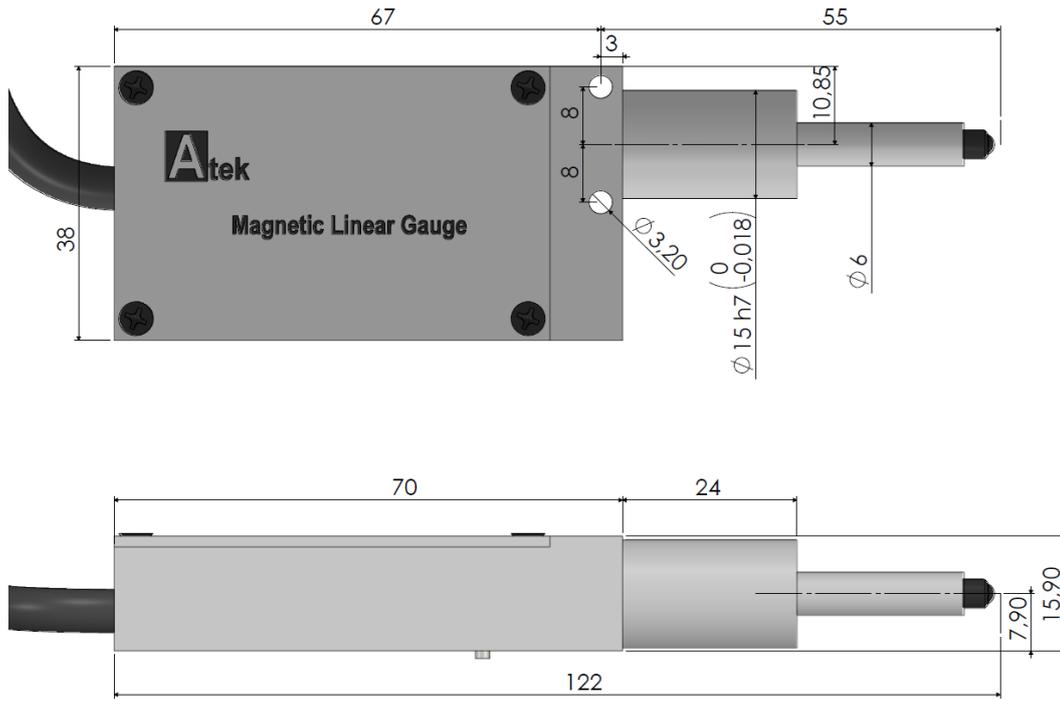


- 5mm or 10mm measuring range
- Spring Loaded System
- 1  $\mu\text{m}$  high resolution
- 20  $\mu\text{m}$  linearity
- Quadrature square wave output
- Small structure, easy installation
- Robust aluminum housing
- IP54 protection class

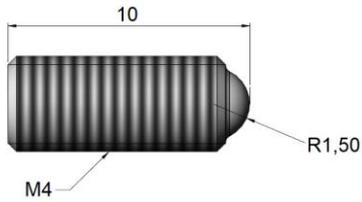
MLG 112 series linear gauges are used for the measurement of various dimensions, displacements and travel distances. It reads position information sensitively and sends it as encoder pulse. With its compact structure, it provides maximum ease of installation to the user. It also has a long working life of up to 10 million times. It provides suitable solutions for areas such as cyclic position measurements, automatic dimension measurements, industrial measurement systems.



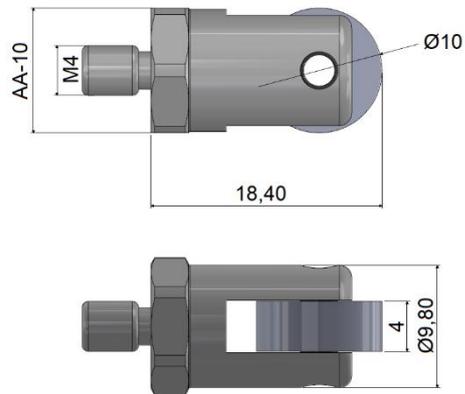
## MECHANICAL DIMENSIONS (mm)



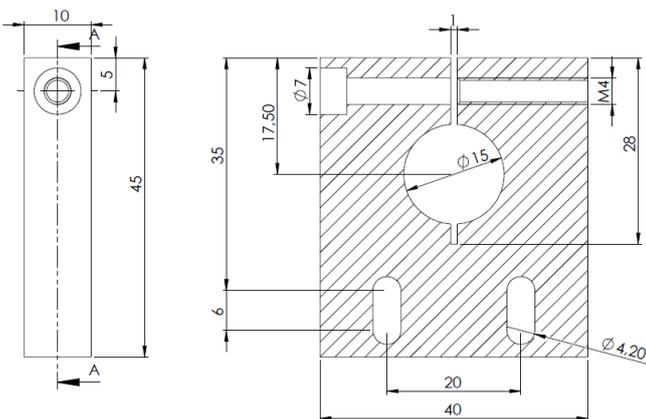
### PB (Ball point) Probe Tip



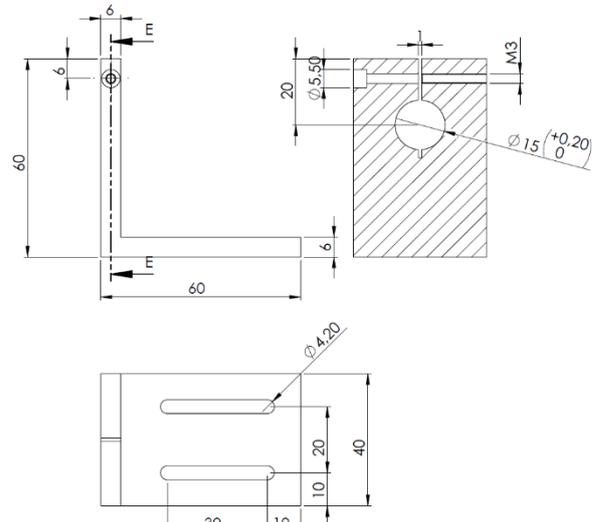
### PR (Bearing) Probe Tip



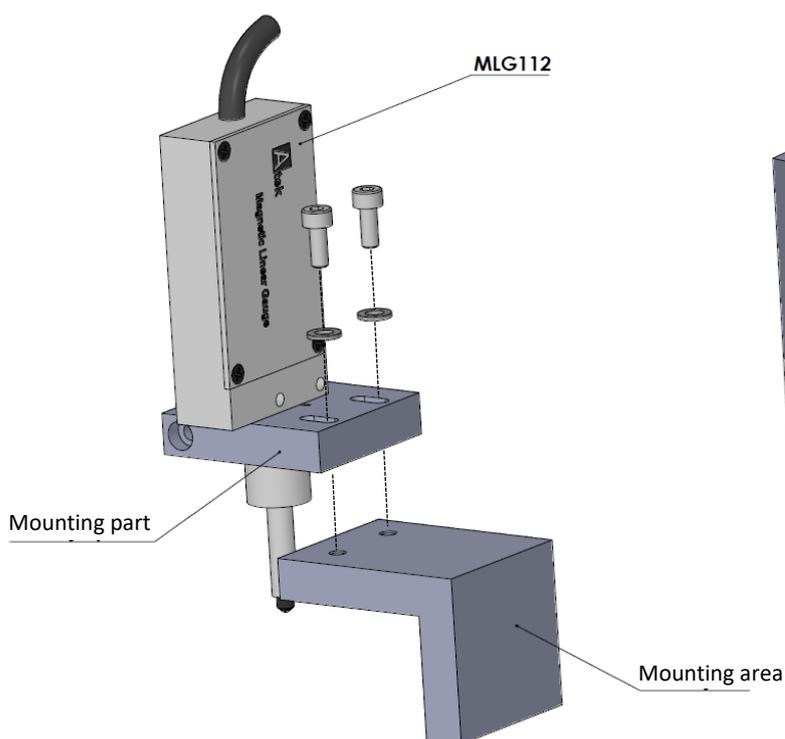
### MS (Standard) Mounting Part



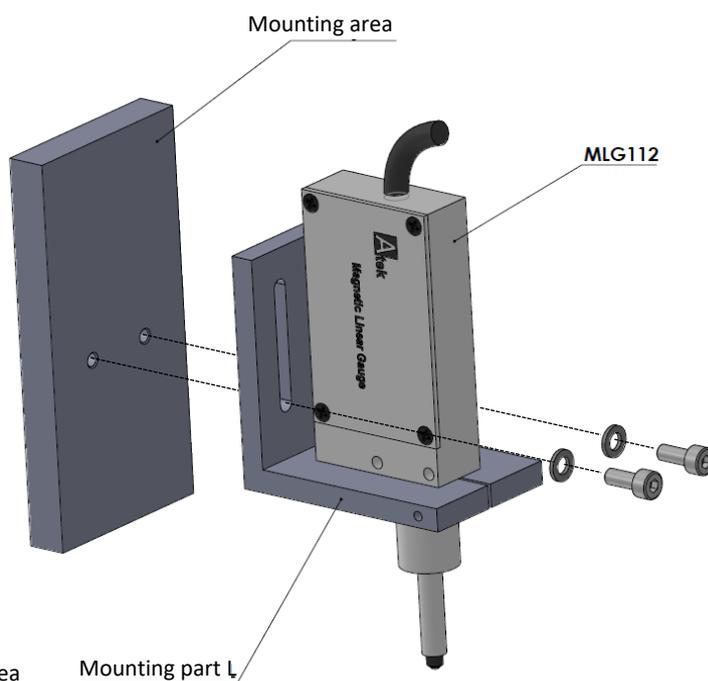
### ML (L Type) Mounting Part



Mounting with standard mounting part



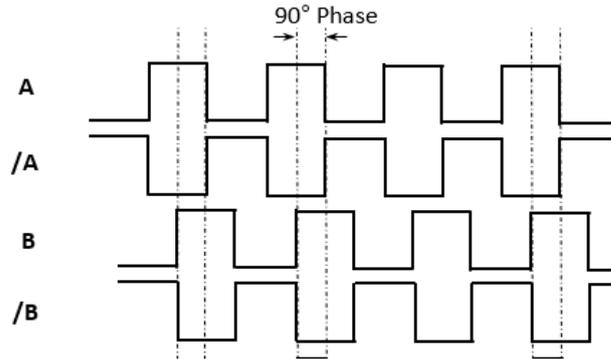
Mounting with L type mounting part



TECHNICAL FEATURES

|                                |                                     |                       |                             |                             |                      |
|--------------------------------|-------------------------------------|-----------------------|-----------------------------|-----------------------------|----------------------|
| <b>Measurement Principle</b>   | Magnetic, hall-effect               |                       |                             |                             |                      |
| <b>Measurement Range</b>       | 5mm or 10mm                         |                       |                             |                             |                      |
| <b>Distance to upper stop</b>  | +2mm                                |                       |                             |                             |                      |
| <b>Resolution</b>              | 1µm                                 |                       |                             |                             |                      |
| <b>Linearity</b>               | 20µm                                |                       |                             |                             |                      |
| <b>Output Signal</b>           | Quadrature square wave              |                       |                             |                             |                      |
| <b>Supply and Output Type</b>  |                                     | <b>PP</b>             | <b>TTL</b>                  | <b>HTL</b>                  | <b>HPL</b>           |
|                                | <b>Supply</b>                       | 10...30 VDC           | 5 VDC                       | 10...30 VDC                 | 5...30 VDC           |
|                                | <b>Output</b>                       | 10...30 VDC Push-pull | 5 VDC TTL RS422 Line Driver | 5 VDC TTL RS422 Line Driver | 5...30 VDC Push-pull |
| <b>Output Signals</b>          | A, /A, B, /B                        |                       |                             |                             |                      |
| <b>Current Consumption</b>     | Max 40 mA / channel                 |                       |                             |                             |                      |
| <b>Repeatability</b>           | 4µm max.                            |                       |                             |                             |                      |
| <b>Maximum operating speed</b> | 3 m/s                               |                       |                             |                             |                      |
| <b>Measurement Force</b>       | <2N                                 |                       |                             |                             |                      |
| <b>Stem diameter</b>           | Ø15mm                               |                       |                             |                             |                      |
| <b>Mechanical life</b>         | ~10 million times                   |                       |                             |                             |                      |
| <b>Operating temperature</b>   | -25...+85 °C                        |                       |                             |                             |                      |
| <b>Storage temperature</b>     | -40...+100 °C                       |                       |                             |                             |                      |
| <b>Electrical connection</b>   | 0,14 mm <sup>2</sup> shielded cable |                       |                             |                             |                      |
| <b>Protection</b>              | IP54                                |                       |                             |                             |                      |
| <b>Housing material</b>        | Aluminum                            |                       |                             |                             |                      |

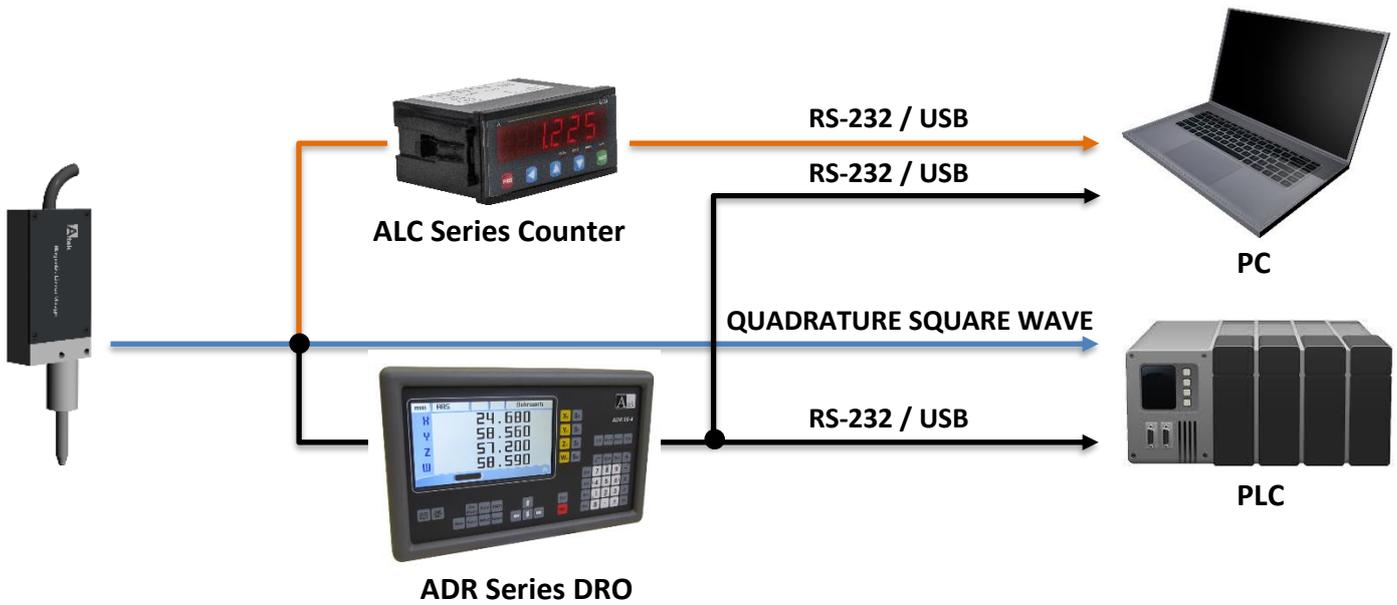
| SIGNAL | CABLE COLOR |
|--------|-------------|
| A      | Yellow      |
| /B     | White       |
| +V     | Red         |
| 0V     | Black       |
| /A     | Blue        |
| B      | Green       |
| -      | Shield      |



In the table above the cable colors of sensors output signals are given. If the control circuit is suitable in the Line Driver sensors of the not output signals (/A, /B) have to be added to the system. If it is not suitable /A, /B signal cables must be fixed as insulated separately. Don't forget that these edges have electricity too.

**WARNING (!)** The sensor should be kept away from any magnetic field. If magnets or devices with similar magnetic effects come close to the product, it will disrupt the working structure of the sensor.

**SYSTEM CONFIGURATION**



**BY PRODUCTS**



**ALC Series Counters**



**ADR Series Digital Readouts**



**Power Supply and Output**

TTL : 5VDC Supply Voltage,  
5 VDC TTL RS422 Line Driver Signal Output  
PP : 10...30 VDC Supply Voltage,  
10...30 VDC Push-Pull Signal Output  
HTL : 10...30 VDC Supply Voltage,  
5 VDC TTL RS422 Line Driver Signal Output  
HPL : 5...30 VDC Supply Voltage,  
5...30 VDC Push-Pull Signal Output

**Measurement Range**

05 : 5mm  
10 : 10mm

**Electrical Connection**

3M : 3 meters cable  
\*Optional others

|              |   |    |   |                   |   |     |   |   |   |    |   |   |
|--------------|---|----|---|-------------------|---|-----|---|---|---|----|---|---|
| MLG 112      | - | XX | - | XX                | - | XXX | - | X   | - | XX | - | XX  |
| <b>Model</b> |   |    |   | <b>Resolution</b> |   |     |   | <b>Signal Output Type</b>                   |   |    |   | <b>Probe Tip Option</b>                             |
|              |   |    |   | 01 : 1µm          |   |     |   | 2 : A, B<br>3 : A, B, Z<br>4 : A, /A, B, /B |   |    |   | PR : Bearing tip probe<br>PB : Ball point tip probe |

**OPTIONAL PRODUCTS**

|                     |                        |                      |
|---------------------|------------------------|----------------------|
|                     |                        |                      |
| <b>Product Code</b> | MS                     | ML                   |
| <b>Description</b>  | Standard mounting part | L type mounting part |