

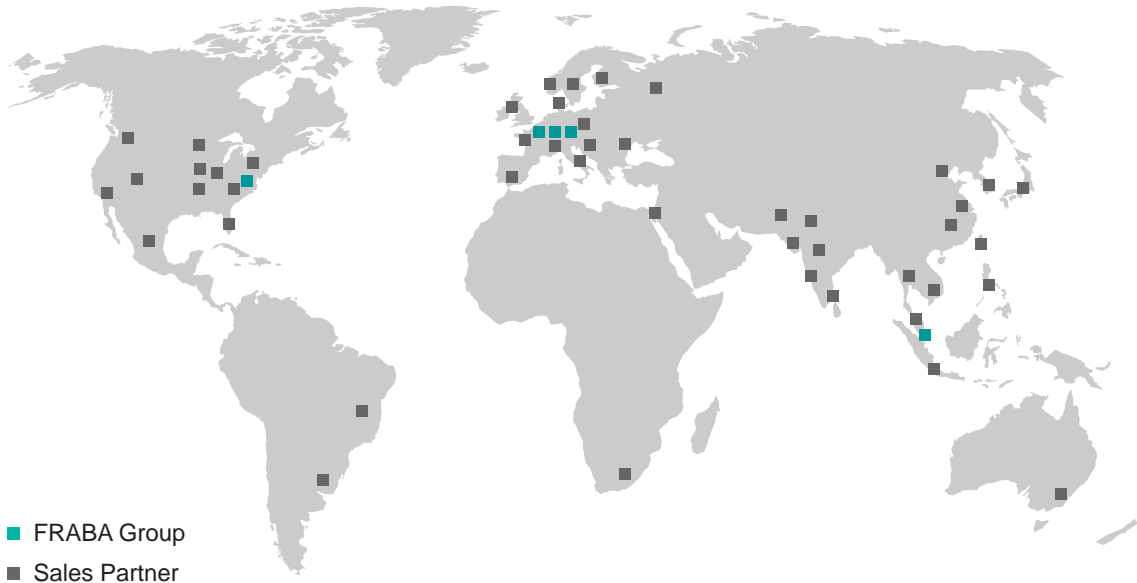
POSITION AND MOTION SENSORS



Rotary Absolute Encoder Selection Guide



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Hamilton, NJ, USA

Asia

FRABA Pte. Ltd.
Singapore

Europe

POSITAL GmbH
Cologne, Germany

R&D Center

Centitech GmbH
Aachen, Germany

Manufacturing

Consitics Sp. z o.o.
Slubice, Poland

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Please visit our website for partner contacts in all countries as the list is constantly growing.

PRODUCTS



IXARC Rotary Encoders

Motion control applications – ranging from factory automation to mobile machinery – require accurate, realtime information about the location of mechanical equipment. The IXARC line of absolute rotary encoders provide precise and reliable measurement of the angular positions of joints, drive shafts, pulleys, etc... Available electronic connections range from simple analog outputs to sophisticated fieldbus and Industrial Ethernet interfaces.

TILTIX Inclinometers

Accurate measurement of tilt or inclination is very important for motion control and safety systems. Inclinometers provide single or dual-axis angle measurement in an economical package. Relying on gravity for their measurement, these sensors have no exposed moving parts, resulting in easy mounting and high environmental protection.



LINARIX Linear Sensors

Many applications require linear motion to be monitored for system control or to ensure safety. With lengths ranging from 1 m to 10 m (3' to 33'), LINARIX draw wire sensors are available in many configurations to meet an application's requirements. Options include a wide variety of outputs (including analog, fieldbus and Ethernet variants), heavy duty housings and compact designs.

Accessories

POSITAL offers a wide variety of accessories that simplify sensor installation. Mating connectors of different styles and lengths ensure proper electrical connections. Using appropriate mounting accessories minimize wear and tear on encoders and help to ensure a long and reliable life cycle. Interface modules and displays are also available to provide users with immediate access to measurements.



PRODUCT OVERVIEW IXARC ROTARY ENCODERS

IP68 – IP69K Encoders with Analog and SSI Interfaces



| | | | | |
|--------------------------------------|--|---------------------------------------|--|---------------------------------------|
| Highlights | Magnetic SSI, Ø 42 mm 300 N Shaft Load | Magnetic SSI, Ø 36 mm IP69K | Magnetic Analog, Ø 42 mm 300 N Shaft Load | Magnetic Analog, Ø 36 mm IP69K |
| Protection Class | IP69K | IP69K | IP69K | IP69K |
| Communication Interface | SSI | SSI | Analog Voltage, Current | Analog Voltage, Current |
| Technology | Magnetic | Magnetic | Magnetic | Magnetic |
| Revolutions (Turns) | Up to 65536 | Up to 65536 | Up to 32768 | Up to 32768 |
| Resolution | Up to 14 bit (0.022°) | Up to 14 bit (0.022°) | Total 12 bit (0.088°) | Total 12 bit (0.088°) |
| Accuracy / Linearity | ±0.35° | ±0.35° | ±0.35° / 0.05 % | ±0.35° / 0.05 % |
| Flange Size in mm [in] | Ø 42 [1.65] | Ø 36 [1.42] | Ø 42 [1.65] | Ø 36 [1.42] |
| Flange Design | Synchro | Synchro | Synchro | Synchro |
| Shaft Diameters in mm [in] | Ø 10 [0.39] | Ø 10 [0.39] | Ø 10 [0.39] | Ø 10 [0.39] |
| Material Flange / Housing | Stainless Steel (V2A) / Stainless Steel (V2A) | Aluminum / Steel | Stainless Steel (V2A) / Stainless Steel (V2A) | Aluminum / Steel |
| RPM / Radial Shaft Load in N | Max. 6000 / 300 | Max. 6000 / 180 | Max. 6000 / 300 | Max. 6000 / 180 |
| Shock / Vibration ¹⁾ | 300 g / 30 g | 300 g / 30 g | 300 g / 30 g | 300 g / 30 g |
| Temperature in °C [°F] / Humidity | -40 to +85 [-40 to +185] / 98 % | -40 to +85 [-40 to +185] / 98 % | -40 to +85 [-40 to +185] / 98 % | -40 to +85 [-40 to +185] / 98 % |
| Connection Type | Connector / Cable Gland | Connector / Cable Gland | Connector / Cable Gland | Connector / Cable Gland |
| Supply Voltage | 4.5 to 30 V | 4.5 to 30 V | 12 to 30 V | 12 to 30 V |
| Certificate | UL, CE | UL, CE | UL, CE | UL, CE |
| Type Key | MCD-S..-G10G-... | MCD-S..-D10D-... | MCD-A..-G10G-... | MCD-A..-D10D-... |

1) Based on (EN 60068-2-27) / (EN 60068-2-6)

Please refer to the product finder on our website for all possible combinations.

PRODUCT OVERVIEW IXARC ROTARY ENCODERS

IP68 – IP69K Encoders with Bus Interfaces



| | | | |
|------------------------------------|--|--|---|
| Highlights | Magnetic Bus Interfaces, Ø 36 mm IP69K | Optical Bus Interfaces Up to 16 bit | Magnetic Bus Interfaces, Ø 42 mm 300 N Shaft Load |
| Protection Class | IP69K | IP68 | IP69K |
| Communication Interface | DeviceNet, CANopen, CANopen Lift, SAE J1939 | DeviceNet, CANopen, CANopen Lift, SAE J1939 | DeviceNet, CANopen, CANopen Lift, SAE J1939 |
| Technology | Magnetic | Optical | Magnetic |
| Revolutions (Turns) | Up to 65536 | Up to 16384 | Up to 65536 |
| Resolution | Up to 14 bit (0.022°) | Up to 16 bit (0.005°) | Up to 14 bit (0.022°) |
| Accuracy | ±0.35° | ±0.022° | ±0.35° |
| Flange Size in mm [in] | Ø 36 [1.42] | Ø 58 [2.28] | Ø 42 [1.65] |
| Flange Design | Synchro | Synchro, Clamp, Blind Hollow | Synchro |
| Shaft Diameters in mm [in] | Ø 10 [0.39] | Shaft Ø 10 [0.39] Hub Ø 6 to 15 [0.24 to 0.59] | Ø 10 [0.39] |
| Material Flange / Housing | Aluminum / Steel | Aluminum / Aluminum | Stainless Steel (V2A) / Stainless Steel (V2A) |
| RPM / | Max. 6000 / | Max. 6000 / | Max. 6000 / |
| Radial Shaft Load in N | 180 | 110 | 300 |
| Shock / Vibration ¹⁾ | 300 g / 30 g | 100 g / 10 g | 300 g / 30 g |
| Temperature in °C [°F] / | -40 to +85 [-40 to +185] / | -40 to +85 [-40 to +185] / | -40 to +85 [-40 to +185] / |
| Humidity | 98 % | 98 % | 98 % |
| Connection Type | Connector / Cable Gland | Connector / Cable Gland | Connector / Cable Gland |
| Supply Voltage | 4.5 to 30 V | 4.5 to 30 V | 4.5 to 30 V |
| Certificate | UL, CE | UL, CE | UL, CE |
| Type Key | MCD-C/D..-D10D-... | OCD-C/D..-... | MCD-C/D..-...H-... |

1) Based on (EN 60068-2-27) / (EN 60068-2-6)

Please refer to the product finder on our website for all possible combinations.

PRODUCT OVERVIEW IXARC ROTARY ENCODERS

Encoders with Analog, SSI, Bit Parallel and Incremental Interfaces



| | | | | | |
|-----------------------------------|---|--|---------------------------------------|--|---------------------------------------|
| Highlights | Optical SSI Up to 16 bit | Optical SSI + Incremental Up to 16 bit | Magnetic SSI Ø 36 mm | Optical Parallel Output Up to 16 bit | Magnetic Programmable Analog |
| Protection Class | Up to IP67 | Up to IP67 | Up to IP65 | Up to IP67 | Up to IP65 |
| Communication Interface | SSI | SSI + Incremental | SSI | Parallel | Analog Voltage, Current |
| Technology | Optical | Optical | Magnetic | Optical | Magnetic |
| Revolutions (Turns) | Up to 16384 | Up to 16384 | Up to 65536 | Up to 16384 | Up to 32768 |
| Resolution | Up to 16 bit (0.005°) | Up to 16 bit (0.005°) | Up to 14 bit (0.022°) | Up to 16 bit (0.005°) | Total 12 bits (0.088°) |
| Accuracy / Linearity | ±0.022° | ±0.022° | ±0.35° | ±0.022° | ±0.35° / 0.05 % |
| Flange Size in mm [in] | Ø 58 [2.28] | Ø 58 [2.28] | Ø 36 [1.42] Ø 58 [2.28] | Ø 58 [2.28] | Ø 36 [1.42] Ø 58 [2.28] |
| Flange Design | All | All | All | All | All |
| Shaft Diameters in mm [in] | Ø 6 to 15 [0.24 to 0.59] | Ø 6 to 15 [0.24 to 0.59] | Ø 6 to 15 [0.24 to 0.59] | Ø 6 to 15 [0.24 to 0.59] | Ø 6 to 15 [0.24 to 0.59] |
| Material Flange / Housing | Aluminum or Stainless Steel / Steel | Aluminum or Stainless Steel / Steel | Aluminum / Steel | Aluminum or Stainless Steel / Steel | Aluminum / Steel |
| RPM / Radial Shaft Load in N | Max. 12000 / 110 | Max. 12000 / 110 | Max. 12000 / 110 | Max. 12000 / 110 | Max. 12000 / 110 |
| Shock / Vibration ¹⁾ | 100 g / 10 g | 100 g / 10 g | 100 g / 10 g | 100 g / 10 g | 100 g / 10 g |
| Temperature in °C [°F] / Humidity | -40 to +85 [-40 to +185] / 98 % | -40 to +85 [-40 to +185] / 98 % | -40 to +85 [-40 to +185] / 98 % | -40 to +85 [-40 to +185] / 98 % | -40 to +85 [-40 to +185] / 98 % |
| Connection Type | Connector / Cable Gland | Connector / Cable Gland | Connector / Cable Gland | Connector / Cable Gland | Connector / Cable Gland |
| Supply Voltage | 4.5 to 30 V | 4.5 to 30 V | 4.5 to 30 V | 4.5 to 30 V | 12 to 30 V |
| Certificate | UL, CE | UL, CE | UL, CE | UL, CE | UL, CE |
| Type Key | OCD-.. | OCD-.. | MCD-.. | OCD-.. | MCD-.. |

¹⁾ Based on (EN 60068-2-27) / (EN 60068-2-6)

Please refer to the product finder on our website for all possible combinations.

PRODUCT OVERVIEW IXARC ROTARY ENCODERS

Encoders with Bus Interfaces



| | | | | | |
|-----------------------------------|---|---|---------------------------------------|---|---------------------------------------|
| Highlights | Optical PROFIBUS Up to 16 bit | Optical Bus Interfaces Up to 16 bit | Magnetic Bus Interfaces Ø 58 mm | Optical DeviceNet Up to 16 bit | Magnetic DeviceNet Ø 36 mm |
| Protection Class | Up to IP67 | Up to IP67 | Up to IP65 | Up to IP67 | Up to IP65 |
| Communication Interface | PROFIBUS DPV0 / DPV1 / DPV2 | CANopen, CANopen Lift | CANopen, CANopen Lift | DeviceNet | DeviceNet |
| Technology | Optical | Optical | Magnetic | Optical | Magnetic |
| Revolutions (Turns) | Up to 16384 | Up to 16384 | Up to 65536 | Up to 16384 | Up to 65536 |
| Resolution | Up to 16 bit (0.005°) | Up to 16 bit (0.005°) | Up to 14 bit (0.022°) | Up to 16 bit (0.005°) | Up to 14 bit (0.022°) |
| Accuracy | ±0.022° | ±0.022° | ±0.35° | ±0.022° | ±0.35° |
| Flange Size in mm [in] | Ø 58 [2.28] | Ø 58 [2.28] | Ø 58 [2.28] | Ø 58 [2.28] | Ø 36 [1.42] Ø 58 [2.28] |
| Flange Design | Clamp, Synchro, Blind Hollow | All | Clamp, Synchro, Blind Hollow | All | Clamp, Synchro, Blind Hollow |
| Shaft Diameters in mm [in] | Ø 6 to 15 [0.24 to 0.59] | Ø 6 to 15 [0.24 to 0.59] | Ø 6 to 15 [0.24 to 0.59] | Ø 6 to 15 [0.24 to 0.59] | Ø 6 to 15 [0.24 to 0.59] |
| Material Flange / Housing | Aluminum or Stainless Steel / Steel | Aluminum or Stainless Steel / Steel | Aluminum / Steel | Aluminum or Stainless Steel / Steel | Aluminum / Steel |
| RPM / Radial Shaft Load in N | Max. 12000 / 110 | Max. 12000 / 110 | Max. 12000 / 110 | Max. 12000 / 110 | Max. 12000 / 110 |
| Shock / Vibration ¹⁾ | 100 g / 10 g | 100 g / 10 g | 100 g / 10 g | 100 g / 10 g | 100 g / 10 g |
| Temperature in °C [°F] / Humidity | -40 to +85 [-40 to +185] / 98 % | -40 to +85 [-40 to +185] / 98 % | -40 to +85 [-40 to +185] / 98 % | -40 to +85 [-40 to +185] / 98 % | -40 to +85 [-40 to +185] / 98 % |
| Connection Type | Connector / Connection Cap | Connector / Connection Cap | Connector / Connection Cap | Connector / Connection Cap | Connector / Connection Cap |
| Supply Voltage | 10 to 30 V | 10 to 30 V | 10 to 30 V | 10 to 30 V | 10 to 30 V |
| Certificate | UL, CE | UL, CE | UL, CE | UL, CE | UL, CE |
| Type Key | OCD-.. | OCD-.. | MCD-.. | OCD-.. | MCD-.. |

1) Based on (EN 60068-2-27) / (EN 60068-2-6)

PRODUCT OVERVIEW IXARC ROTARY ENCODERS

Encoders with Ethernet Interfaces



| | | | | | |
|------------------------------------|---|---|---|---|---|
| Highlights | Optical Ethernet/IP Up to 16 bit | Optical PROFINET Up to 16 bit | Optical Modbus/TCP Up to 16 bit | Optical POWERLINK Up to 16 bit | Optical EtherCAT Up to 16 bit |
| Protection Class | Up to IP67 | Up to IP67 | Up to IP67 | Up to IP67 | Up to IP67 |
| Communication Interface | EtherNet/IP | PROFINET | Modbus/TCP | ETHERNET POWERLINK | EtherCAT |
| Technology | Optical | Optical | Optical | Optical | Optical |
| Revolutions (Turns) | Up to 16384 | Up to 16384 | Up to 16384 | Up to 16384 | Up to 16384 |
| Resolution | Up to 16 bit (0.005°) | Up to 16 bit (0.005°) | Up to 16 bit (0.005°) | Up to 16 bit (0.005°) | Up to 16 bit (0.005°) |
| Accuracy | ±0.022° | ±0.022° | ±0.022° | ±0.022° | ±0.022° |
| Flange Size in mm [in] | Ø 58 [2.28] | Ø 58 [2.28] | Ø 58 [2.28] | Ø 58 [2.28] | Ø 58 [2.28] |
| Flange Design | Clamp, Synchro, Blind Hollow | Clamp, Synchro, Blind Hollow | Clamp, Synchro, Blind Hollow | Clamp, Synchro, Blind Hollow | Clamp, Synchro, Blind Hollow |
| Shaft Diameters in mm [in] | Ø 6 to 15 [0.24 to 0.59] | Ø 6 to 15 [0.24 to 0.59] | Ø 6 to 15 [0.24 to 0.59] | Ø 6 to 15 [0.24 to 0.59] | Ø 6 to 15 [0.24 to 0.59] |
| Material Flange / Housing | Aluminum or Stainless Steel / Steel | Aluminum or Stainless Steel / Steel | Aluminum or Stainless Steel / Steel | Aluminum or Stainless Steel / Steel | Aluminum or Stainless Steel / Steel |
| RPM / Radial Shaft Load in N | Max. 12000 / 110 | Max. 12000 / 110 | Max. 12000 / 110 | Max. 12000 / 110 | Max. 12000 / 110 |
| Shock / Vibration ¹⁾ | 100 g / 10 g | 100 g / 10 g | 100 g / 10 g | 100 g / 10 g | 100 g / 10 g |
| Temperature in °C [°F] / | -40 to +85 [-40 to +185] / | -40 to +85 [-40 to +185] / | -40 to +85 [-40 to +185] / | -40 to +85 [-40 to +185] / | -40 to +85 [-40 to +185] / |
| Humidity | 98 % | 98 % | 98 % | 98 % | 98 % |
| Connection Type | Connector | Connector | Connector | Connector | Connector |
| Supply Voltage | 10 to 30 V | 10 to 30 V | 10 to 30 V | 10 to 30 V | 10 to 30 V |
| Certificate | UL, CE | UL, CE | UL, CE | UL, CE | UL, CE |
| Type Key | OCD-.. | OCD-.. | OCD-.. | OCD-.. | OCD-.. |

1) Based on (EN 60068-2-27) / (EN 60068-2-6)

Please refer to the product finder on our website for all possible combinations.

PRODUCT OVERVIEW IXARC ROTARY ENCODERS

Explosion Proof and Safety-Certified Encoders



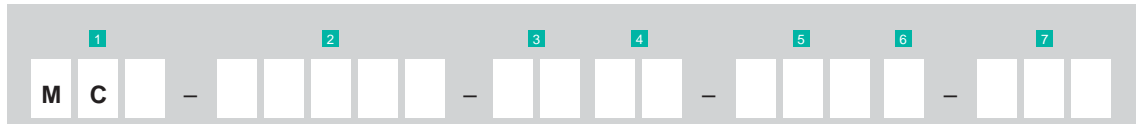
| | | | | | |
|-----------------------------------|--|--|---|---------------------------------------|---------------------------------------|
| Highlights | ATEX Certified Bus Encoder | ATEX Certified SSI Encoder | ATEX Certified Ethernet Encoder | SIL Certified Magnetic Encoder | SIL CL 3 Certified Precise Encoder |
| Protection Class | Up to IP67 | Up to IP67 | Up to IP67 | Up to IP67 | Up to IP67 |
| Communication Interface | PROFIBUS, CANopen, DeviceNet | SSI | EtherNet/IP, PROFINET, Modbus/TCP | CANSafe (EN50325-5) | CANSafe (EN50325-5) |
| Technology | Optical | Optical | Optical | Magnetic | Optical |
| Revolutions (Turns) | Up to 16384 | Up to 16384 | Up to 16384 | Singleturn | Up to 16384 |
| Resolution | Up to 16 bit (0.005°) | Up to 16 bit (0.005°) | Up to 16 bit (0.005°) | Up to 14 bit (0.005°) | Up to 16 bit (0.005°) |
| Accuracy | ±0.022° | ±0.022° | ±0.022° | ±1.8° (safe) | ±0.35° (safe) |
| Flange Size in mm [in] | Ø 78 [3.07] | Ø 78 [3.07] | Ø 78 [3.07] | Ø 25 [0.98] Ø 9 [0.35] | Ø 58 [2.28] |
| Flange Design | Clamp, Blind Hollow, Synchro | Clamp, Blind Hollow, Synchro | Clamp, Blind Hollow, Synchro | Synchro | Clamp, Blind Hollow, Synchro |
| Shaft Diameters in mm [in] | Shaft Ø 10 [0.39] / Hub Ø 14 [0.55] | Shaft Ø 10 [0.39] / Hub Ø 14 [0.55] | Shaft Ø 10 [0.39] / Hub Ø 14 [0.55] | Ø 6 [0.24] Ø 10 [0.39] | Ø 6 to 15 [0.24 to 0.59] |
| Material Flange / Housing | Aluminum or Stainless Steel | Aluminum or Stainless Steel | Aluminum or Stainless Steel | Aluminum / Steel | Aluminum / Steel |
| RPM / Radial Shaft Load in N | Max. 3000 / 50 | Max. 3000 / 50 | Max. 3000 / 50 | Application Dependent | Max. 6000 / 110 |
| Shock / Vibration ¹⁾ | 100 g / 10 g | 100 g / 10 g | 100 g / 10 g | 100 g / 10 g | 100 g / 10 g |
| Temperature in °C [°F] / Humidity | -40 to +75 [-40 to +167] / 98 % | -40 to +75 [-40 to +167] / 98 % | -40 to +75 [-40 to +167] / 98 % | -40 to +75 [-40 to +167] / 98 % | -30 to +70 [-22 to +158] / 98 % |
| Connection Type | Connection Cap with Cable Gland | Connection Cap with Cable Gland | Cable | Cable | Connector / Connection Cap |
| Supply Voltage | 10 to 30 V | 4.5 to 30 V | 10 to 30 V | 9 to 35 V | 12 to 30 V |
| Certificate Type Key | ATEX / IECEx OCE/M- | ATEX / IECEx OCE/M- | ATEX / IECEx OCE/M- | SIL CL 2 and PI d MCS- | SIL CL 3 and PI e OCS- |

1) Based on (EN 60068-2-27) / (EN 60068-2-6)

Please refer to the product finder on our website for all possible combinations.

PRODUCT SELECTION GUIDE IXARC ROTARY ENCODERS

IXARC Magnetic Encoders



1 Certificate

D CE/UL
S SIL

2 Communication Interface

AV001 Voltage: 0 to 5 V
AVP01 Voltage: 0 to 5 V w. Pushbuttons
AV002 Voltage: 0 to 10 V
AVP02 Voltage: 0 to 10 V w. Pushbuttons
AV003 Voltage: 0.5 to 4.5 V
AVP03 Voltage: 0.5 to 4.5 V w. Pushbuttons
AV004 Voltage: 0.5 to 9.5 V
AVP04 Voltage: 0.5 to 9.5 V w. Pushbuttons
AC005 Current: 4 to 20 mA
ACP05 Current: 4 to 20 mA w. Pushbuttons
AC006 Current: 0 to 20 mA
ACP06 Current: 0 to 20 mA w. Pushbuttons
CA00B CANopen
CL00B CANopen Lift
D200B DeviceNet
C900B J1939
S101B SSI Binary
S101G SSI Gray

3 Revolution

00 Singleturn
04 Multiturn: 4 bit (16 rev)
08 Multiturn: 8 bit (256 rev)
12 Multiturn: 12 bit (4096 rev)
13 Multiturn: 13 bit (8192 rev)
14 Multiturn: 14 bit (16384 rev)
16 Multiturn: 16 bit (65536 rev)

4 Resolution

10 10 bit (1024 Steps / 0.35°)
12 12 bit (4096 Steps / 0.088°)

5 Mechanical Design

See next page for details

6 Protection Class

A IP54
0 IP54 to IP65
S IP54 to IP67 (Only Clamping Flange)
D IP54 to IP69K
G IP54 to IP69K (Stainless Steel)

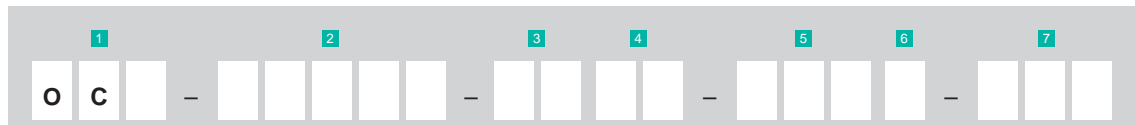
7 Connection Type

CAW Cable: Axial 1 m
2AW Cable: Axial 2 m
5AW Cable: Axial 5 m
AAW Cable: Axial 10 m
CRW Cable: Radial 1 m
2RW Cable: Radial 2 m
5RW Cable: Radial 5 m
ARW Cable: Radial 10 m
PAM Connector: Axial M12 (5 pin)
PAQ Connector: Axial M12 (8 pin)
PRM Connector: Radial M12 (5 pin)
PRQ Connector: Radial M12 (8 pin)

Please refer to the product finder on our website for all possible combinations.

PRODUCT SELECTION GUIDE IXARC ROTARY ENCODERS

IXARC Optical Encoders



1 Certificate

| | | | |
|----------|--------------|-----------|-------------------------------|
| D | CE/UL | 12 | 12 bit (4096 Steps / 0.088°) |
| E | Ex Oil / Gas | 13 | 13 bit (8192 Steps / 0.044°) |
| M | Ex Mining | 16 | 16 bit (65536 Steps / 0.005°) |
| S | SIL | | |

2 Communication Interface

| | |
|--------------|--|
| PPA1B | Parallel Binary |
| PPA1G | Parallel Gray |
| P1A1B | Parallel Preset Binary |
| P1A1G | Parallel Preset Gray |
| S101B | SSI Binary |
| S101G | SSI Gray |
| S401B | SSI Binary w. Pushbuttons |
| S401G | SSI Gray w. Pushbuttons |
| S5xxB | SSI+Incremental binary + A/B/Z (RS-422) |
| S6xxB | SSI+Incremental binary + A/B/Z (Push-Pull) |
| S5xxG | SSI+Incremental Gray + A/B/Z (RS-422) |
| S6xxG | SSI+Incremental Gray + A/B/Z (Push-Pull) |
| DPC1B | Profibus DP |
| CAA1B | CANopen |
| CL00B | CANopen Lift |
| D2B1B | DeviceNet |
| IBA1B | Interbus |
| EIB1B | PROFINET IO |
| EEA1B | EtherNet/IP |
| E2A2B | POWERLINK |
| EC00B | EtherCAT |
| EM00B | Modbus/TCP |

3 Revolution

| | |
|-----------|-------------------------------|
| 00 | Singleturn |
| 08 | Multiturn: 8 bit (256 rev) |
| 12 | Multiturn: 12 bit (4096 rev) |
| 13 | Multiturn: 13 bit (8192 rev) |
| 14 | Multiturn: 14 bit (16384 rev) |

5 Mechanical Design

See next page for details

6 Protection Class

| | |
|----------|-----------------------------------|
| 0 | IP54 to IP65 |
| S | IP54 to IP67 (with Shaft Sealing) |
| V | IP54 to IP67 (Stainless Steel) |
| H | IP54 to IP67 (Heavy Duty Design) |

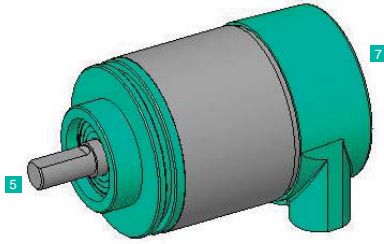
7 Connection Type

| | |
|------------|--|
| CAW | Cable: Axial 1 m |
| 2AW | Cable: Axial 2 m |
| 5AW | Cable: Axial 5 m |
| AAW | Cable: Axial 10 m |
| CRW | Cable: Radial 1 m |
| 2RW | Cable: Radial 2 m |
| 5RW | Cable: Radial 5 m |
| ARW | Cable: Radial 10 m |
| PAM | Connector: Axial M12, 5 pin |
| PAQ | Connector: Axial M12, 8 pin |
| PAL | Connector: Axial M23, 12 pin (SSI) |
| PAP | Connector: Axial M23, 16 pin (Parallel) |
| PAT | Connector: Axial M27, 26 pin (Parallel) |
| PRM | Connector: Radial M12, 5 pin (CAN, Analog) |
| PRQ | Connector: Radial M12, 8 pin (SSI) |
| PRL | Connector: Radial M23, 12 pin (SSI) |
| PRP | Connector: Radial M23, 16 pin (Parallel) |
| PRT | Connector: Radial M27, 26 pin (Parallel) |
| PRM | Connector: Radial 2 x M12 (Modbus) |
| PRM | Connector: Radial 3 x M12 (Ethernet/IP, Profinet, Powerlink, EtherCat) |
| PRI | Connector: Radial 2 x M23, 9 pin (Interbus) |
| H3P | Connection Cap: 3 Cable Glands |
| H2M | Connection Cap: 2 x M20 Cable Glands (Profibus, CAN, DeviceNet) |
| H72 | Connection Cap: 3 x M12 Connectors (Profibus, CAN, DeviceNet) |
| H2B | Connection Cap: 2 x M12 Connectors (CAN, DeviceNet) |
| H1B | Connection Cap: 1 x M12 Connector (CAN, DeviceNet) |
| H1C | Connection Cap: 1 x M23 Connector (DeviceNet) |
| HCC | Connection Cap: Without |
| HFZ | Connection Cap: 2 x Radial Blind Plug (for OCE / OCM) |
| HFE | Connection Cap: 3 x Radial Blind Plug (for OCE / OCM) |
| HFG | Connection Cap: Axial Blind Plug (for OCE / OCM) |

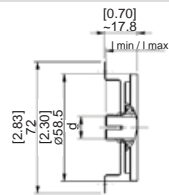
Please refer to the product finder on our website for all possible combinations.

PRODUCT SELECTION GUIDE IXARC ROTARY ENCODERS

Mechanical Design ⁵ and Connection Type ⁷

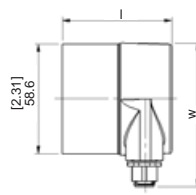


⁵ Through Hollow Flange (T) Ø 58



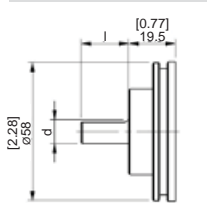
| Type | d |
|------|----|
| T08 | 8 |
| T10 | 10 |
| T12 | 12 |

⁷ Housing for Fieldbus and Ethernet Ø 58



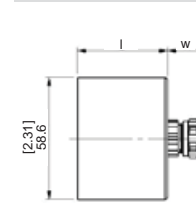
| Type | W | L (ST / MT) ²⁾ |
|-------|----|--|
| PRM | 70 | 57.5 / 68.5 67.7 / 78.7 ³⁾ |
| H _ _ | 90 | 57.5 / 68.5 |
| H2M | | 60.7 / 71.7 |

⁵ Clamp Flange (C) Ø 58



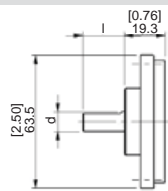
| Type | d | l |
|------|-----|------------------|
| C06 | 6 | 10 |
| C10 | 10 | 20 ¹⁾ |
| C12 | 12 | 20 |
| CA7 | 9.5 | 20 |

⁷ Axial Housings (Cable or Connector) Ø 58



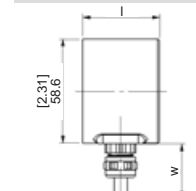
| Type | W | L (ST / MT) ²⁾ |
|------|----|---------------------------|
| _ AW | 18 | 32.2 / 43.2 |
| PA _ | 24 | 32.2 / 43.2 |

⁵ Square Flange (9) Ø 58



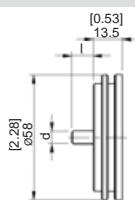
| Type | d | l |
|------|-----|----|
| 9A7 | 9.5 | 20 |

⁷ Radial Housings (Cable or Connector) Ø 58



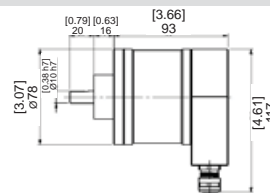
| Type | W | L (ST / MT) ²⁾ |
|------|----|--|
| _ RW | 19 | 43.2 / 43.2 43.2 / 53.0 ⁴⁾ |
| PR _ | 24 | 43.2 / 43.2 43.2 / 53.0 ⁴⁾ |

⁵ Synchro Flange (S) Ø 58

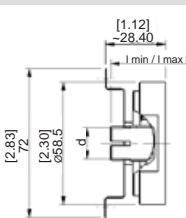


| Type | d | l |
|------|----|------------------|
| S06 | 6 | 10 ¹⁾ |
| S10 | 10 | 20 ¹⁾ |
| S12 | 12 | 20 |

⁵ Clamp Flange (F10)⁵⁾ Ø 78, EX-Proof

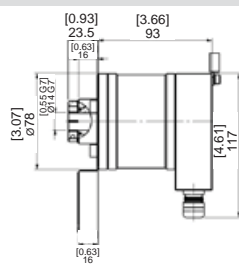


⁵ Blind Hollow Flange (B) Ø 58



| Type | d | l min/max |
|------|----|-----------------------|
| B06 | 06 | 15 / 30 |
| B08 | 08 | 15 / 30 |
| B10 | 10 | 15 / 30 |
| B12 | 12 | 15 / 30 ¹⁾ |
| B14 | 14 | 15 / 30 |
| B15 | 15 | 15 / 30 |

⁵ Blind Hollow Flange (E14)⁵⁾ Ø 78, EX-Proof



All measurement in mm [in]

- 1) SIL Certified
- 2) ST Singleturn, MT Multiturn
- 3) Modbus/TCP
- 4) Parallel
- 5) Available for OCE/M Types

File: FRA-RotaryAbsolute01.pdf