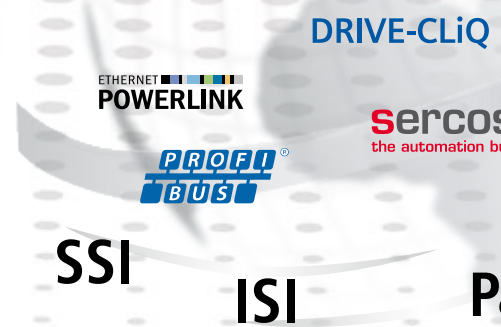
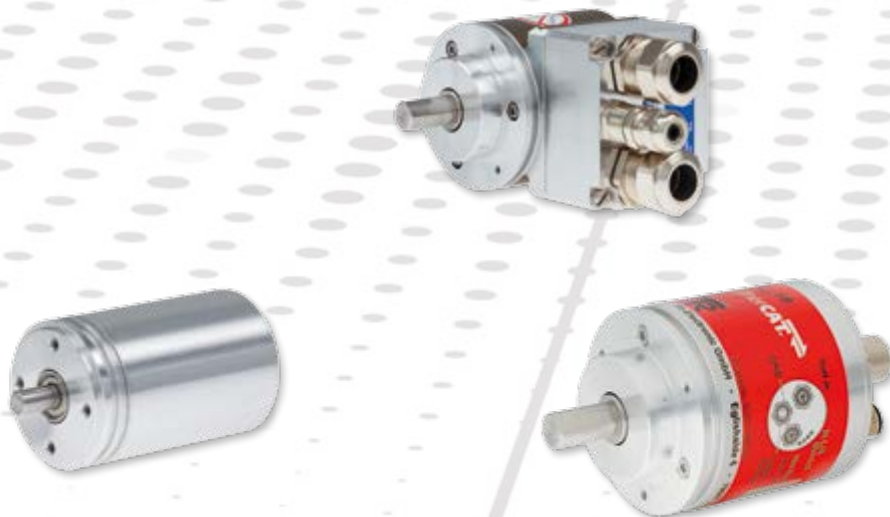


Absolute Rotary Encoders

ATEX



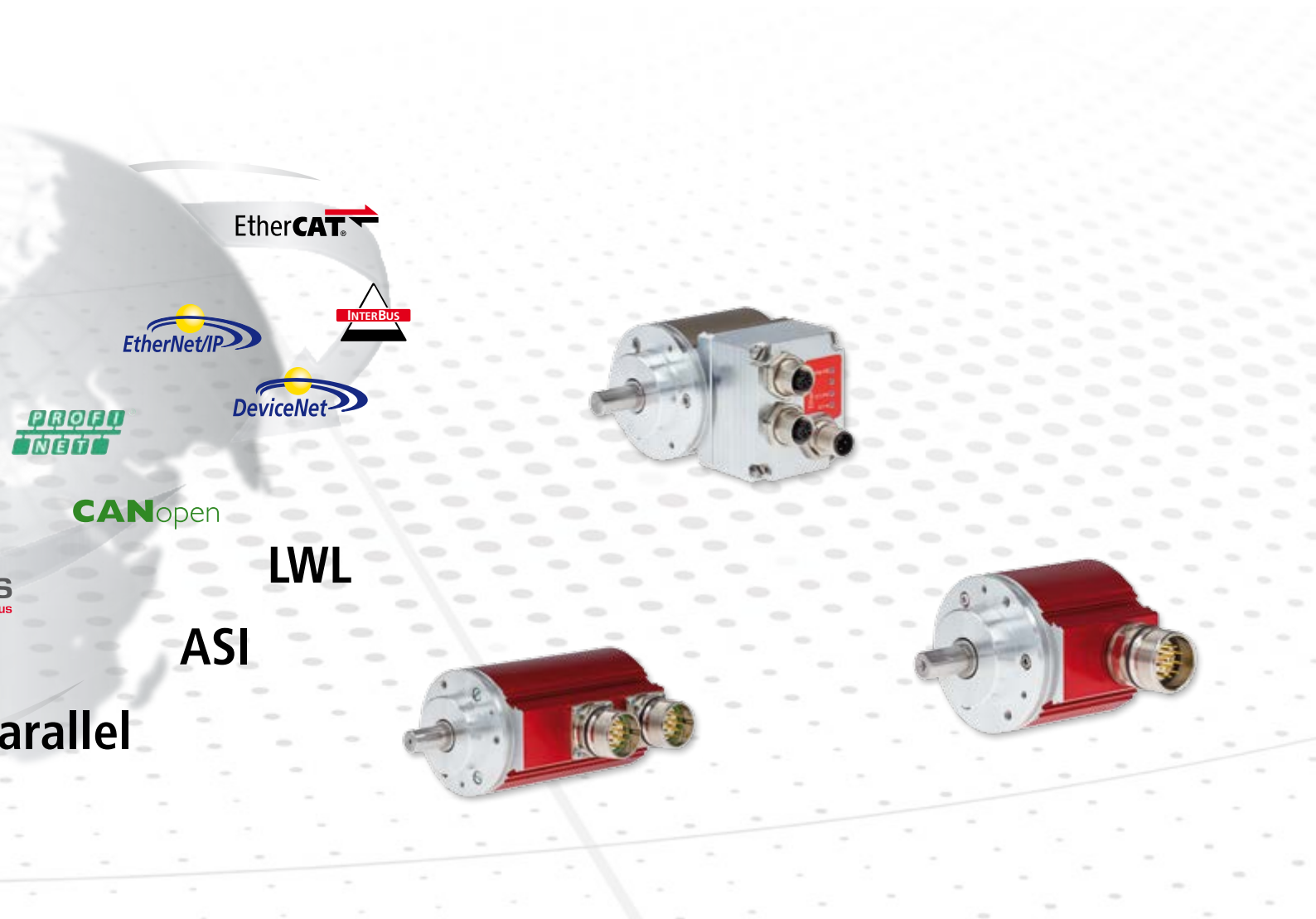
Absolute rotary encoder



Rotary encoders for industrial applications.

TR-Electronic rotary encoders with optical or magnetic scanning precisely acquire position in steel production, wind power plants, cranes and ships as well as in explosion-proof versions in painting lines. Miniature versions ensure the correct position in medical technology and SIL3 approved absolute rotary encoders ensure the necessary safety.

In addition to high-quality rotary encoders for almost every application, we also offer extensive accessories such as programming tools, displays and assembly components for quick and simple commissioning and seamless integration into your processes.



Content

| | |
|----------------------------------|----|
| Absolute Encoders acc. ATEX..... | 6 |
| Zone 1/21 | 6 |
| Zone 2/22 | 12 |

ATEX-compliant rotary encoders

Zone 0 / 20

**probability of explosion:
permanent, long-term or frequent.**

Dangerous, explosible atmosphere as a mixture of air and inflammable gases, vapors, mists or dust.



**risk of explosion by
gases, mist ,vapors and dusts**

Zone 1 / 21

**probability of explosion:
occasional**

Dangerous, explosible atmosphere as a mixture of air and inflammable gases, vapors, mists or dust.



Classification into EX Zones

EX atmospheres are divided into six zones. The table on the right describes how the zones are classified, according to hazardous environments for gases, vapors, mists on the one hand and dusts on the other.

Additionally, a distinction is made between the risk category and the probability of a hazard occurring. Ultimately, the EX categories are allocated describing the degree of safety of the device. The table shows which specifications the device has to fulfill in order to be used in a specific zone. Naturally, the devices belonging to higher categories fulfill the requirements of the lower categories.

Zone 2 / 22

**probability of explosion:
normalerweise nicht oder aber nur kurzzeitig**

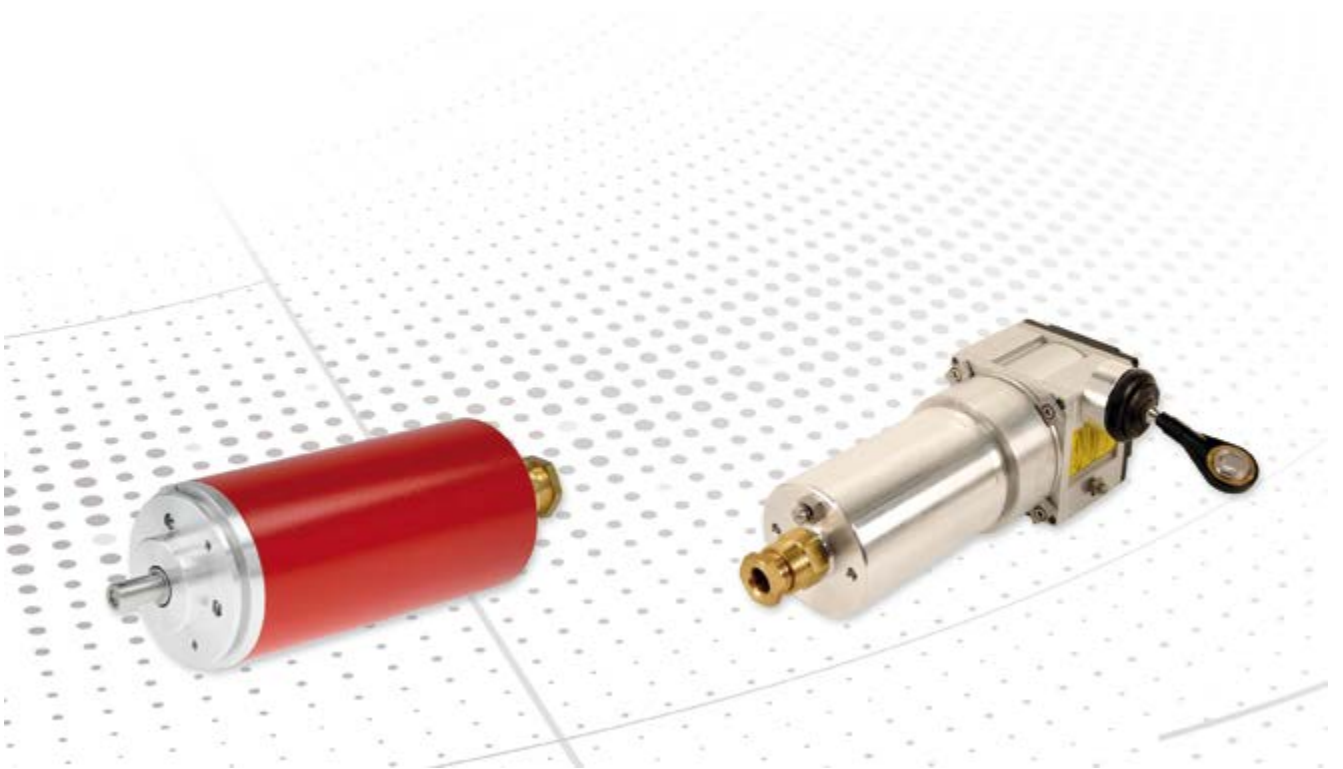
Dangerous, explosible atmosphere as a mixture of air and inflammable gases, vapors, mists or dust.



no ATEX requirements

| Flammable materials | Probability | Classification of explosive atmospheres | Identification of equipment | | |
|-------------------------|----------------------------------|---|-----------------------------|-----------------------------------|-----|
| | | | Device group | Device category for EX atmosphere | |
| Gases Mist Vapors | permanent, long-term or frequent | Zone 0 | II | 1 G | |
| | occasional | Zone 1 | II | | 2 G |
| | unlikely | Zone 2 | II | | 3 G |
| Dusts | permanent, long-term or frequent | Zone 20 | II | 1 D | |
| | occasional | Zone 21 | II | | 2 D |
| | unlikely | Zone 22 | II | | 3 D |

ATEX-Zone 1/21



All our Encoder that are suitable for use in Zone 1/21.

Following pages show an excerpt from our families of absolute encoders that are suitable for use in Zone 1/21

Housing Option for rotary encoders

Absolute rotary encoder SIL3/Plc

| Products | AEV70 | AOV70 | ADV88M |
|--|---|--|--|
| |  |  |  |
| Type | Housing Option for rotary encoders | Housing Option for rotary encoders | Absolute rotary encoder SIL3/Plc |
| Single / Multi | (M) Multi (S) Single | (M) Multi (S) Single | (M) Multi |
| Supply | 11...27 VDC | 11...27 VDC | 11...27 VDC |
| Full Resolution | <= 33 Bit * | <= 36 Bit * | 28 bit |
| Steps per Turn | <= 32768 * | <= 262144 * | 8192 |
| Nuber of turns | <= 256000 * | <= 262144 * | 32768 |
| Shaft diameters available | 6...12mm | 6...12mm | 10mm with groove |
| Connectors | Cable gland with ATEX-specified Cable | Cable gland with ATEX-specified Cable | cable gland axial |
| Ambient Temperature | -20...+60 °C | -20...+60 °C | -20...+60 °C |
| Protection Class | IP65 (Option IP67) | IP65 (Option IP67) | IP 65 |
| ATEX-Zone | 1/21 | 1/21 | 1/21 |
| Interface | SSI INC Analog SIN / COS ASI  | SSI INC Analog SIN / COS ASI  | SSI  |
| Option, additional interfaces (on request) | Analog INC | Analog INC | INC |
| Weblink | www.tr-electronic.com/s/S008508 | www.tr-electronic.com/s/S008508 | |
| QR-Code |  |  | |

Suggested Products

| Order code | Steps per Turn | Turns | Shaft / Flange | Connector Position | Remark |
|------------------------|----------------|-------|------------------|--|------------------------|
| AEV70M SSI | | | | | |
| AEV70M-00100 | 4096 | 4096 | 10FL/19,5 - ZB36 | Cable Gland axial, 20 m Cable (ATEX cert.) | |
| AEV70M Profibus | | | | | |
| AEV70M-00101 | 4096 | 4096 | 12NT/19,5 - ZB36 | Cable Gland axial, 10 m Cable (ATEX cert.) | Address 10 factory set |

Further product information

1. Enter order code into ...



| Bestellnummer | Umdrehung | Wollen |
|---------------|-----------|--------|
| CMV58-A | | |
| CMV58S-00011 | 1,000 | Ø10h7 |

2. Searchfield (top right) on www.tr-electronic.com



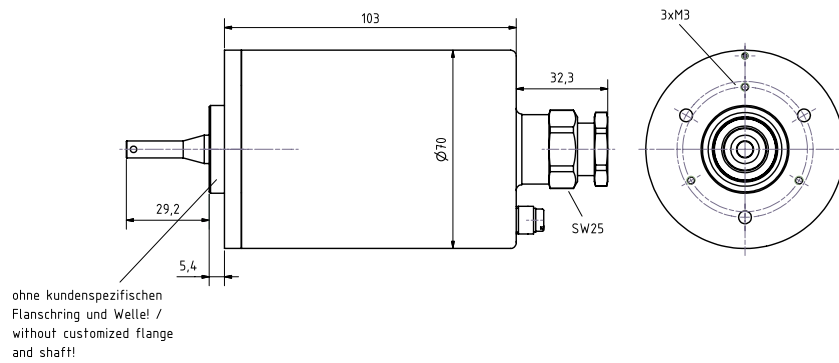
3. Choose desired information



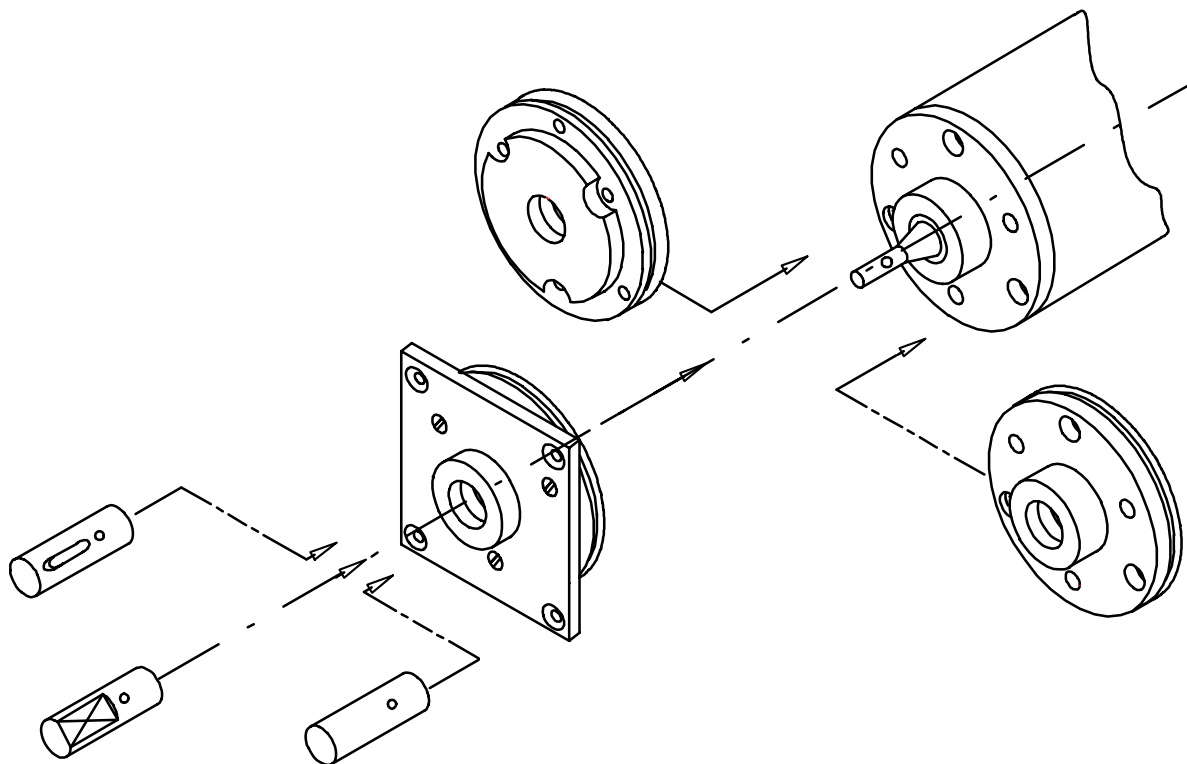
We will help you to select the most suitable products from the complete TR range. Please contact us (info@tr-electronic.de).

Dimensional Drawings

A_V70 Basic device without Flange/Shaft
 Flange/Shaft can be chosen from the C__65 family

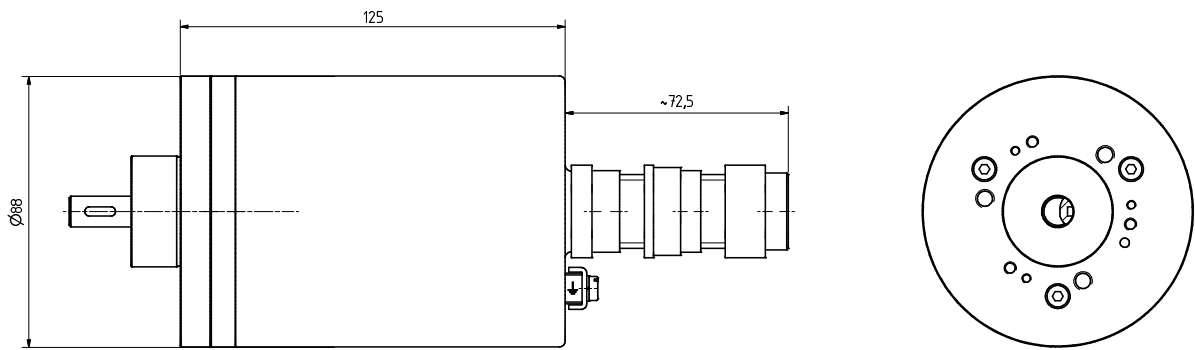


A_V70 Modular Flange / Shaft Assembly



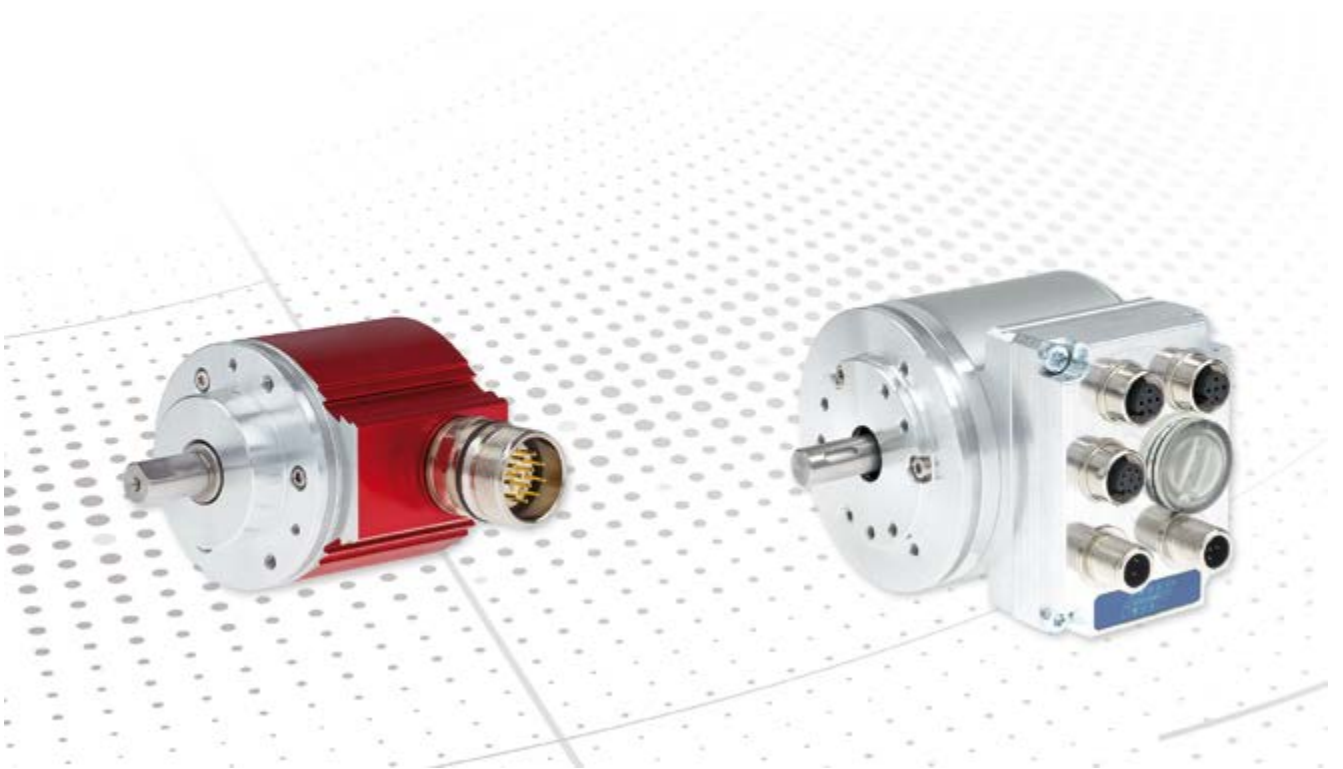
Dimensional Drawings

ADV88
ATEX Zone 1/21, SIL3/PLe





ATEX-Zone 2/22



All our Encoder that are suitable for use in Zone 2/22.

Following pages show an excerpt from our families of absolute encoders that are suitable for use in Zone 2/22

A__58

| Products | AMV58 | AEV58 | AES58 |
|--|--|--|---|
| |  |  |  |
| Detection | Magnet Detection (M) | Optical 15 Bit (E) | Optical 15 Bit (E) |
| Single / Multi | (M) Multi (S) Single | (M) Multi (S) Single | (M) Multi (S) Single |
| Supply | 11...27 VDC (12...30 VDC)* | 11...27 VDC | 11...27 VDC |
| Full Resolution | <= 24 Bit * | <= 33 Bit * | <= 33 Bit * |
| Steps per Turn | <= 4096 * | <= 32768 * | <= 32768 * |
| Nuber of turns | <= 4096 * | <= 256000 * | <= 256000 * |
| Special | | | |
| Shaft diameters available | 6...12mm | 6...12mm | 8, 10, 12mm |
| Connectors | Connector axial or radial * | Cable gland or Connector, radial or axial, Fieldbus hood radial * | Connector axial or radial * |
| Ambient Temperature | -20...+70 °C | -20...+70 °C | -20...+70 °C |
| Protection Class | IP65 | IP65 | IP65 |
| ATEX-Zone | 2/22 | 2/22 | 2/22 |
| Interface | Analog | SSI Analog | SSI Analog |
| Option, additional interfaces (on request) | | | |
| Weblink | www.tr-electronic.com/s/S008452 | www.tr-electronic.com/s/S007163 | www.tr-electronic.com/s/S007164 |
| QR-Code |  |  |  |

* depending on the interface







Can't find the right variant? Please contact us (info@tr-electronic.de)

A__65
AD_75

| Products | AEV65 | ADV75M | ADH75M | |
|--|--|---|---|--|
| |  |  |  | |
| Detection | Optical 15 Bit (E) | Optical Detection (E) | Optical Detection (E) | |
| Single / Multi | (M) Multi (S) Single | (M) Multi | (M) Multi | |
| Supply | 11...27 VDC (A: 18...27VDC) | 11...27 VDC | 11...27 VDC | |
| Full Resolution | <= 33 Bit | 28 bit | 28 bit | |
| Steps per Turn | 32768 | 8192 | 8192 | |
| Nuber of turns | 25600 | 32768 | 32768 | |
| Special | | SIL3 / Ple | SIL3 / Ple | |
| Shaft diameters available | 6...12mm | 10mm with keyway | 20mm with keyway | |
| Connectors | Connectors axial or radial * | connectors radial, cable glands radial (SSI) | connectors radial, cable glands radial (SSI) | |
| Ambient Temperature | -20...+60 °C | -20...+70 °C | -20...+70 °C | |
| Protection Class | IP64 | IP 54 | IP 54 | |
| ATEX-Zone | 2/22 | Zone 2/22 | Zone 2/22 | |
| Interface | SSI Analog | SSI    | SSI    | |
| Option, additional interfaces (on request) | | INC | INC | |
| Weblink | www.tr-electronic.com/s/S007151 | www.tr-electronic.com/s/S007273 | www.tr-electronic.com/s/S007274 | |
| QR-Code |  |  |  | |

* depending on the interface

AD_75

| | |
|---|---|
| <p>AEV115</p>  | <p>ADV115</p>  |
| <p>Optical 15 Bit (E)</p> | <p>Double Detection (D)D</p> |
| <p>(M) Multi (S) Single</p> | <p>(M) Multi (S) Single</p> |
| <p>11...27 VDC</p> | <p>11...27 VDC</p> |
| <p>25 bit</p> | <p>25 bit</p> |
| <p>8192</p> | <p>8192</p> |
| <p>256000</p> | <p>256000</p> |
| <p>12, 14, 20</p> | <p>12, 14, 20</p> |
| <p>Cable gland</p> | <p>Cable gland</p> |
| <p>0...+40 °C</p> | <p>0...+40 °C</p> |
| <p>IP65</p> | <p>IP65</p> |
| <p>22</p> | <p>22</p> |
|  | <p>SSI</p>  |
| <p>SSI</p> | <p>SSI INC</p> |
| <p>www.tr-electronic.com/s/S008524</p> | <p>www.tr-electronic.com/s/S008525</p> |
|  |  |

* depending on the interface

Can't find the right variant? Please contact us (info@tr-electronic.de)

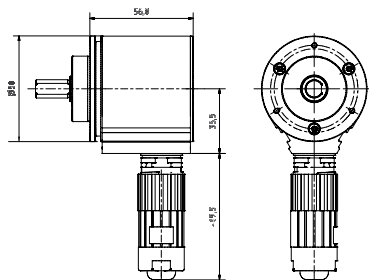
Suggested Products

| Order code | Steps per Turn | Turns | Shaft / Flange | Connector Position | Connector Type | Remark |
|--|----------------|-------------|-----------------------------|--------------------|------------------|------------------|
| ATEX AEV58-SSI (E) Optical 15 Bit, Solid Shaft, SSI | | | | | | |
| AEV58M-00001 | 8192 | 4096 | 10FL/19,5 ZB36 | Radial | Radial | ATEX Zone 2 / 22 |
| ATEX AES58-SSI (E) Optical 15 Bit, Blind Shaft, SSI | | | | | | |
| AES58M-00001 | 8192 | 4096 | 10H7 blind Shaft | Radial | Radial | ATEX Zone 2 / 22 |
| AEV65 SSI+ANALOG | | | | | | |
| AEV65M-00001 | 4096 | 4096 | 10FL/19,5 - ZB36 | Connector radial | Connector radial | ATEX Zone 2/22 |
| ATEX ADV75M-PB (D) Double detection, Solid shaft, Profibus | | | | | | |
| ADV75M-00001 | 8192 | 32768 | 10Keyway/19,5 ZB50/D75 9XM4 | Connector radial | Connector radial | ATEX Zone 2/22 |
| ATEX ADV75M-PN (D) Double detection, Solid shaft, Profinet | | | | | | |
| ADV75M-00002 | 8192 | 32768 | 10Keyway/19,5 ZB50/D75 9XM4 | Connector radial | Connector radial | ATEX Zone 2/22 |
| ATEX ADH75M-PB (D) Double detection, Hollow shaft, Profibus | | | | | | |
| ADH75M-00001 | 8192 | 32768 | 20H7/Keyway Slot for pin D4 | Connector radial | Connector radial | ATEX Zone 2/22 |
| ATEX ADH75M-PN (D) Double detection, Hollow shaft, Profinet | | | | | | |
| ADH75M-00002 | 8192 | 32768 | 20H7/Keyway Slot for pin D4 | Connector radial | Connector radial | ATEX Zone 2/22 |
| AEV115 Profibus | | | | | | |
| AEV115M-00001 | 4096 | 4096 | 20 Keyway /40 | Fieldbus Hood | Fieldbus Hood | ATEX Zone 22 |
| ADV115 Doppelencoder Profibus+SSI, SSI+INC | | | | | | |
| ADV115M-00001 | 8192 / 8192 | 4096 / 4096 | 20 Keyway /40 | Fieldbus Hood | Fieldbus Hood | ATEX Zone 22 |

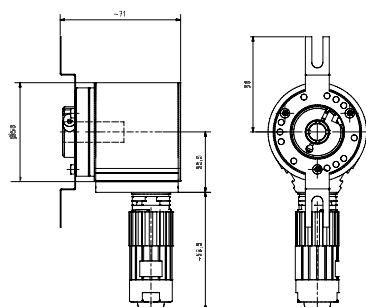
For further product information simply enter the order number in the search field at www.tr-electronic.de.

Dimensional Drawings

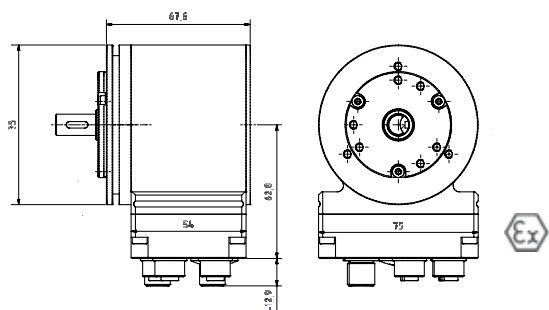
AEV58-SSI
ATEX Zone 2/22



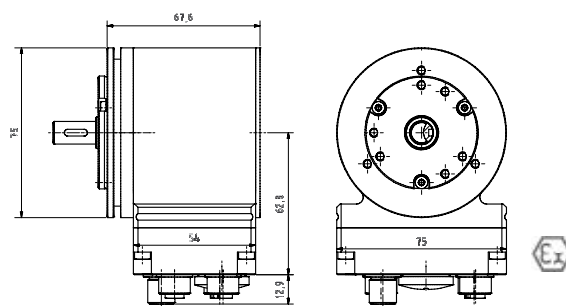
AES58-SSI
ATEX Zone 2/22



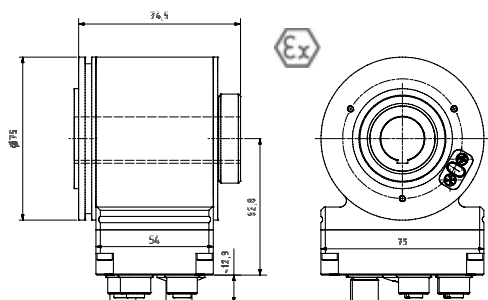
ADV75-PB
ATEX Zone 2/22 Absolute-Encoder ADV75M - PB



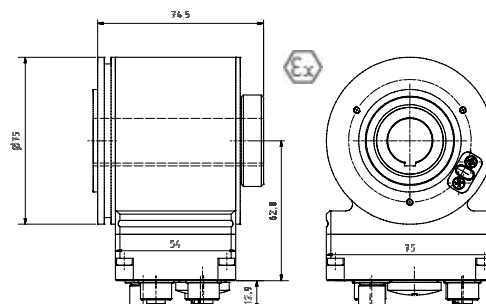
ADV75-PN
ATEX Zone 2/22 Absolute-Encoder ADV75M - PROFINET / PROFIsafe



ADH75-PB
ATEX Absolute-Encoder ADH75M - PB



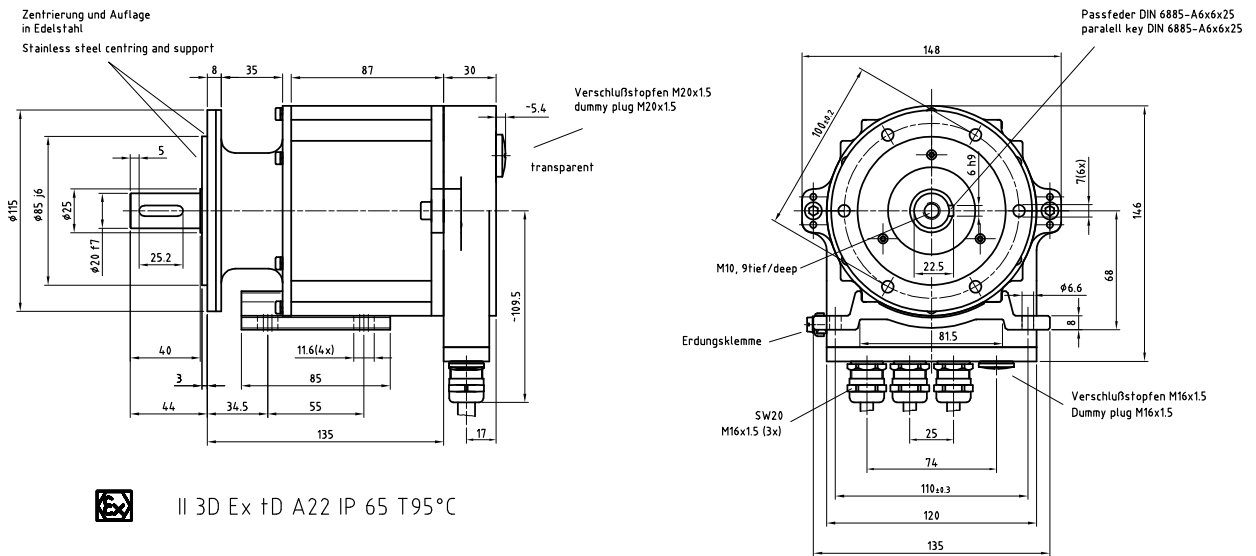
ADH75-PN
ATEX Zone 2/22 Absolute-Encoder ADH75M - PROFINET / PROFIsafe



Dimensional Drawings

AEV115

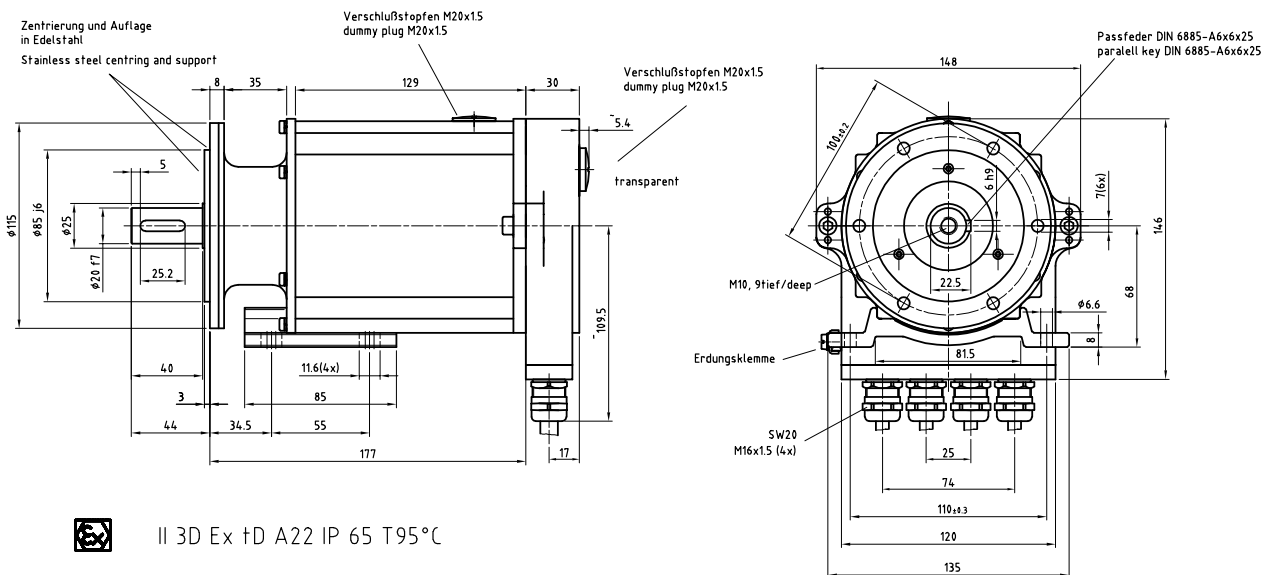
Connection Hood same orientation as mountig foot



Dimensional Drawings

ADV115

Connection Hood same orientation as mountig foot

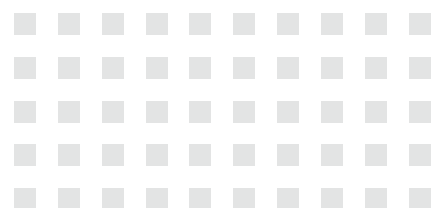


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Subject to technology and design modifications.

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