
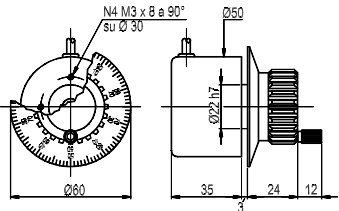

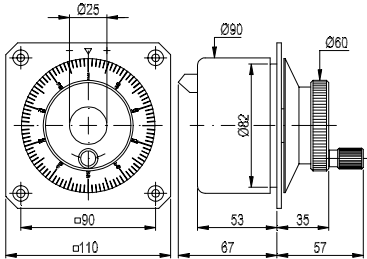

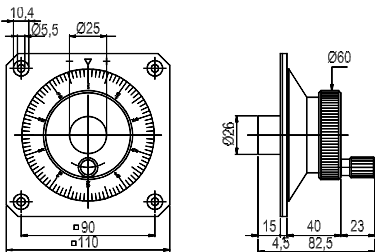

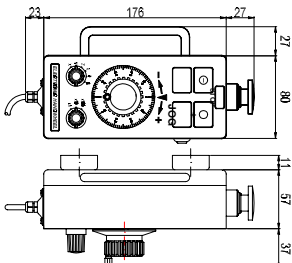

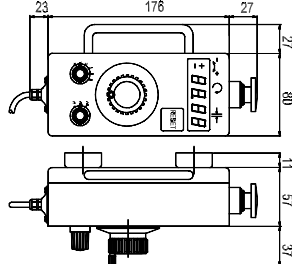

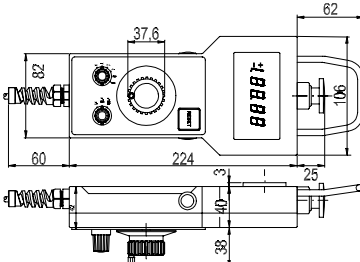


- Incremental encoders
- Absolute encoders
- Linear transducers
- Helical couplings



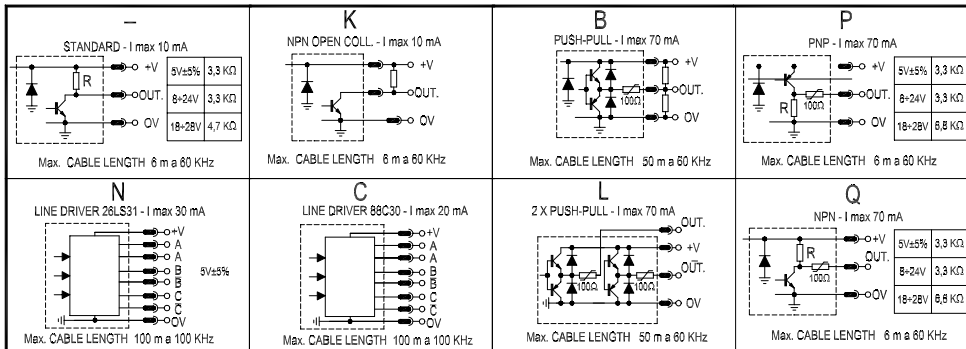
## ELECTRONIC HANDWHEELS

|             |   |  |   |
|-------------|---|--|---|
| <b>VA5</b>  |    |    | <p><b>Weight:</b> about 190 g.<br/> <b>Protection:</b> IP54<br/> <b>Axial connections:</b> -<br/> <b>Radial connections:</b> cable<br/> <b>Electronics:</b> -, K, B, N, C<br/> <b>Power supply:</b> 5V,8 ÷ 24V,18 ÷ 28V<br/> <b>Pulses/rev.:</b> 100</p>  |
| <b>VA10</b> |    |   | <p><b>Weight:</b> about 900 g.<br/> <b>Protection:</b> IP64<br/> <b>Axial conn.:</b> cable or connector<br/> <b>Radial conn.:</b> cable or connector<br/> <b>Electronics:</b> -, K, B, N, C<br/> <b>Power supply:</b> 5V,8 ÷ 24V,18 ÷ 28V<br/> <b>Pulses/rev.:</b> 100</p>  |
| <b>WA10</b> |  |  | <p><b>Weight:</b> about 650 g<br/> <b>Protection:</b> IP53<br/> <b>Axial conn.:</b> terminal box<br/> <b>Radial connections:</b> -<br/> <b>Electronics:</b> -, K, N<br/> <b>Power supply:</b> 5V<br/> <b>Pulses/rev.:</b> 100</p>   |
| <b>PH51</b> |  |  | <p><b>Weight:</b> about 1390 g.<br/> <b>Protection:</b> IP64<br/> <b>Connections:</b> spiral cable<br/> <b>Electronics:</b> -, K, B, N, C<br/> <b>Power supply:</b> 5V,8 ÷ 24V,18 ÷ 28V<br/> <b>Pulses/rev.:</b> 100<br/> <b>Switches:</b> 2<br/> <b>Push buttons:</b> 4 + emergency</p>  |
| <b>PEH</b>  |  |  | <p><b>Weight:</b> about 1440 g.<br/> <b>Protection:</b> IP64<br/> <b>Connections:</b> spiral cable<br/> <b>Electronics:</b> -, K, B, N, C<br/> <b>Power supply:</b> 5V,8 ÷ 24V,18 ÷ 28V<br/> <b>Pulses/rev.:</b> 100<br/> <b>Switches:</b> 2<br/> <b>Push buttons:</b> 1 for the emergency<br/> <b>Display:</b> 4 digits + sign</p> |
| <b>PEH1</b> |  |  | <p><b>Weight:</b> about 1440 g.<br/> <b>Protection:</b> IP64<br/> <b>Connections:</b> spiral cable<br/> <b>Electronics:</b> -, K, B, N, C<br/> <b>Power supply:</b> 5V,8 ÷ 24V,18 ÷ 28V<br/> <b>Pulses/rev.:</b> 100<br/> <b>Switches:</b> 2<br/> <b>Push buttons:</b> 1 for the emergency<br/> <b>Display:</b> 4 digits + sign</p> |

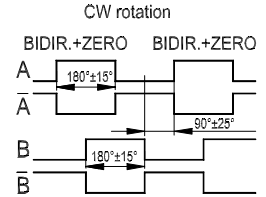
# TECHNICAL SPECIFICATIONS

| MODELLO - MODEL                  |    | VA5                                   | VA10               | VAS10    | WA10  | PH51              | PEH             | PEH1 |
|----------------------------------|----|---------------------------------------|--------------------|----------|-------|-------------------|-----------------|------|
| Weight                           | g  | 190                                   | 900                | 850      | 650   | 1400              | 1450            | 1450 |
| Housing and Knob                 | -  | Anodized aluminium                    |                    |          |       |                   |                 |      |
| Internal shaft                   | -  | Installed on a pair of ABEC5          |                    |          |       |                   |                 |      |
| Start torque                     | Nm | 0,15                                  | 0,15               | 0,15     | 0,12  | 0,12              | 0,12            | 0,12 |
| Shock resistance (11mS)          | G  | 30                                    |                    |          |       |                   |                 |      |
| Vibration resistance (10÷2000Hz) | G  | 10                                    |                    |          |       |                   |                 |      |
| Protection degree                | IP | 54                                    | 64                 | 64       | 53    | 64                | 64              | 64   |
| Light source                     | -  | GaAs Led                              |                    |          |       |                   |                 |      |
| Light detectors                  |    | Phototransistors in push-pull connect |                    |          |       |                   |                 |      |
| Internal electronic              | -  | -                                     | -                  | -        | -     | -                 | CMOS – TTL      |      |
| Display                          | -  | -                                     | -                  | -        | -     | -                 | 7 segments      |      |
| Readout                          | -  | -                                     | -                  | -        | -     | -                 | 4 digits + sign |      |
| Pulses per revolutions           | N° | 100                                   | 100 o 25           | 100 o 25 |       |                   |                 | 100  |
| Operating voltage                | V  | 5±5%, 8÷24, 18÷28                     |                    |          | 5±5%  | 5±5%, 8÷24, 18÷28 |                 |      |
| Consumption                      | mA | 80 without driver, 150 with driver    |                    |          |       |                   |                 | 250  |
| Operating temperature            | °C | 0÷70                                  |                    |          |       |                   |                 | 0÷60 |
| Storage temperature              | °C | -20÷+85                               |                    |          |       |                   |                 |      |
| Connections                      | -  | Cable                                 | Cable or connector |          | MS    | Spiral cable      |                 |      |
| Output electronic                | -  | -,K,B,C,N,P                           |                    |          | -,K,N | -,K,B,C,N,P       |                 |      |
| Rotational life at 200 RPM       | H  | 1.000.000                             |                    |          |       |                   |                 |      |
| Standard spiral cable lenght     |    |                                       |                    |          |       |                   |                 | 3m   |

## OUTPUT ELECTRONICS



## OUTPUT SIGNALS



## ORDERING CODE

| OPTIONS  | MODEL      | PULSES PER REV.                    | POWER SUPPLY  | VERSION                  | ELECTRONIC   | CONNECTION   | OUTPUT                         |
|--|------------|------------------------------------|---|--------------------------|--|--|--------------------------------|
| [ ]  | <b>VA5</b> | <b>100</b>                         | <b>5</b>  | <b>B</b>                 | <b>N</b>   | <b>CV</b>  | <b>R</b>                       |
| Only for PEH<br>- - Standard<br><b>M</b> – Magnetic coupler<br><b>X</b> – Custom options |            | <b>25</b> – 25<br><b>100</b> – 100 | <b>5</b> – 5V ±5%<br><b>824</b> – 8 ÷ 24V<br><b>1828</b> – 18 ÷ 28V<br><b>815</b> – 8 ÷ 15V | <b>B</b> – Bidirectional | - - Standard<br><b>K</b> – Open collector<br><b>B</b> – Push-pull<br><b>N</b> – 26LS31 Line driver<br><b>C</b> – 88C30 Line driver | <b>CV</b> – Cable<br><b>MS</b> – Terminal box<br><b>CD</b> – DE9P Connector<br><b>CM</b> – MS3102A-16S-1P connector<br><b>CL</b> – MS3102A-18-1P connector<br><b>CI</b> – UTG014-12P connector<br><b>CH</b> – Eml121 connector | - - Axial<br><b>R</b> - Radial |