1982  Lika Electronic founded in Schio (VI).

1983  Lika starts the production of absolute encoders for the German market.

1985  Lika produces a 50 mm diameter miniature encoder, the smallest absolute encoder in Europe.

1986  Manufacturing of absolute encoders with integrated display and incremental encoders for the Italian market.

1987  Lika starts the production of absolute encoders for the German market.

1990  Foundation of Lika Trading commercial corporate.

1991  Lika Electronic is the first company in Italy to offer a complete portfolio of encoders in the 58 mm diam. range.


1995  The 100,000th encoder rolled off the production line.

1995  ROTACAM ASR58 is the first absolute encoder fitted with a cam programmer.

1996  ROTAPULS  
Incremental rotary encoders

ROTACOD  
Absolute rotary & Fieldbus encoders

ROTAMAG  
Rotary Magnetic encoder & Encoder modules

LINEPULS - LINECOD  
Linear Absolute & Incremental encoders

DRAW-WIRE  
Draw-wire encoders & potentiometers

COUPLINGS  
Flexible & Transmission couplings

POSCONTROL  
Displays & Signal converters
Encoder Interfaces

DRIVECOD  
Rotary Actuators & Positioning units

30 YEARS YOUNG  
1982-2012
Lika Electronic stands for encoders and position measuring systems. Since its inception in 1982, Lika Electronic develops and manufactures incremental and absolute, optical and magnetic, rotary and linear encoders, incremental & absolute sensors, linear and rotary incremental & absolute magnetic measurement systems, rotary actuators, displays, signal converters and encoder interfaces.

Starting as a family-owned business, thanks to its technical competence and comprehensive know-how in the automation industry along with the high quality standards and the skill in providing solutions that target specific customer needs, over the years Lika Electronic has grown becoming a forward thinking innovative and global company and has become one of the leading manufacturers of optical encoders and magnetic measurement systems in Europe and worldwide.

Many key features include the extensive technical engineering skills, in-depth knowledge and expertise in digital and analogical electronic design as well as the proven daily practice in co-operation with universities, research institutions and customers in order to develop and provide advanced electronic equipment and high-tech materials & devices tailored to specific customer and market requirements. Moreover software development and mechanical & optical components design are entirely performed within the company. Often production machinery and tools are often engineered and built internally to satisfy specific needs and performances.

Every day Lika Electronic is committed to being a step ahead and always at the forefront of innovation, looking to the future with the enthusiasm that steers the company towards new opportunities without giving up the strength of being an international family company.

Lika Electronic is certified for compliance with ISO 9001:2000 quality management system and is now committed to adopt an environmental management system complying with ISO 14001:2004 requirements. All Lika’s products are designed and manufactured to fully meet the requirements of CE, RoHS and REACH directives, most of them are UL and CSA compliant too. ATEX certified solutions suitable to be integrated into potential explosive environments and hazardous areas are also available.

Global presence, make us closer to the customer

Every day, everywhere Lika Electronic works in close contact with its customers to build strong, long-lasting relationships and support them at all times in each day-to-day requirement.

Lika’s actions focus on customers’ needs with daily challenges to develop reliable and cutting edge solutions.

Continuous innovation, outstanding expertise, overall quality, prompt action and maximum flexibility are the fundamental values that Lika Electronic is truly proud of offering its customers when working together.

Lika Electronic operates all over the world providing a widespread and efficient global distribution network, offering unrivalled technical support and excellent customer service.

At the present time the export share is approximately 60% of the turnover in more than 50 countries.
# Product News Calendar

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Product Details</th>
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<tbody>
<tr>
<td>Gennaio</td>
<td>01 @ 20</td>
<td>SMIS “Selector”</td>
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<tr>
<td></td>
<td>02 @ 20</td>
<td>IT68 tool machine encoder</td>
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<tr>
<td></td>
<td>03 @ 20</td>
<td>SFA absolute draw-wire encoder</td>
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<tr>
<td></td>
<td>04 @ 20</td>
<td>SMRI magnetic ring encoder</td>
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<tr>
<td></td>
<td>05 @ 20</td>
<td>MOR flexible coupling with electric insulation</td>
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<td>06 @ 20</td>
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<td>07 @ 20</td>
<td>C50 hollow shaft encoder</td>
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<td></td>
<td>08 @ 20</td>
<td>SMAX Low-cost position sensor</td>
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<td>09 @ 20</td>
<td>MSK36</td>
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<td></td>
<td>10 @ 20</td>
<td>MH58S Heavy-duty absolute encoder</td>
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<td>11 @ 20</td>
<td>AMR58 cam switch encoder</td>
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<td>12 @ 20</td>
<td>RD6 rotary actuator</td>
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<td>14 @ 20</td>
<td>MOM Ultra-robust coupling</td>
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<td>15 @ 20</td>
<td>SMG Tooth Sensor</td>
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<td>16 @ 20</td>
<td>SMA Absolute Sensor</td>
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<td>18 @ 20</td>
<td>HM58 high resolution with PROFINET</td>
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<td>19 @ 20</td>
<td>SMB UHV</td>
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<td>20 @ 20</td>
<td>SMRA absolute ring encoder</td>
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<tr>
<td>Model</td>
<td>Dimensions (mm)</td>
<td>Hollow shaft ø (mm)</td>
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<td>RD1A</td>
<td>59 x 112 x 125</td>
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<tr>
<td>RD12A</td>
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</tr>
<tr>
<td>RD5</td>
<td>48,3 x 88 x 126,6</td>
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<tr>
<td>RD52</td>
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<tr>
<td>RD4</td>
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**RD1A**: Positioning unit with absolute encoder, Brushless motor, Diagnostic LEDs

**RD12A**: Positioning unit with absolute encoder, Brushless motor, Diagnostic LEDs

**RD5**: Compact positioning unit with absolute encoder, Brushless motor

**RD52**: Compact positioning unit with absolute encoder, Brushless motor

**RD4**: Positioning unit with absolute encoder, Brushless motor

**RD1A**: Industrial

**RD12A**: Industrial

**RD5**: Industrial

**RD52**: Industrial

**RD4**: Heavy-duty

**RD1A**: 28

**RD12A**: 30

**RD5**: 32

**RD52**: 32

**RD4**: 34

**DRIVECOD rotary actuators**
<table>
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<tr>
<th>Page</th>
<th>Display</th>
<th>Dimensions (mm)</th>
<th>Input</th>
<th>Counting frequency max.</th>
<th>Interface</th>
<th>Power supply</th>
<th>Output max.</th>
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<tr>
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<td></td>
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<td>angular</td>
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**POSICONTROL displays & interfaces**
<p>| IF10 | Industrial | 58 | Universal incremental encoder signal splitter, converter &amp; switcher DIN rail mounting | 2 inputs HTL or TTL / RS422 | 2 outputs HTL or TTL / RS422 | Adjustable inputs and outputs signal levels (can be mixed) Contactless switch-over Up to 1 MHz input frequency |
| IF20 | Industrial | 59 | Signal converter for incremental encoder DIN rail mounting | HTL or TTL / RS422 | HTL or TTL / RS422 | Output voltage according to remote voltage Input/Output galvanically separated AB quadrature to UP/DOWN conversion |
| IF30 | Industrial | 60 | Sine/Cosine signal interpolator DIN rail mounting | 1Vpp | HTL (A0) or RS422 (A0/A0) | Adjustable interpolation rate up to x50 Adjustable pulse divider Filtering functions |
| IF50 | Industrial | 61 | Incremental signal to Analogue converter DIN rail mounting | HTL or TTL / RS422 | ± 10 V 0-20 mA 4-20 mA | Rs232 Rs485 | Signal linearization Scaling factor Teach-in function |
| IF51 | Industrial | 62 | Absolute SSI to Analogue converter DIN rail mounting | SSI (up to 25 bit) | ± 10 V 0-20 mA 4-20 mA | Rs232 Rs485 | Bit blanking function Signal linearization Scaling factor |
| IF52 | Industrial | 63 | Absolute SSI to Bit parallel converter DIN rail mounting | SSI (up to 25 bit) | Push-Pull | Rs232 | Signal linearization Scaling factor |
| IF60 - IF61 | Heavy-duty | 64 | Fibre-optic signal converters for incremental encoders IF60 transmitter IF61 receiver | HTL or TTL / RS422 | Optical signal | Safe signal transmission up to 1000 m Suitable for explosive areas and environments with extremely high electromagnetic fields |
| IF62 - IF63 | Heavy-duty | 65 | Fibre-optic signal converters for absolute encoders IF62 transmitter IF63 receiver | SSI | Optical signal | Safe signal transmission up to 1500 m Suitable for explosive areas and environments with extremely high electromagnetic fields |</p>
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<th>IM30 – IM31 – IM56</th>
<th>30+56</th>
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<th>-40 +85 (-40 +185)</th>
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</table>

**Rotapuls Incremental Encoders**

**Housing ø (mm)**

**Shaft max. ø (mm)**

**Shaft rotational speed max. (rpm)**

**Resolution max. (PPR)**

**Output frequency max. (kHz)**

**Power supply (Vdc)**

- NPN
- PNP
- 1Vpp
- Push-Pull
- Line Driver
- Universal circuit

**Operating temp. °C (°F)**

- min.
- max.

**Protection max.**

- connector
- cable
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<th>Type</th>
<th>Connector</th>
<th>Cable</th>
<th>Housing ø (mm)</th>
<th>Shaft max. ø (mm)</th>
<th>Shaft rotational speed max. (rpm)</th>
<th>Resolution max. (PPR)</th>
<th>Output frequency max. (kHz)</th>
<th>Power supply (Vdc)</th>
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<th>PNP</th>
<th>1 Vpp</th>
<th>Push-Pull</th>
<th>Line Driver</th>
<th>Universal circuit</th>
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### ROTACOD absolute encoders

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<th>Diameter (mm)</th>
<th>Shaft max. ø (mm)</th>
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<th>Connection</th>
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<th>Power supply (Vdc)</th>
<th>CPR</th>
<th>Modbus</th>
<th>Add. incremental track</th>
<th>Analogue output</th>
<th>Operating temp. °C (+F) min. - max.</th>
<th>Protection max.</th>
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<td>Protection max.</td>
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<td>CANopen LIFT</td>
<td>Profibus-DP</td>
<td>DeviceNet</td>
<td>EtherCAT</td>
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### ROTACOD absolute encoders - Fieldbus

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<th>CANopen LIFT</th>
<th>Profibus-DP</th>
<th>DeviceNet</th>
<th>EtherCAT</th>
<th>Operating temp. °C (°F) (max.)</th>
<th>Protection max.</th>
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<td>Profibus-DP</td>
<td>DeviceNet</td>
<td>EtherCAT</td>
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<td>Protection max.</td>
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<td>18</td>
<td>16 x 14</td>
<td>+10 +30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-25 +85 (-13 +185)</td>
<td>IP66</td>
<td></td>
</tr>
</tbody>
</table>
### DRAW WIRE UNITS & Accessories

<table>
<thead>
<tr>
<th>Dimensions (mm)</th>
<th>Measured length (mm)</th>
<th>Stroke per turn (mm)</th>
<th>Measuring speed max. (mm/sec)</th>
<th>Sensor</th>
<th>Incremental encoder</th>
<th>Absolute encoder</th>
<th>Fieldbus encoder</th>
<th>Atex encoder</th>
</tr>
</thead>
</table>
| **SFP**
Draw wire potentiometer
Miniature | 56 x 55 x 79 | 2000 | 100 | 2 | • | • |
| **SFE**
Draw wire encoder
Miniature | 56 x 55 x 64 | 2000 | 100 | 2 | • | • |
| **SFA**
Draw wire encoder
Miniature | 56 x 56 x 79 | 2000 | 100 | 1 | • | • |
| **SFI – SFA**
Draw wire unit
Standard version | 125 x 83 x 58 | 6800 | 200 | 2.5 | • | • | • |
| **SAK-10000**
**SAK-15000**
Draw wire unit
Reinforced winding mechanism | 233.5 x 128 x 135 | 15000 | 300 | 10 | • | • | • | • |
| **SBK-20000, SBK-30000**
**SBK-40000, SBK-50000**
Draw wire unit
Reinforced winding mechanism | 401 x 190 x 200 | 50000 | 500 | 10 | • | • | • | • |

### Flexible couplings
- Complete range of encoder and transmission couplings
- Flexible or rigid
- Zero-backlash
- Electrically insulated
- Vibration absorbing
- High torque & stiffness versions
- Grub screw or collar fixing
- Versions with keyway
- Stainless steel versions

### Mounting and Connection accessories
- Mounting accessories for encoders and electrical connections
- Spring loaded brackets
- Mounting bells and adapter flanges
- Fixing clamps, Reducing sleeves
- Connectors
- Cordets

### Metric wheels and Gears
- Metric wheels with 200 and 500 mm circumference
- Aluminum or Rubber surface
- Metric wheel encoders
- (IR65 series on request)
- Rack and pinions
- (for ICS series)
| MT - MTS | Magnetic tape | Incremental coding | Dimensions (mm) | Connection | Resolution max. (µm) | Travel speed max. (m/s) | Push-Pull | Line Driver | 1Vpp | Reference | Limit switches | Power supply (Vdc) | Operating temp. °C (°F) | min. - max. | Protection max. |
|----------|---------------|-------------------|-----------------|------------|---------------------|------------------------|----------|-------------|-------|-----------|---------------|-----------------|------------------------|------------|-----------------
<p>| MT: 10   | MTS: 5 x 100 m max. | -                  | -               | -          | -                   | -                      | -        | -           | -    | -         | -             | -40 +120 (-40 +248) | IP67                   |          |
| MRI/xxx  | Magnetic rings | Incremental coding | Ø up to 1000    | -          | -                   | -                      | -        | -           | -    | -         | -             | -40 +120 (-40 +248) | IP67                   |          |
| SMB2 - SMB5 | Magnetic sensors | External converter | 25 x 15 x 8,5 | 1          | 16                  | 5                      | 10 +30   | +5          |       | -90       | -80           | +25 +85 (-13 +185) | IP67                   |          |
| SME51    | Magnetic sensor | Status LED, wipers | 40 x 25 x 10   | 5          | 16                  | 5                      | 10 +30   | +5          |       | -90       | -80           | +25 +85 (-13 +185) | IP67                   |          |
| SME52    | Magnetic sensor | Status LED, wipers, limit switches | 40 x 25 x 10 | 5          | 16                  | 5                      | 10 +30   | +5          |       | -90       | -80           | +25 +85 (-13 +185) | IP67                   |          |
| SME21    | Magnetic sensor | Status LED, wipers, limit switches | 40 x 25 x 10 | 1          | 16                  | 5                      | 10 +30   | +5          |       | -90       | -80           | +25 +85 (-13 +185) | IP67                   |          |
| SME22    | Magnetic sensor | Status LED, wipers, limit switches | 40 x 25 x 10 | 1          | 16                  | 5                      | 10 +30   | +5          |       | -90       | -80           | +25 +85 (-13 +185) | IP67                   |          |
| SME11    | High performance sensor | for linear motors | 40 x 25 x 10 | 0,5       | 16                  | 5                      | 10 +30   | +5          |       | -90       | -80           | +25 +85 (-13 +185) | IP67                   |          |
| SME12    | High performance sensor | for linear motors | 40 x 25 x 10 | 0,5       | 16                  | 5                      | 10 +30   | +5          |       | -90       | -80           | +25 +85 (-13 +185) | IP67                   |          |</p>
<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Dimensions (mm)</th>
<th>Connector</th>
<th>Resolution max. (µm)</th>
<th>Travel speed max. (m/s)</th>
<th>Push/Pull</th>
<th>Line Driver</th>
<th>1Vpp</th>
<th>Reference</th>
<th>Limit switches</th>
<th>Power supply (Vdc)</th>
<th>Operating temp. °C (°F)</th>
<th>Protection max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMS11</td>
<td>Magnetic sensor for linear motors Sine/cosine output Feedback</td>
<td>40 x 25 x 10</td>
<td>•</td>
<td>1000</td>
<td>16</td>
<td>•</td>
<td></td>
<td>•</td>
<td>•</td>
<td>+5</td>
<td>-25 +85 (-13 +185)</td>
<td>IP67</td>
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<tr>
<td>SMS12</td>
<td>Magnetic sensor for linear motors Sine/cosine output Limit switches Feedback</td>
<td>40 x 25 x 10</td>
<td>•</td>
<td>1000</td>
<td>16</td>
<td>•</td>
<td></td>
<td>•</td>
<td>•</td>
<td>+5</td>
<td>-25 +85 (-13 +185)</td>
<td>IP67</td>
<td></td>
</tr>
<tr>
<td>SMK</td>
<td>Robust magnetic sensor for standard applications Heavy-duty</td>
<td>40 x 25 x 10</td>
<td>•</td>
<td>10</td>
<td>2.5</td>
<td>•</td>
<td></td>
<td>•</td>
<td>•</td>
<td>+5 +10 +30</td>
<td>-25 +85 (-13 +185)</td>
<td>IP67</td>
<td></td>
</tr>
<tr>
<td>SML - SMH</td>
<td>Robust magnetic sensors for standard applications Heavy-duty</td>
<td>40 x 25 x 10</td>
<td>•</td>
<td>100</td>
<td>10</td>
<td>•</td>
<td></td>
<td>•</td>
<td>•</td>
<td>+5 +10 +30</td>
<td>-25 +85 (-13 +185)</td>
<td>IP67</td>
<td></td>
</tr>
<tr>
<td>SMX2 - SMX5</td>
<td>Magnetic speed sensors Heavy-duty</td>
<td>M10 x 30</td>
<td>•</td>
<td>5 mm (1.25) 2 mm (0.5)</td>
<td>30</td>
<td>(7.5 kHz)</td>
<td></td>
<td>•</td>
<td>•</td>
<td>+5 +10 +30</td>
<td>-10 +70 (+14 +158)</td>
<td>IP67</td>
<td></td>
</tr>
<tr>
<td>SMSR</td>
<td>Miniature magnetic sensor for linear motors and pick &amp; place applications Feedback</td>
<td>25 x 15 x 8,5</td>
<td>•</td>
<td>1000</td>
<td>10</td>
<td>•</td>
<td></td>
<td>•</td>
<td>•</td>
<td>+5</td>
<td>-25 +85 (-13 +185)</td>
<td>IP68</td>
<td></td>
</tr>
<tr>
<td>SMIG</td>
<td>Magnetic system with self-guiding sensor head Heavy-duty</td>
<td>80 x 48 x 28</td>
<td>•</td>
<td>5</td>
<td>1</td>
<td>•</td>
<td></td>
<td>•</td>
<td>•</td>
<td>+5 +10 +30</td>
<td>-25 +85 (-13 +185)</td>
<td>IP67</td>
<td></td>
</tr>
</tbody>
</table>
### LINECOD absolute magnetic sensors

| MTA1 – MTA5  | Magnetic tape | Absolute coding |
| Dimensions (mm) | 20 x 5,1 m | - | - | - | - | - | - | - | - | - | - | 40 +120 (-40 +248) | IP67 |
| SMA5  | Compact magnetic sensor | SSI interface |
| Dimensions (mm) | 65 x 20 x 20 | 5 | 5 | • | • | +10 +30 | -25 +85 (-13 +185) | IP67 |
| SMA1  | Compact magnetic sensor | BiSS + sin/cos interface |
| Dimensions (mm) | 85 x 21 x 20 | 5 | 5 | • | • | +10 +30 | -25 +85 (-13 +185) | IP67 |
| SMAG | Magnetic system with self-guiding sensor head |
| Dimensions (mm) | 80 x 48 x 28 | 5 | 1 | • | • | +10 +30 | -25 +85 (-13 +185) | IP65 |
| SMAL  | Magnetic sensor for long distances |
| Dimensions (mm) | 190 x 52 x 45 | 1 mm | 5 | • | • | • | • | +10 +30 | -25 +85 (-13 +185) | IP54 |
| SMAL2 | Magnetic sensor for long distances |
| Dimensions (mm) | 147 x 100 x 60 | 0,1 mm | 5 | • | • | • | • | +10 +30 | -25 +85 (-13 +185) | IP54 |
Intelligent rotary actuators
Designed to solve your positioning needs

More and more increasingly modern industries demand automated production processes with little downtimes to ensure optimum efficiency, provide precise control and repeatability, raise productivity and attain improvements in product quality. Meanwhile, the “large batch, long run” philosophy is becoming obsolete. Today volatile demands call for quick responses. Small-batches, one-off items, just-in-time production and acceleration of cycle times often drive businesses.

DRIVECOD series rotary actuators developed by Lika Electronic are the complete and cost-effective solution to help you solve these tasks. They are suitable to drive positioning and auxiliary axes and allow you to greatly reduce set-up and change-over times, in particular in multi-axis systems. Furthermore they prevent operator errors that not seldom afflict the manual positioning operations.

Thus DRIVECOD positioning units afford increased flexibility and responsiveness and make it possible to dramatically reduce the production costs ensuring maximum efficiency, speed in positioning along with the highest precision, extremely low downtimes, remarkably less waste material.

DRIVECOD series intelligent actuators are designed to fully integrate in a single package all of the components needed to deliver performance and safety in any motion control tasks: BLDC brushless motor, absolute multiturn encoder, smart position controller and fieldbus interface. No additional tools are required such as external controllers, brakes, proximity switches, limit switches, transducers, etc. as the unit already encompasses the absolute encoder and, on request, the brake as well as the software limit and reference switch functions, among others. The “all-in-one” configuration further provides the user with considerable simplification in design and ease of integration in motorized axes.

RD series positioning units are offered with the most popular industrial fieldbus interfaces: Profibus-DP, CANopen and Modbus RTU RS485 and come in both industrial and heavy-duty constructions to meet the specific requirements of any application and environment.

DRIVECOD positioning units are suitable for use in a wide range of applications in any industrial sector such as in mold changers, mobile stops, tools changers, filling and bottling machines, suction cups motion units, spindle positioning devices, conveyors, packaging & woodworking machineries, labelling machines, among others.

DRIVECOD rotary actuators bring many valuable benefits, including:
• cut machine set-up time;
• reduce downtimes;
• allow tailor-made individual production;
• ensure precise repeatability;
• prevent operator errors and waste of material;
• enable the modernization of existing plants;
• ease installation and wiring;
• offer “all-in-one” advantage.

This means: DRIVECODs produce effective machine utilization, maximize productivity, reduce costs.
Compact and easily integrateable

Frame
The rugged anticorodal or die-cast aluminium housing is designed to improve protection and dependability. It features small-footprint and space-saving design, thus it can be comfortably fitted into equipment with constrained and tight mounting space. Easy mounting characteristics increase flexibility due to the output hollow shaft made of stainless steel and available with diameters of 14 and 20 mm (0.55" and 0.79") according to model. The adjustable collar and antirotation pin fitted with an elastomeric screw insulation provide both stability and mobility needed to absorb the mechanical loads being exerted on the bearings and the shaft during operation. The mounting assembly grants unparalleled quickness and ease of installation and does not require any expensive couplings or mounting flanges. Even better it is exactly the same used for digital position indicators and handwheels widely installed in manual adjustable shafts, thus RD become the very profitable choice for modernizing existing systems. The degree of protection is up to IP65.

Rugged and high-performance

Motor
DRIVECOD rotary actuators are driven by sturdy 24VDC BLDC brushless motors capable of providing a nominal torque of up to 15 Nm and a starting torque of up to 30 Nm depending on models and gear ratios. Motors are compact, reliable and extremely durable and have up to 100 W. Power, accurate motion and safety are all under control thanks to the smart built-in position controller that enhances performance and flexibility at the highest levels.

Gear
The robust, compact size gearbox encompasses nitrided steel cogwheels built to last and is available in many ratios to suit a variety of torque requirements in specific applications. RD4 model further offers a superior benefit: cogwheels are oil bath lubricated for enduring smooth, quiet and even continuous operation in heavy-duty environments and the toughest installations.
Intelligent and accurate

Encoder
The multiturn absolute encoder is installed on the output axis and therefore is not affected by any backlash errors of the gears. It provides accurate measuring information to the position controller.

It is offered with a resolution of 1024 singleturn x 1024 multiturn (20-bit) or 1024 singleturn x 256 multiturn (18-bit) according to series with a position accuracy of ±0,9°.

This allows for motion detection as well as position and directional indication within hundredths of a millimetre accuracy even on 5-mm pitch spindles!

Furthermore it is able to output the absolute position information even when the shaft is moved after the power is turned off for installations that require the safest positioning routines. It needs no battery.

Position controller
The controller, fully developed by Lika Electronic, integrates many state-of-the-art features for command and control operational functions.

Control operation is achieved through two cascade control loop cycles, the position loop cycle performed at every 1 ms and the current loop cycle performed at every 200 μs. The internal trajectory generator (boasting a 64-bit double precision) allows the operator to set a new target position even on-the-fly.

Controls on overtemperature, overcurrent, undervoltage and bus communication failure (because of a broken or disconnected cable or a faulty wiring) are further implemented to increase operational safety.

Versatile and open

Fieldbus interfaces
RD positioning units can be easily integrated into fieldbus networks in any kind of industrial automation system thanks to the wide range of fieldbus protocols implemented: Profibus-DP, CANopen and Modbus RTU (RS485).

Fieldbus technology permits to improve performance thanks to complete device interface (bi-directional data transmission, enhanced programmability, comprehensive diagnostic information), achieve communication transparency, simplify and standardize installations allowing several devices to be simply connected in the same network.

Service interface
RD1A and RD12A Profibus and CANopen models are further equipped with an additional service serial port for simplified configuration and management of the unit through Lika’s programming software. Moreover the use of standardized bus cables provides an easier and safer connectivity thus saving time and money whilst reducing the risk of errors.
Programming software

To enhance interfaceability and ease programmability the sophisticated technology at the core of DRIVECODs is also accessible in specific models through an intuitively operated interface. A programming software is expressly developed and released by Lika Electronic and can be used as an alternative to your own bus controller to offer simple and comfortable operation, whenever you need to set the working parameters of the actuator; control manually some movements and functions; and monitor its work cycles. The program is supplied for free and can be installed in any PC fitted with a Windows operating system (Windows XP or later). Communication is achieved via USB serial interface. In this way user can easily and quickly programme, set up and start the positioning unit even before mounting at his convenience. Connection cables (USB to RD) are available for every model.

Up-to-date and upgradable

Boot-loader feature

Today almost all models of Lika’s RD positioning units offer a new noteworthy benefit. The intelligent controller implements now the boot-loader feature which allows the operator to upgrade the DRIVECOD unit firmware by downloading upgrading data to the flash memory. RD units are designed so that the firmware can be easily updated by the user himself. This allows Lika Electronic to make new improved firmware programs available during the lifetime of the product. Typical reasons for releasing a new firmware program include improving and even adding new functionalities to the device. RD5x model implements the boot-loader feature via CAN.
Complete and reliable

Key features

RD positioning units further boast a large number of added-value benefits offered at no charge. Just to give a mere cross section:

Centralized control
Actuators are centrally controlled through bus interfaces: a single command provides multiple precise adjustments in just one cycle and very short time.

Separated power supply
Control unit power supply is galvanically separated from motor power supply to enhance insulation and lines stability. Fieldbus can be operated when no power is provided to the motor.

General purpose I/Os
Up to three general purpose digital inputs and outputs are provided in specific models: they are useful to developers to have a handful of additional I/O resources available for the Master.

Preset & Jog buttons
Preset and Jog buttons are fitted in RD1xA model to manually move and calibrate the unit: no need for getting connection or engaging communication, just a push to take control.

Available commands
All models support both continuous jog command and incremental jog command (relative positioning).

Diagnostic LEDs
Diagnostic LEDs are meant to show visually the operating or fault status of both the device and the interface.

DIP switches
DIP switches are designed to hardware set the node ID, the baud rate and the termination resistance (when requested).

Integrated brake
RD12A and RD52 models are also equipped with an integrated brake. It is designed to activate as soon as the motor comes to a stop and safely protects the equipment from uncontrolled movements, especially in mobile stops and vertical axes.
Displays for incremental & absolute encoders

Compact, easy-to-integrate and user-friendly.
Lika Electronic designs, manufactures and markets a wide range of multi-function electronic counters and position controllers with either LCD or LED display.
Whether you need to achieve information about distance, stroke, rotation, quantity and time or to monitor position, angle, speed, rate, frequency, POSICONTROL displays offer the right solution for your any application.
They are easy-to-read, simple and versatile, support multiple operating modes and are able to suit the most diverse requirements in any kind of transducer installation.

POSICONTROL display series provides a great deal of benefits:
- Multi line up to 8-digit LED or LCD displays for simultaneous readout
- Crisp, clear visualisation with effective, eye-catching brightness
- Counting frequency up to 1 MHz
- Universal models for different devices and multi-purpose applications
- Dedicated parameters for either rotary encoders or linear sensors, incremental or absolute information
- Fully programmable (scaling factor, frequency, resolution, counting direction, preset, offset, filter, etc.) to best suit specific needs
- Extra functions such as linearisation, Teach-IN, security code and more
- Free outputs available
Comprehensive industrial communication & integration solutions

Nowadays a wide variety of data transmission types and interfaces is available to industrial processes. There is nothing unusual that devices having different communication standards need to be installed and communicate in the same system, especially in existing industrial installations. The need for integration of components with bad compatibility has recently grown and led both problems and costs to a significant increase.

To solve this matter today Lika Electronic has developed a comprehensive range of valuable and affordable solutions intended to meet a variety of practical and unique demands in encoder signal conversion, interpolation and transmission. Your advantage: no need for expensive replacements of equipment and cables, you can connect your varied automation components without any problems thus saving both time and money.

**POSICONTROL interfaces** are the efficient and low-cost industrial communication solutions designed to fulfill the integration requirements of your most diverse applications. They always allow modern and outdated industrial devices to reliably and safely communicate in the same system.

- Versatile, reliable and universal units for your any incremental and absolute requirements in industrial applications
- Incremental to analogue; sin/cos to incremental; SSI to analogue; SSI to parallel and much more
- From most basic up to fully programmable modules (scaling factor, digital filtering, SSI settings, etc.)
- Extra functions such as linearisation and Teach-IN procedures
- Fibre-optic signal converters for both incremental and absolute encoders up to 1500 m (5,000 ft)
- DIN rail mounting

**POSICONTROL Operating principle**

[Diagram showing POSICONTROL interface with connections for various signal types and specifications]
DRIVECOD
Rotary actuator

RD1A Series

- Integrated positioning unit
- High performance brushless motor
- RS232 service interface for easy setup
- Real absolute multi turn encoder
- Additional jog +/- buttons for easy calibration

ENVIRONMENTAL SPECIFICATIONS

Operating temperature range: 0°C +60°C (32°F +140°F)
Storage temperature range: -20°C +80°C (-4°F +176°F)
Protection: IP54

MECHANICAL SPECIFICATIONS

Dimensions: see drawing
Shaft hollow: Ø 14 mm
Shaft loading (axial and radial): 100 N, 200 N
Positioning accuracy: ± 0,9°
Electrical connections: M12 connectors
Duty cycle: 20% ED
Torque and shaft rotational speed:
- 5 Nm @ 60 rpm (T48)
- 2,5 Nm @ 120 rpm (T24)
- 1,2 Nm @ 240 rpm (T12)

Starting torque:
- T48: 12 Nm
- T24: 6 Nm
- T12: 3 Nm

Weight: ~ 1,8 kg (63,5 oz)

ELECTRICAL SPECIFICATIONS

Resolution: 1024 inf./rev. x 1024 rev.
Power supply: +24Vdc ± 10%
Power (motor): 31 W
Service interface: RS232 (except Modbus RTU RS485)
Bus Interface: Profinet-DP, CANopen, Modbus RTU (RS485)
Inputs: 3 x 24V
Output: 1 x o.c @ 100 mA

MATERIALS

Flange: non corroding, UNI EN AW-6082
Housing: non corroding, UNI EN AW-6082
Bearings: ABEC 5
Shaft: stainless steel non-magnetic, UNI EN 1.4305
Motor: high performance brushless motor

ACCESSORIES

CC-RD-PB: Profinet mating connectors
EC-M12MP-LK-PB-5: PB cordset M12 male conn., 5 m cable
EC-M12FP-LK-PB-5: PB cordset M12 female conn., 5 m cable
EC-M12FC-S37-P3-5: Cordset M12 power supply, 5 m cable
CC-RD-CB/M: CANopen/Modbus mating connectors
EC-M12MC-LK-CB-5: CB/MB cordset M12 male conn., 5 m cable
EC-M12FC-LK-CB-5: CB/MB cordset M12 female conn., 5 m cable
E-M12F8: M12 8 pin conn. for RS232 ft (0’s)
E-M12TC: M12 conn. for power supply
EXC-M12f8-LK-0,5-DSF-SS1: Connection cable RDxx to RS232 (PC)
EXC-USBA-SS4-0N-2-M12MC-SS4: Connection cable RDxx Modbus to USB/PC

Specifications subject to changes without prior notice
1 Fixing plate  
2 Dip switch Jog +/- button access  
3 Diagnostic leds  
4 M12 5 pin connector BUS OUT  
5 M12 8 pin plug, Service interface, I/Os  
6 M12 5 pin plug BUS IN  
7 M12 4 pin plug power supply  
8 GND connection

**Order code**

| RD1A |  | X |  | XXX |  | XX |  | XX |  | - |  | X |

**POWER SUPPLY**  
P8 = 24Vdc ± 10%

**TORQUE/SHAFT ROTATIONAL SPEED**  
T48 = 5 Nm @ 60 rpm  
T24 = 2,5 Nm @ 120 rpm  
T12 = 1,2 Nm @ 240 rpm

**INTERFACE**  
CB = CANopen (DS301)  
PB = Profibus-DP  
MB = Modbus RTU (RS485)

**ENCODER**  
E2 = Absolute, 1024 inf./rev. x 1024 rev.

**CONNECTIONS**  
M = M12 connectors
Integrated positioning unit
High performance brushless motor
RS232 service interface for easy setup
Real absolute multi turn encoder
Integrated motor brake for enhanced halt functions
Additional jog +/- buttons for easy calibration

**ENVIRONMENTAL SPECIFICATIONS**
Operating temperature range: 0°C to +60°C (32°F to 140°F)
Storage temperature range: -20°C to +80°C (-4°F to 176°F)
(98% R.H. without condensation)
Protection: IP54

**MECHANICAL SPECIFICATIONS**
Dimensions: see drawing
Shaft hollow: Ø 14 mm
Shaft loading (axial and radial): 100 N, 200 N
Positioning accuracy: ± 0,9°
Electrical connections: M12 connectors
Duty cycle: 20% ED
Torque and shaft rotational speed:
- 5 Nm @ 60 rpm (T48)
- 2,5 Nm @ 120 rpm (T24)
- 1,2 Nm @ 240 rpm (T12)
Starting torque:
- T48: 12 Nm
- T24: 6 Nm
- T12: 3 Nm
Hold force with activated brake:
- T48: 17 Nm
- T24: 8,5 Nm
- T12: 4,2 Nm
Weight: ~ 2,1 kg (74,1 oz)

**ELECTRICAL SPECIFICATIONS**
Resolution: 1024 inf./rev. x 1024 rev.
Power supply: +24Vdc ± 10%
Power (motor): 31 W
Service interface: RS232 (except Modbus RTU RS485)
Bus Interface: Profibus-DP, CANopen, Modbus RTU (RS485)
Inputs:
- 3 x 24V
Output:
- 1 x o.c @ 100 mA

**MATERIALS**
Flange: non corroding, UNI EN AW-6082
Housing: non corroding, UNI EN AW-6082
Bearings: ABEC 5
Shaft: stainless steel non-magnetic, UNI EN 1.4305
Motor: high performance brushless motor
Brake: electromagnetic brake

**ACCESSORIES**
CC-RD-PB: Profibus mating connector
EC-M12MP-LK-PB-5: PB cordset M12 male conn., 5 m cable
EC-M12FP-LK-PB-5: PB cordset M12 female conn., 5 m cable
EC-M12FC-S37-P3-5: Cordset M12 power supply, 5 m cable
CC-RD-CB/MB: CANopen/Modbus mating connectors
EC-M12MC-LK-CB-5: CB/MB cordset M12 male conn., 5 m cable
EC-M12MC-LK-CB-5: CB/MB cordset M12 female conn., 5 m cable
E-M12F8: M12 8 pin conn. for RS232 & I/O's
EXC-USB4-S54-GN-2-M12MC-S54: Connection cable for power supply
EXC-M12F8-LK-0,5-D9F-S51: Connection cable RDxx to RS232 (PC)
EXC-M12F8-LK-0,5-D9F-S51: Connection cable RDxx Modbus to USB/PC
RD12A

1 Fixing plate
2 Dip switch Jog +/- button access
3 Diagnostic leds
4 M12 5 pin connector BUS OUT
5 M12 8 pin plug, Service interface, I/Os
6 M12 5 pin plug BUS IN
7 M12 4 pin plug power supply
8 GND connection

Order code

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<th>X</th>
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</thead>
</table>

① POWER SUPPLY
PB = 24Vdc ± 10%

② TORQUE/SHAFT ROTATIONAL SPEED
T48 = 5 Nm @ 60 rpm
T24 = 2,5 Nm @ 120 rpm
T12 = 1,2 Nm @ 240 rpm

③ INTERFACE
CB = CANopen (DS301)
Pb = Profibus-DP
MB = Modbus RTU (RS485)

④ ENCODER
E2 = Absolute, 1024 inf./rev x 1024 rev.

⑤ CONNECTIONS
M = M12 connectors
### DriveCOD Compact rotary actuators with halt brake

**RD5 • RD52**

- Compact positioning unit for secondary axes
- Integrated drive, position controller & encoder
- Closed loop position control
- Absolute multi turn encoder
- RD52 with integrated motor brake
- M12 connections
- Boot loader via CAN

#### ENVIRONMENTAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating temperature range</td>
<td>0°C to 60°C (32°F to 140°F)</td>
</tr>
<tr>
<td>Storage temperature range</td>
<td>-20°C to 80°C (-4°F to 176°F)</td>
</tr>
<tr>
<td>(98% R.H. without condensation)</td>
<td></td>
</tr>
<tr>
<td>Protection</td>
<td>IP54</td>
</tr>
</tbody>
</table>

#### MECHANICAL SPECIFICATIONS

- Dimensions: see drawing
- Shaft hollow: Ø 14 mm
- Shaft loading (axial and radial): 50 N max.
- Positioning accuracy: ± 0.9°
- Electrical connections: 3 x M12 connectors
- Duty cycle: RD5: 70% ED, 300 s (without brake)  
  RD52: 45% ED, 300 s (with brake)
- Torque and shaft rotational speed: 5 Nm @ 60 rpm
- Starting torque: 12 Nm
- Hold force with activated brake: 10 Nm
- Weight: ~ 1 kg (35.2 oz)

#### ELECTRICAL SPECIFICATIONS

- Resolution: 1024 inf./rev. x 256 rev.
- Power supply: ±24Vdc ± 10%
- Power (motor): 31 W
- Input current: motor: ~1.6A nominal, ~2A max.  
  control unit: 80 mA max. (RD5)  
  480 mA max. (RD52)
- Bus Interface: Profinbus-DP, CANopen, Modbus RTU (RS485)
- Protection: against overcurrent and overtemperature

#### MATERIALS

- Flanges: die cast aluminium, UNI EN AC-46100
- Housing: die cast aluminium, UNI EN AC-46100
- Bearings: ABEC 5
- Shaft/Fixing clamp: stainless steel non-magnetic, UNI EN 4305
- Motor: high performance brushless motor
- Brake: solenoid hold brake

#### ACCESSORIES

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC-RD-PB</td>
<td>Profibus mating connectors</td>
</tr>
<tr>
<td>EC-M12MP-LK-PB-5</td>
<td>PB cordset M12 male conn., 5 m cable</td>
</tr>
<tr>
<td>EC-M12FP-LK-PB-5</td>
<td>PB cordset M12 female conn., 5 m cable</td>
</tr>
<tr>
<td>EC-M12FC-S37-P3-5</td>
<td>COrdset M12 power supply, 5 m cable</td>
</tr>
<tr>
<td>CC-RD-CB/MB</td>
<td>CANopen/Mobus mating connectors</td>
</tr>
<tr>
<td>EC-M12MC-LK-CB-5</td>
<td>CB/MB cordset M12 male conn., 5 m cable</td>
</tr>
<tr>
<td>EC-M12FC-LK-CB-5</td>
<td>CB/MB cordset M12 female conn., 5 m cable</td>
</tr>
<tr>
<td>E-M12TC</td>
<td>M12 conn. for power supply</td>
</tr>
<tr>
<td>EXC-USB4-554-0V-2-M12MC-554</td>
<td>Connection cable</td>
</tr>
</tbody>
</table>

Specifications subject to changes without prior notice
1 = Dip switch access, diagnostic LEDs
2 = Power supply connector
3 = Bus OUT connector
4 = Bus IN connector
5 = GND connection screw
6 = Magnet position for manual brake release

Order code

<table>
<thead>
<tr>
<th>RD5</th>
<th>RD52</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>X</td>
<td>XXX</td>
</tr>
<tr>
<td>4</td>
<td>b</td>
</tr>
<tr>
<td>5</td>
<td>c</td>
</tr>
<tr>
<td>6</td>
<td>d</td>
</tr>
</tbody>
</table>

- POWER SUPPLY
  PB = 24Vdc ± 10%

- TORQUE/SHAFT ROTATIONAL SPEED
  T50 = 5 Nm @ 60 rpm

- INTERFACE
  CB = CANopen (DS301)
  PB = Profindus-DP
  MB = Modbus RTU (RS485)

- ENCODER
  E3 = Absolute, 1024 inf./rev. x 256 rev.

- CONNECTIONS
  M = M12 connectors
- Heavy-duty rotary actuator for secondary axes
- Integrated drive, position controller & encoder
- Closed loop position control
- Starting torque from 24 to 30 Nm, rated torque from 10 to 15 Nm
- 20 bit real absolute encoder
- Oil bath gearbox for continuous operation

**ENVIRONMENTAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating temperature range</td>
<td>0°C to 60°C (32°F to 140°F)</td>
</tr>
<tr>
<td>Storage temperature range</td>
<td>-20°C to 80°C (-4°F to 176°F) (98% R.H. without condensation)</td>
</tr>
<tr>
<td>Protection</td>
<td>IP54</td>
</tr>
</tbody>
</table>

**MECHANICAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>see drawing</td>
</tr>
<tr>
<td>Shaft hollow</td>
<td>Ø 20 mm</td>
</tr>
<tr>
<td>Shaft loading (axial and radial):</td>
<td>100 N, 200 N</td>
</tr>
<tr>
<td>Positioning accuracy</td>
<td>± 0.9°</td>
</tr>
<tr>
<td>Electrical connections</td>
<td>M12 connectors</td>
</tr>
<tr>
<td>Duty cycle</td>
<td>50% ED</td>
</tr>
<tr>
<td>Torque and shaft rotational speed:</td>
<td>T32: 10 Nm @ 94 rpm / 6 Nm with continuous duty</td>
</tr>
<tr>
<td></td>
<td>T47: 15 Nm @ 63 rpm / 8 Nm with continuous duty</td>
</tr>
<tr>
<td>Starting torque</td>
<td>T32: 24 Nm</td>
</tr>
<tr>
<td></td>
<td>T47: 30 Nm</td>
</tr>
<tr>
<td>Weight</td>
<td>~ 2.8 kg (98.7 oz)</td>
</tr>
</tbody>
</table>

**ELECTRICAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resolution</td>
<td>1024 inf./rev. x 1024 rev.</td>
</tr>
<tr>
<td>Power supply</td>
<td>+24 Vdc ± 10%</td>
</tr>
<tr>
<td>Power (motor)</td>
<td>100 W</td>
</tr>
<tr>
<td>Input current</td>
<td>motor: 6.5 A max.</td>
</tr>
<tr>
<td></td>
<td>control unit: 75 mA max.</td>
</tr>
<tr>
<td>Bus Interface</td>
<td>Profibus-DP, CANopen (DS301), Modbus RTU (RS485)</td>
</tr>
<tr>
<td>Inputs</td>
<td>3 x 24V</td>
</tr>
<tr>
<td>Output</td>
<td>3 x O.C @ 100 mA</td>
</tr>
</tbody>
</table>

**MATERIALS**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flange</td>
<td>non corroding, UNI EN AW-6082</td>
</tr>
<tr>
<td>Housing</td>
<td>non corroding, UNI EN AW-6082</td>
</tr>
<tr>
<td>Bearings</td>
<td>ABEC 5</td>
</tr>
<tr>
<td>Shaft</td>
<td>stainless steel non-magnetic, UNI EN 1.4305</td>
</tr>
<tr>
<td>Motor</td>
<td>high performance brushless motor</td>
</tr>
</tbody>
</table>

**ACCESSORIES**

- CC-RD4-PB: Profibus mating connectors
- EC-M12MP-LK-PB-5: PB cordset M12 male conn., 5 m cable
- EC-M12FP-LK-PB-5: PB cordset M12 female conn., 5 m cable
- EC-M12X-P3-37-P3: M12 connector, 3 x 24V, 3 x O.C @ 100 mA
- CC-RD4-CB/M: CANopen/Modbus mating connectors
- EC-M12MC-LK-CB-5: CB/MB cordset M12 male conn., 5 m cable
- EC-M12FC-LK-CB-5: CB/MB cordset M12 female conn., 5 m cable
- E-M12F8: M12 8 pin conn. for I/Os
- E-M16F: M16 conn. for power supply
- EXC-US84-564-0V-2-M12MC-SS4: Connection cable RDox Modbus to USB/PC

Specifications subject to changes without prior notice
RD4 - X

a - XXX
b - XX
c - XX
d - X
e - XXX

Order code

- POWER SUPPLY
  P8 = 24 Vdc ± 10%

- TORQUE/SHAFT ROTATIONAL SPEED
  T32 = 10 Nm @ 94 rpm
  T47 = 15 Nm @ 63 rpm

- INTERFACE
  CB = CANopen (DS301)
  PB = Profibus-DP
  MB = Modbus RTU (RS485)

- ENCODER
  E2 = Absolute, 1024 inf./rev. x 1024 rev.

- CONNECTIONS
  M = M12 connectors
- Compact 5 digit LED display
- Max. display accuracy 0,01 mm
- Actual value memory
- Panel mount housing
- Reading distance sensor/tape up to 2 mm
- RS485 interface
- 5V backup input
- Works with SM5 magnetic sensors
Order code – Display

<table>
<thead>
<tr>
<th>LD120</th>
<th>-</th>
<th>XX</th>
<th>-</th>
<th>XX</th>
</tr>
</thead>
</table>

① INPUT ⑤ INTERFACE
M7 = magnetic sensor I4 = RS485

Order code – Sensor

<table>
<thead>
<tr>
<th>SMS</th>
<th>-</th>
<th>X</th>
<th>XX</th>
</tr>
</thead>
</table>

① SENSOR ⑤ CABLE LENGTH
R = rectangular 2 = cable 2 meters
C = circular X = cable X meters
(10 meters max.)

Order code – Tape

<table>
<thead>
<tr>
<th>MT50</th>
<th>-</th>
<th>XX</th>
<th>-</th>
<th>XXX</th>
<th>-</th>
<th>X</th>
</tr>
</thead>
</table>

① LENGTH ⑤ ACCURACY CLASS ⑥ COVER STRIP
1 = 1,0 m 100 = ± 85 µm/m
2 = 2,0 m 50 = ± 35 µm/m (up to 30 m)
4 = 4,0 m 10 = 10,0 m
10 = 10,0 m 20 = 20,0 m
20 = 20,0 m 30 = 30,0 m
30 = 30,0 m 1 = included
• Quasi-absolute LCD display
• Max. display accuracy 0,01 mm or 1/64 inch
• Actual value memory
• Linear and Angular display mode
• Panel mount housing
• Reading distance sensor/tape up to 1 mm
### Order code - Display

<table>
<thead>
<tr>
<th>LD112</th>
<th>XX</th>
<th>X</th>
<th>XX</th>
</tr>
</thead>
<tbody>
<tr>
<td>INPUT</td>
<td>ⓜ</td>
<td>ⓝ</td>
<td>ⓝ</td>
</tr>
<tr>
<td>M7 = magnetic sensor</td>
<td>R = rectangular</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ⓝ CABLE LENGTH</td>
<td>ⓝ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0,2 = cable 0,2 meters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 = cable 1 meter</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X = cable X meters (5 meters max.)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Order code - Tape

<table>
<thead>
<tr>
<th>MT25</th>
<th>XX</th>
<th>XXX</th>
<th>-</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>LENGTH</td>
<td>ⓝ</td>
<td>ⓝ</td>
<td>ⓝ</td>
<td></td>
</tr>
<tr>
<td>1 = 1,0 m</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 = 2,0 m</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 = 4,0 m</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 = 10,0 m</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 = 20,0 m</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 = 30,0 m</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACCURACY CLASS</td>
<td>ⓝ</td>
<td>ⓝ</td>
<td>ⓝ</td>
<td></td>
</tr>
<tr>
<td>100 = ± 85 µm/m</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 = ± 35 µm/m (up to 30 m)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COVER STRIP</td>
<td>ⓝ</td>
<td>ⓝ</td>
<td>ⓝ</td>
<td></td>
</tr>
<tr>
<td>1 = included</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Series LD111

- Quasi-absolute LCD display
- Max. display accuracy 0,01 mm or 1/64 inch
- Actual value memory
- Linear and Angular display mode
- Compact OEM version without housing
- Reading distance sensor/tape up to 1 mm

**ELECTRICAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>Integrated batteries (2 x 1,5 V)</td>
</tr>
<tr>
<td>Consumption</td>
<td>~ 220 µA</td>
</tr>
</tbody>
</table>

**ACCESSORIES**

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MT25</td>
<td>Magnetic tape</td>
</tr>
</tbody>
</table>

**PARAMETERS**

3 offset values, Preset value, Linear & angular display mode, mm/inch display, Relative/absolute measurement

**ENVIRONMENTAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating temperature range</td>
<td>0°C to +50°C (+32°F to +122°F)</td>
</tr>
<tr>
<td>Storage temperature range</td>
<td>-20°C to +80°C (-4°F to +176°F)</td>
</tr>
<tr>
<td>Protection</td>
<td>IP00 (or depending on customers assembly)</td>
</tr>
</tbody>
</table>

**MECHANICAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display resolution</td>
<td>max. 0,01 mm or 1/64 inch</td>
</tr>
<tr>
<td>System accuracy</td>
<td>± 0,05 mm typ.</td>
</tr>
<tr>
<td>Repeat accuracy</td>
<td>± 1 digit</td>
</tr>
<tr>
<td>Display range</td>
<td>-999999 to 999999</td>
</tr>
<tr>
<td>Measurement speed</td>
<td>max. 5 m/s</td>
</tr>
<tr>
<td>Magnetic sensor</td>
<td>SM25</td>
</tr>
<tr>
<td>Reading distance sensor/tape</td>
<td>0,1 - 1,0 mm</td>
</tr>
<tr>
<td>Dimensions</td>
<td>see drawing</td>
</tr>
<tr>
<td>Connections</td>
<td>Battery holder (AAA type)</td>
</tr>
<tr>
<td></td>
<td>Cable (sensor)</td>
</tr>
</tbody>
</table>

Specifications subject to changes without prior notice
**Order code – Display**

<table>
<thead>
<tr>
<th>LD111</th>
<th></th>
<th>XX</th>
<th>X</th>
<th>XX</th>
</tr>
</thead>
</table>

- **INPUT**
  - M7 = magnetic sensor
- **SENSOR**
  - R = rectangular
- **CABLE LENGTH**
  - 0,2 = cable 0,2 meter
  - 1 = cable 1 meter
  - X = cable X meters
  - (5 meters max.)

**Order code – Tape**

<table>
<thead>
<tr>
<th>MT25</th>
<th></th>
<th>XX</th>
<th></th>
<th>XXX</th>
<th></th>
<th>X</th>
</tr>
</thead>
</table>

- **LENGTH**
  - 1 = 1,0 m
  - 2 = 2,0 m
  - 4 = 4,0 m
  - 10 = 10,0 m
  - 20 = 20,0 m
  - 30 = 30,0 m
- **ACCURACY CLASS**
  - 100 = ± 85 µm/m
  - 50 = ± 35 µm/m (up to 30 m)
- **COVER STRIP**
  - 1 = included
• Quasi-absolute LCD display, 14 mm height
• Max. display accuracy 0.01 mm or 1/64 inch
• Actual value memory
• Linear & Angular display mode
• Compact OEM version without housing
• Reading distance sensor/tape up to 1 mm
• RS232 interface (optional)

PARAMETERS
3 offset values, Preset value, Linear and angular display mode, mm & fractional inch display,
Relative/absolute measurement

ENVIRONMENTAL SPECIFICATIONS
Operating temperature range: 0°C to +50°C (+32°F to +122°F)
Storage temperature range: -20°C to +80°C (-4°F to +176°F)
Protection: IP00 (or depending on customers assembly)

MECHANICAL SPECIFICATIONS
Display resolution: max. 0.01 mm or 1/64 inch
System accuracy: ± 0.05 mm typ.
Repeat accuracy: ± 1 digit
Display range: -999999 to 999999
Measurement speed: max. 5 m/s
Magnetic sensor: SM25
Reading distance sensor/tape: 0.1 - 1.0 mm
Dimensions: see drawing
Connections: Battery holder (AAA type)
Cable (sensor)
DSub 9 pin (RS232)

ELECTRICAL SPECIFICATIONS
Power supply: Integrated batteries (2 x 1.5V)
Consumption: ~ 700 µA
Interface: RS232 (optional)

ACCESSORIES
MT25: Magnetic tape

Specifications subject to changes without prior notice
Order code - Display

<table>
<thead>
<tr>
<th>LD141</th>
<th>-</th>
<th>XX</th>
<th>X</th>
<th>XX</th>
<th>-</th>
<th>XX</th>
</tr>
</thead>
</table>

- **INPUT**
  - M7 = magnetic sensor

- **SENSOR**
  - R = rectangular

- **CABLE LENGTH**
  - 0.2 = cable 0.2 meters
  - 1 = cable 1 meter
  - X = cable X meters
    - (5 meters max.)

- **INTERFACE**
  - I1 = RS232

Order code - Tape

<table>
<thead>
<tr>
<th>MT25</th>
<th>-</th>
<th>XX</th>
<th>-</th>
<th>XXX</th>
<th>-</th>
<th>X</th>
</tr>
</thead>
</table>

- **LENGTH**
  - 1 = 1.0 m
  - 2 = 2.0 m
  - 4 = 4.0 m
  - 10 = 10.0 m
  - 20 = 20.0 m
  - 30 = 30.0 m

- **ACCURACY CLASS**
  - 100 = ± 85 µm/m
  - 50 = ± 35 µm/m (up to 30 m)

- **COVER STRIP**
  - 1 = included
Specifications subject to changes without prior notice
### Order code – Display

<table>
<thead>
<tr>
<th>LD140</th>
<th>-</th>
<th>XX</th>
<th>-</th>
<th>XX</th>
</tr>
</thead>
<tbody>
<tr>
<td>② INPUT</td>
<td>⑤ INTERFACE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M7 = magnetic sensor</td>
<td>I1 = RS232</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Order code – Sensor

<table>
<thead>
<tr>
<th>SM25</th>
<th>-</th>
<th>R</th>
<th>XX</th>
</tr>
</thead>
<tbody>
<tr>
<td>② SENSOR</td>
<td>⑤ CABLE LENGTH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R = rectangular</td>
<td>0.2 = cable 0.2 meter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 = cable 1 meter</td>
<td>1 = cable X meters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5 meters max.)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Order code – Tape

<table>
<thead>
<tr>
<th>MT25</th>
<th>-</th>
<th>XX</th>
<th>-</th>
<th>XXX</th>
<th>-</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>② LENGTH</td>
<td>⑤ ACCURACY CLASS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 = 1.0 m</td>
<td>100 = ± 85 µm/m</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 = 2.0 m</td>
<td>50 = ± 35 µm/m (up to 30 m)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 = 4.0 m</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 = 10.0 m</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 = 20.0 m</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 = 30.0 m</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>⑥ COVER STRIP</td>
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POSICONTROL
Universal position display

Series LD200

- Universal display with multiple inputs
- Works with HTL, TTL, SSI and sine/cosine encoders
- High brightness LEDs, 8 digits, 10 mm
- RS232 interface
- Dedicated menus for angular & linear encoders
- mm, inch & fractional inch display

ELECTRICAL SPECIFICATIONS

- Power supply: 24Vdc ±20%
- Consumption: 4,5 W
- Counting frequency: 1 MHz for incremental signals
  6 kHz for sine/cosine signals
- Sensor input: Push-Pull (HTL), RS422 (TTL), 1Vpp, SSI
  SMS/SMS magnetic sensors
- Interface: RS232
- Outputs: 3 x 24V @ 23 mA max.
- Inputs: 1 x Vin 30V max.

ENVIRONMENTAL SPECIFICATIONS

- Operating temperature range: 0°C to +70°C (+32°F to +158°F)
- Storage temperature range: -20°C to +80°C (-4°F to +176°F)
- Protection: IP65 front, IP20 overall

MECHANICAL SPECIFICATIONS

- Display range: -99999999 to 99999999
- Dimensions: see drawing
- Cut-out: 90 x 44 mm²
- Connections: Terminal blocks
  DSub 9 pin (RS232)
  MiniDIN (SM sensors)

PARAMETERS

Offset value, Preset, mm/inch/fractional inch display, Angular display mode (360°), Limit switches
Order code

| LD200 | -   | XX |

POWER SUPPLY
PB = 24 Vdc ± 20%
- Multi-function display for SSI encoders
- Position display, linear and angular mode
- Programmable bit blanking
- Digital or analogue outputs
- Multivoltage supply 24Vdc, 115/230Vac
- LD250 SSI display
  - LD251 SSI display with analogue output
  - LD252 SSI display with digital I/O
  - LD253 SSI display with serial interface

**FUNCTIONS**
Linear/angular display mode, Bit blanking, Linearization of analogue output, Scaling factor, Round loop function, Switching mode of digital outputs

**ENVIRONMENTAL SPECIFICATIONS**
- Operating temperature range: 0°C +45°C (+32°F, +113°F)
- Storage temperature range: -20°C +80°C [-4°F, +176°F]
- Protection: IP65 front, IP20 back

**MECHANICAL SPECIFICATIONS**
- Dimensions: 96 x 48 x 141 mm³
- Cut out: 91 x 44 mm²
- Display: LED, 6 digits x 15 mm (-199999 ÷ 999999)

**ELECTRICAL SPECIFICATIONS**
- Power supply: 24Vdc ± 20%, 115/230Vac
- Consumption: 3.6 W or 7.5 VA (without sensor)
- SSI clock rate: 100 kHz max. – 1MHz
- Sensor input: SSI, any protocol, 8 to 32 bit
- Interface: RS232/RS485 (LD253)
- Outputs:
  - LD251: analogue 0/4-20 mA, 0 ±10V
  - LD252: digital PNP 2 x 30V – 150 mA
- Input: LD252: 3 digital inputs (PNP, NPN or Namur)
Order code

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<thead>
<tr>
<th>LD250</th>
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© POWER SUPPLY
PM = 24Vdc ±20%, 115/230 Vac

© SENSOR INPUT
MS = SSI (8-32 bit)
- Multi-function display for incremental encoders
- Position display, tachometer, start/stop speed display
- Event counter
- Digital or analogue outputs
- Multivoltage supply 24Vdc, 24/42Vac, 115/230Vac
- LD300 display
- LD301 display with analogue output
- LD302 preset display with digital outputs
- LD303 display with serial interface

**FUNCTIONS**
Counter/Position, Tachometer, Time display, Stop watch, Transition speed, Linearization of analogue output, Scaling factor

**ENVIRONMENTAL SPECIFICATIONS**
- Operating temperature range: 0°C +45°C (+32°F, +113°F)
- Storage temperature range: -20°C +80°C (-4°F, +176°F)
- Protection: IP65 front, IP20 back

**MECHANICAL SPECIFICATIONS**
- Dimensions: 96 x 48 x 141 mm³
- Cut out: 91 x 44 mm²
- Display: LED, 6 digits x 15 mm (-199999 ÷ 999999)

**ELECTRICAL SPECIFICATIONS**
- Power supply: 24Vdc ± 20%, 115/230 Vac
- Consumption: 3.6 W max or 7.5 VA (without sensor)
- Counting frequency: 100 kHz max. (counter mode)
- Sensor input: PNP or NPN (HTL)
- Interface: RS232/RS485 (LD303)
- Outputs: LD301: analogue 0/4 - 20 mA, 0 ± 10 V
- LD302: digital PNP 2 x 30V - 150 mA
Order code

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<th>LD300</th>
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© POWER SUPPLY
PM = 24Vdc ±20%, 115/230 Vac
P4 = 24Vdc ±20%, 24/42 Vac

© SENSOR INPUT
M1 = PNP, NPN (HTL)
M8 = TTL
POSICONTROL
Single axis LED position display

Series
MC150

- Programmable position display for encoders
- Counting frequency up to 1 MHz
- Large range power supplies

### ELECTRICAL SPECIFICATIONS
- **Power supply:** 24 Vdc/Vac, 115 Vac, 230 Vac
- **Consumption:** 150 mA (excl. encoders)
- **Counting frequency:** 1 MHz
- **Encoder input:** ABO, ABO / ABO (HTL or TTL selectable)
  - Function input for reset, preset, relative/absolute mode
- **Power supply for encoder:** 5 Vdc/24 Vdc (12 Vdc with P5)
- **Outputs:** 2 digital outputs 24V, 600 mA, PNP (optional, only with power supply P1)
  - 2 relays (optional, only with power supply P1)
- **Interface:** RS232 (optional)

### MECHANICAL SPECIFICATIONS
- **Dimensions:** 96 x 72 x 77 mm³
- **Cut out:** 94 x 66 mm²
- **Display:** 6 digit x 14 mm (-999999 ÷ 999999)

### ENVIRONMENTAL SPECIFICATIONS
- **Operating temperature range:** 0°C to 50°C (+32°F to +122°F)
- **Storage temperature range:** -20°C to 65°C (-4°F to +149°F)
- **Protection:** IP42 front, IP20 back

### FUNCTIONS
- Set value, Power down memory, Scaling factor, Edge evaluation, Counting direction, Decimal point,
  - Key functions, Reset and Set logic, Absolute/relative mode, Offset logic, Offset value, In- and Output
  - logic, Security code, Reference pulse

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Specifications subject to changes without prior notice
### Order code

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#### POWER SUPPLY
- P1 = 24Vdc ± 10%
- P5 = 230 Vac ± 10%
- P6 = 115 Vac ± 10%

#### INPUT
- M12 = A80, A80 | A80

#### INTERFACE
- I1 = RS232
- - = no interface

#### OUTPUT
- 01 = 2 digital outputs (only with P1)
- 02 = 2 relays (only with P1)
• Position display for encoders
• Encoder or potentiometer input
• Low-cost version
Order code

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- POWER SUPPLY
  P8 = 24Vdc ± 10%
- INPUT
  M1 = AB (HFL)
  A10 = 2 x analogue
- OUTPUT
  01 = 2 outputs 24V-600mA, PNP
  - = no output
  (Function inputs not available)
• 2 axes position display for incremental encoders
• Compact housing
• 3 axes version available on request

FUNCTIONS
Set value, power down memory, scaling factor, edge evaluation, counting direction, decimal point, key functions, reset and set logic, absolute/relative mode, offset logic, offset value, ln- and output logic, security code, reference pulse

ENVIRONMENTAL SPECIFICATIONS
Operating temperature range: 0°C +50°C (+32°F, +122°F)
Storage temperature range: -20°C +65°C (+4°F, +149°F)
Protection: IP42 front, IP20 back

MECHANICAL SPECIFICATIONS
Dimensions: 96 x 96 x 72 mm³ (incl. connectors)
Cut out: 92 x 92 mm²
Display: 2 x 6 digit x 14 mm (-999999 ÷ 999999)

ELECTRICAL SPECIFICATIONS
Power supply: 24 Vdc +10%, 115 Vac, 230 Vac
Consumption: 170 mA max. (excl. encoders)
Counting frequency: 500 kHz max.
Encoder input: 2 x A0, A0 / A0 (HTL + TTL)
Power supply for encoder: 5 Vdc/24 Vdc
Digital inputs: 4 for preset, reset, absol/rel mode
Interface: RS232 (optional)
Outputs: 2 digital outputs 24V@600 mA, PNP (optional)

Specifications subject to changes without prior notice
Order code

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① POWER SUPPLY
P8 = 24Vdc ± 10%
P5 = 230 Vac ± 10%
P6 = 115 Vac ± 10%

② INPUT
M12 = A80, A80 | A80

③ OUTPUT
- = no output
01 = 2 digital outputs

④ INTERFACE
- = no interface
I1 = RS232 interface
# POSICONTROL

## Encoder splitter and signal distributor

### IF10 Series

**Order code:** IF10

Order code: IF10

---

**Specifications subject to changes without prior notice**

---

## ELECTRICAL SPECIFICATIONS

- **Power supply:** +12Vdc to +30Vdc
- **Consumption:** 50 mA (without sensor)
- **Counting frequency:**
  - RS422 or TTL differential: 1 MHz
  - HTL or TTL: 250 kHz
- **Sensor input:** see diagram
- **Outputs:** HTL, TTL, Push-Pull A80, [A80 5-30V @ 30 mA](#)

---

## ENVIRONMENTAL SPECIFICATIONS

- **Operating temperature range:** 0°C to +50°C (+32°F to +113°F)
- **Storage temperature range:** -25°C to +75°C (-13°F to +158°F)
- **Protection:** IP40

---

## MECHANICAL SPECIFICATIONS

- **Dimensions:** see drawing
- **Electrical connections:** screw terminals
- **Weight:** ~ 0.1 Kg (3.5 oz)

---

## ELECTRICAL SPECIFICATIONS

### FUNCTIONS

Encoder signal splitter, signal level converter/repeater and encoder cross switcher

### ENVIRONMENTAL SPECIFICATIONS

- **Operating temperature range:** 0°C to +50°C (+32°F to +113°F)
- **Storage temperature range:** -25°C to +75°C (-13°F to +158°F)
- **Protection:** IP40

---

## MECHANICAL SPECIFICATIONS

- **Dimensions:** see drawing
- **Electrical connections:** screw terminals
- **Weight:** ~ 0.1 Kg (3.5 oz)

---

## ELECTRICAL SPECIFICATIONS

- **Power supply:** +12Vdc to +30Vdc
- **Consumption:** 50 mA (without sensor)
- **Counting frequency:**
  - RS422 or TTL differential: 1 MHz
  - HTL or TTL: 250 kHz
- **Sensor input:** see diagram
- **Outputs:** HTL, TTL, Push-Pull A80, [A80 5-30V @ 30 mA](#)
POSICONTROL
Encoder splitter and signal converter

Series
IF20

Specifications subject to changes without prior notice

Order code: IF20

ELECTRICAL SPECIFICATIONS
- Power supply: +5Vdc +30Vdc
- Consumption: 50 mA (without sensor)
- Counting frequency: RS422: 500 kHz, HTL: 300 kHz
- Sensor input: see diagram
- Interface: RS232
- Outputs: HTL, TTL, Push-Pull ABO, /ABO 5-30V @ 30 mA

MECHANICAL SPECIFICATIONS
- Dimensions: see drawing
- Electrical connections: screw terminals, DSub connectors
- Weight: ~ 0.1 Kg (3.5 oz)

ENVIRONMENTAL SPECIFICATIONS
- Operating temperature range: 0°C + 50°C (+32°F + 113°F)
- Storage temperature range: -25°C + 75°C (-13°F + 158°F)
- Protection: IP40

FUNCTIONS
- Encoder signal splitter, signal level converter and potential separator

Specifications subject to changes without prior notice
Series IF30

Specifications subject to changes without prior notice

**Modello**

**Interpolation interface for sine/cosine encoders**

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POSICONTROL

**Electrical Specifications**

- Power supply: +18Vdc – 30Vdc
- Consumption: 150 mA max. (without sensor)
- Sensor input: sine/cosine 1Vpp (0.8 ÷ 1.2 Vpp)
- Output: HTL: Vin - 4V, TTL acc. to RS422

**Mechanical Specifications**

- Dimensions: see drawing
- Electrical connections: screw terminals, Dsub connectors
- Weight: ~ 200 g

**Environmental Specifications**

- Operating temperature range: 0°C + 50°C (+32°F + 113°F)
- Storage temperature range: -25°C + 75°C (-13°F + 158°F)
- Protection: IP40

**Functions**

- Adjustable interpolation rate 5÷50
- Divider function 1:1 ÷ 1:128 (to reduce output frequency)
- Filtering functions, adjustable output signal level

**Series**
**POSICONTROL**

Signal converter for incremental encoders

**Order code: IF50**

Specifications subject to changes without prior notice

### ELECTRICAL SPECIFICATIONS

- **Power supply:** +18Vdc +30Vdc
- **Consumption:** 85 mA max. (without sensor)
- **Sensor input:** Line Driver (RS422/TTL diff.), TTL, HTL
- **Output:** analogue ±10V, 0–10V, 0–20 mA, 4–20 mA
- **Interface:** RS232/485

### MECHANICAL SPECIFICATIONS

- **Dimensions:** see drawing
- **Electrical connections:** screw terminals, Dsub connectors
- **Weight:** ~ 190 g

### ENVIRONMENTAL SPECIFICATIONS

- **Operating temperature range:** 0°C +50°C (+32°F +113°F)
- **Storage temperature range:** -25°C +75°C (-13°F +158°F)
- **Protection:** IP40

### FUNCTIONS

- Incremental quadrature to analogue or RS232/485 conversion, free scaling, linearization curves, teach-in function, encoder supply + 5Vdc
POSICONTROL
Absolute encoder signal converter

Series
IF51

Specifications subject to changes without prior notice

**ELECTRICAL SPECIFICATIONS**

- **Power supply:** +18Vdc +30Vdc
- **Consumption:** 170 mA max. (without sensor)
- **Sensor input:** any SSI protocol: 6 to 25 bit (see diagram)
- **Clock output:** differential (acc. to RS422), 1 MHz
- **Interface:** RS232, RS485
- **Outputs:** ±10 V, 0-10V, 0-20 mA, 4-20 mA

**FUNCTIONS**
SSI signal converter, master or slave mode, free scaling, linearization curves, bit blanking

**ENVIRONMENTAL SPECIFICATIONS**

- **Operating temperature range:** 0°C +50°C (+32°F +113°F)
- **Storage temperature range:** -25°C +75°C (-13°F +158°F)
- **Protection:** IP40

**MECHANICAL SPECIFICATIONS**

- **Dimensions:** see drawing
- **Electrical connections:** screw terminals, DSub connectors
- **Weight:** ~ 190 g
**POSICONTROL**
Absolute encoder signal converter, SSI to Bit parallel

---

**Series**

**IF52**

---

**ELECTRICAL SPECIFICATIONS**

- **Power supply:** +18Vdc +30Vdc
- **Consumption:** 200 mA max. (without sensor)
- **Sensor input:** any SSI protocol: 6 to 25 bit, Gray or Binary coded
- **Output:** Push Pull (short circuit proof), Gray, Binary or BCD coded
- **Interface:** RS232

---

**MECHANICAL SPECIFICATIONS**

- **Dimensions:** see drawing
- **Electrical connections:** screw terminals, Dsub connectors
- **Weight:** ~ 190 g

---

**ENVIRONMENTAL SPECIFICATIONS**

- **Operating temperature range:** 0°C +50°C [-32°F +113°F]
- **Storage temperature range:** -25°C +75°C [-13°F +158°F]
- **Protection:** IP40

---

**FUNCTIONS**

- SSI signal converter, master or slave mode, free scaling, linearization curves, latch input

---

Specifications subject to changes without prior notice
# Specifications

## POSICONTROL
Optical transmission modules for incremental encoders

## Series
**IF60 • IF61**

### IF60 trasmitter

<table>
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<tr>
<th>IF60</th>
<th>XX-X</th>
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**INTERFACE – POWER SUPPLY**

- L-1 = RS422, +5Vdc ± 5%
- L-2 = RS422, +10Vdc +30Vdc
- YC-2 = HTL/Push-Pull (A80) (A80), +10Vdc +30Vdc
- Y-2 = HTL/Push-Pull (A80), +10Vdc +30Vdc

### IF61 receiver

<table>
<thead>
<tr>
<th>IF61</th>
<th>XX-X</th>
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**INTERFACE – POWER SUPPLY**

- L-1 = RS422, +5Vdc ± 5%
- L-2 = RS422, +10Vdc +30Vdc
- YC-2 = HTL/Push-Pull, +10Vdc +30Vdc

### ELECTRICAL SPECIFICATIONS

- **Power supply:** +5Vdc ± 5%, 10-30 Vdc
- **Consumption:** < 2 W each module
- **Encoder input:** TTL/RS422, HTL
- **Input/output frequency:** 1 MHz max.
- **Signal sampling rate:** 10 M samples/sec.

### MECHANICAL SPECIFICATIONS

- **Dimensions:** see drawing
- **Optical fiber connection:** ST connector ø 9 mm
- **Glass fibre:** 2,5 mm² max., multimode, 50/125 µm, 62.5/125 µm
- **Weight:** ~ 200 g

### ENVIRONMENTAL SPECIFICATIONS

- **Operating temperature range:** 0°C +50°C (+32°F +113°F)
- **Storage temperature range:** -25°C +75°C (-13°F +158°F)
- **Protection:** IP40

## Order code

**IF60 trasmitter**

- **Order code:** IF60

**IF61 receiver**

- **Order code:** IF61

Specifications subject to changes without prior notice
POSICONTROL
Optical transmission modules for absolute encoders

Series
IF62 • IF63

ENVIRONMENTAL SPECIFICATIONS
Operating temperature range: -10°C +60°C (14°F +140°F)
Storage temperature range: -10°C +60°C (14°F +140°F)
Protection: IP40

MECHANICAL SPECIFICATIONS
Dimensions: see drawing
Optical fiber connection: ST connector, 13 mm, ø 9 mm
Glass fibre: 2.5 mm² max., multimode, 50/125 µm, 62.5/125 µm
Weight: ~ 200 g

ELECTRICAL SPECIFICATIONS
Power supply: +5Vdc ± 5%, 10-30 Vdc
Consumption: < 2 W each module
Encoder input: SSI (clock +/-, data +/-)
Clock rate: 500 kHz max.
Optical transmission rate: 120 MBit/s

Order code
IF62 trasmitter
IF62 XX-X
Order code
IF63 receiver
IF63 XX-X

INTERFACE - POWER SUPPLY
S-1 = SSI (RS422), +5Vdc ± 5%
S-2 = SSI (RS422), +10Vdc ±30Vdc

Specifications subject to changes without prior notice
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