Fiber optic rotary encoder
Passiv optischer Drehgeber

MICRONOR
automation components
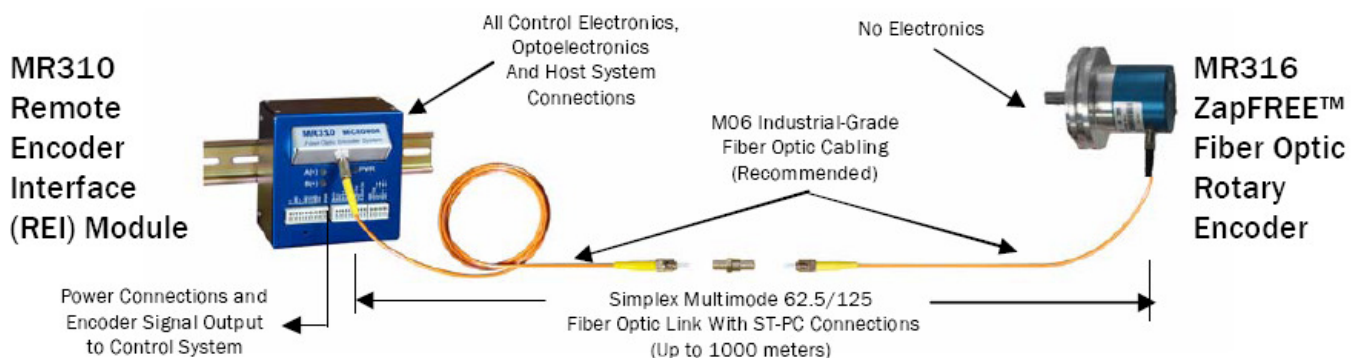
Serie MR 316

Features:
- 100% passive sensing design
- Intrinsically safe and inert for use in hazardous and explosive atmospheres
- Insensitive to EMI and RFI for use in and around medical equipment and „noisy" industrial environments
- Immune to lightning and atmospheric static that „zaps" conventional encoders
- Outdistances copper, link lengths to 1000m
- Standard model operates -40 °C bis +80 °C Extended option covers -60 °C bis 150 °C
- Special versions can be engineered for radiation and thermal-vac environments

Product

The MR316 series ZapFREE^{TM} Fiber Optic Rotary Encoder is an entirely passive fiber optic incremental rotary encoder – ideal for a wide range of harsh and hazardous environment applications. There are no integral electronics within the encoder housing and the all-optical design requires just a single 62.5/125 MM optical fiber connection – the utmost in simplicity, reliability and ease of installation.

Downstream, en MR310 Remote Encoder Interface (REI) module converts the optical signals to an array of standard electrical outputs (both quadrature and analog) for interfacing to conventional counters, PLC's or computer interface boards. An RS232 / RS422 / RS485 serial interface is also provided for ease of interface to computers and PC's.
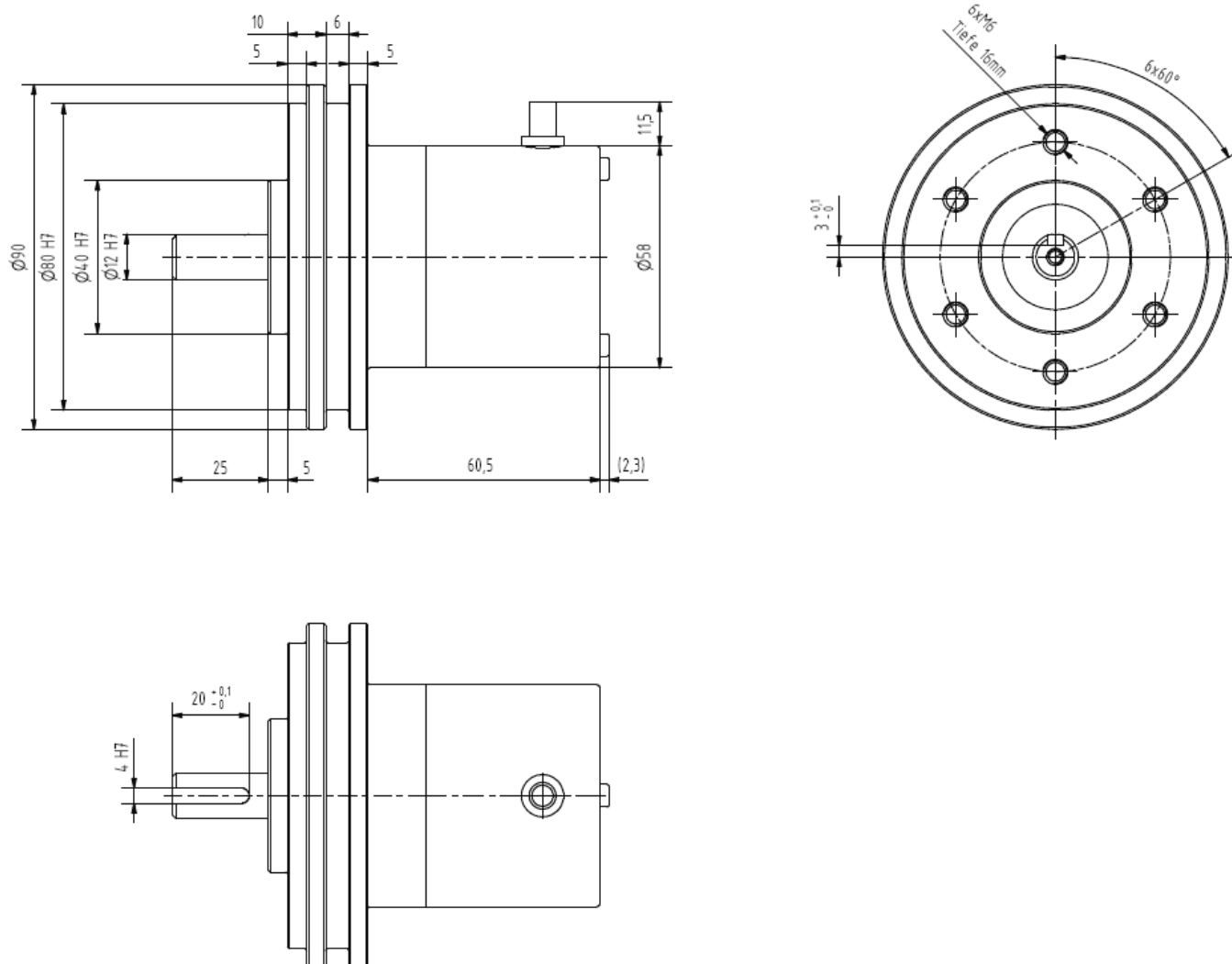
Installation

1. Connect the MR316to the external equipment via a flexible shaft coupling and follow flange / panel mounting guidelines provided in the ZapFREE^{TM} Encoder System User Guide.

2. Make MR310 electrical connections (power, ground, quadrature signals, serial interface, etc.) to the control system via WAGO Quick-Connect plugs (supplied with the MR310).

3. Connect ZapFREE^{TM} Encoder to MR310 Module via MR320 series ST-PC to ST-PC FO cable assembly (or equivalent).

4. The ZapFREE^{TM} Fiber Optic Encoder System is now ready to operate!

Technische Änderungen vorbehalten / Subject to change without prior notice

Outline drawing

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Specifications

Resolution	100, 128, 256 and 360ppr (other options available upon request)
Max Speed	
Mechanical & MR 310 direct quadrature	8000 rpm (Contact Micronor for applications requiring higher speeds)
Outputs for MR310 auxilliary functions	5000 rpm (Speed limitation if all processor-controlled auxiliary functions are being used at same time; e.g. programmable divider, programmable analog outputs, etc. Individual functions may be usable at higher speeds with operational trade-offs. Contact Micronor for more informations)
Optical Interface	ST-PC (for connection to MR310 REI Module)
Fiber type	MM 62.5/125µm, Graded Index, 0.275NA
Fiber length (between MR310 and MR316	Up to 1000m (3280ft)
Temperature range	
Standard Option	-40°C bis +80°C
Extended Option	-60°C bis +150°C
Humidity	0% to 95% RH (non-condensing)
Seal rating	IP66
Shaft OD	Ø 6mm (other options available upon request)
Housing / Weight	Ø 90mm x 82.5mm; 615g (21.5 oz)

Order key

MR316. X X

Serie

Pulses
1 = 100
2 = 128
3 = 256
4 = 360

Temperature
1 = -40°C to +80°C
2 = -60°C to +150°C