

- Meets industrial standards
- Synchro flange or clamping flange
- Up to 20000 ppr at 5000 slits
- 10 V ... 30 V with short circuit protected push-pull transistor output
- 5 V; RS 422
- Comprehensive accessory line
- Cable or connector versions



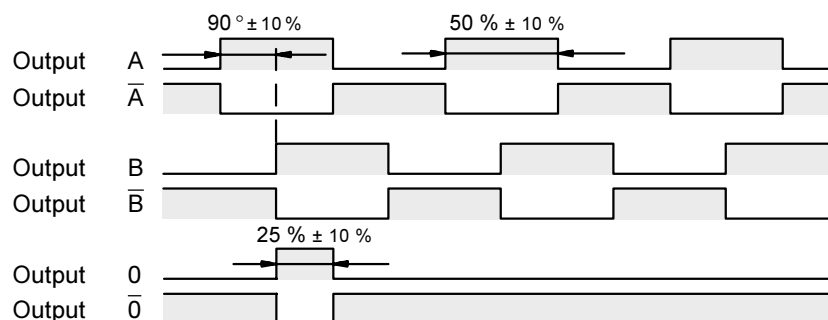
### Pulses per revolution:

Plastic disc: Every pulse per revolution: between 1 and 1500.  
 Glass disc: 60, 100, 120, 180, 200, 250, 256, 300, 314, 360, 400, 500, 512, 600, 720, 900, 1000, 1024, 1200, 1250, 1500, 1800, 2000, 2048, 2400, 2500, 3000, 3600, 4000, 4096, 5000  
 More information available upon request.

### Electrical Specifications:

Measuring principle		Photoelectric	
Maximum pulse count	[I/U]	5000	
		<b>RS422</b>	<b>Push-pull</b>
No-load current $I_0$ at			
Operating voltage $U_B = 5 V \pm 5 \%$	[mA]	100	--
Operating voltage $U_B = 10 V \dots 30 V$	[mA]	--	80
Operating current $I_L$ per channel	[mA]	20	40, short circuit protected
Voltage drop $U_d$	[V]	--	< 4
Maximum output frequency $f$	[kHz]	160	160
Response times	[ns]	100	250

### Signal Output Configuration (for clockwise rotation):

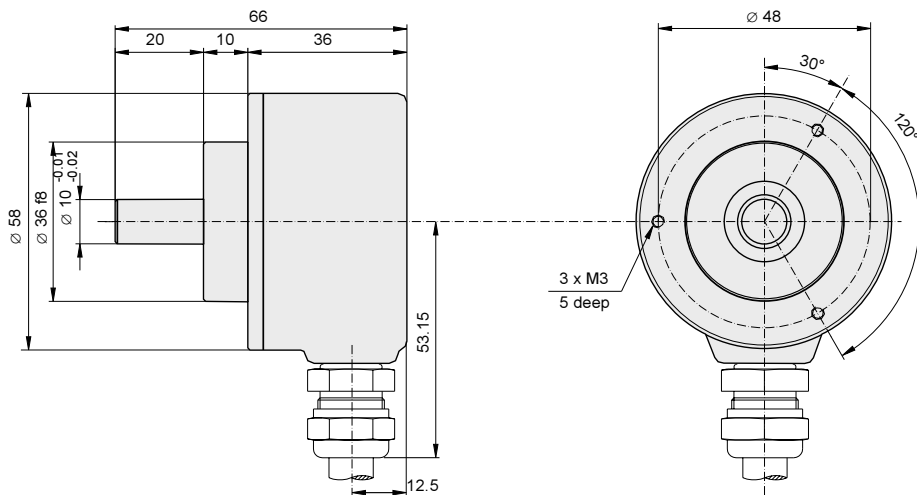
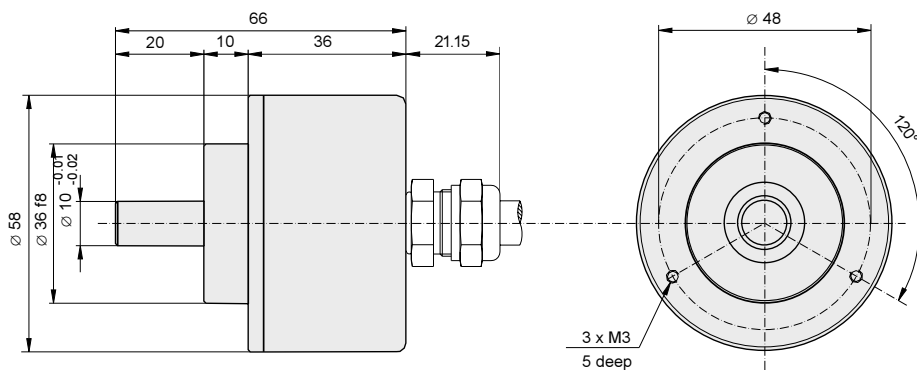
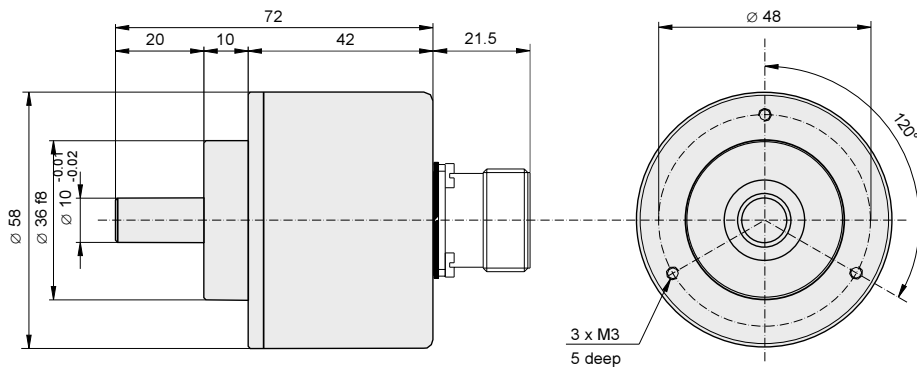
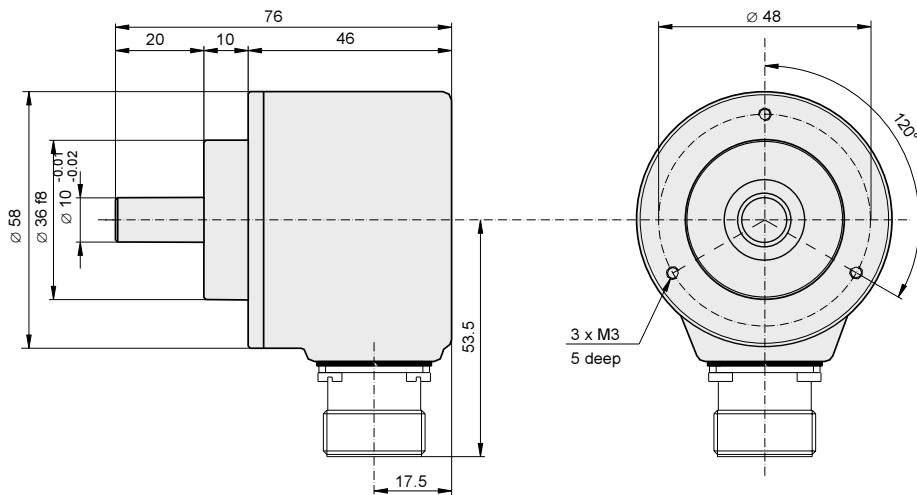


### Electrical Connections

	GND	$U_B$	A	B	$\bar{A}$	$\bar{B}$	0	$\bar{0}$	NC	NC	NC	NC
12-wire cable	white / green	brown / green	brown	grey	green	pink	red	black	blue	violet	yellow	white
Connector 9416	10	12	5	8	6	1	3	4	2	7	9	11

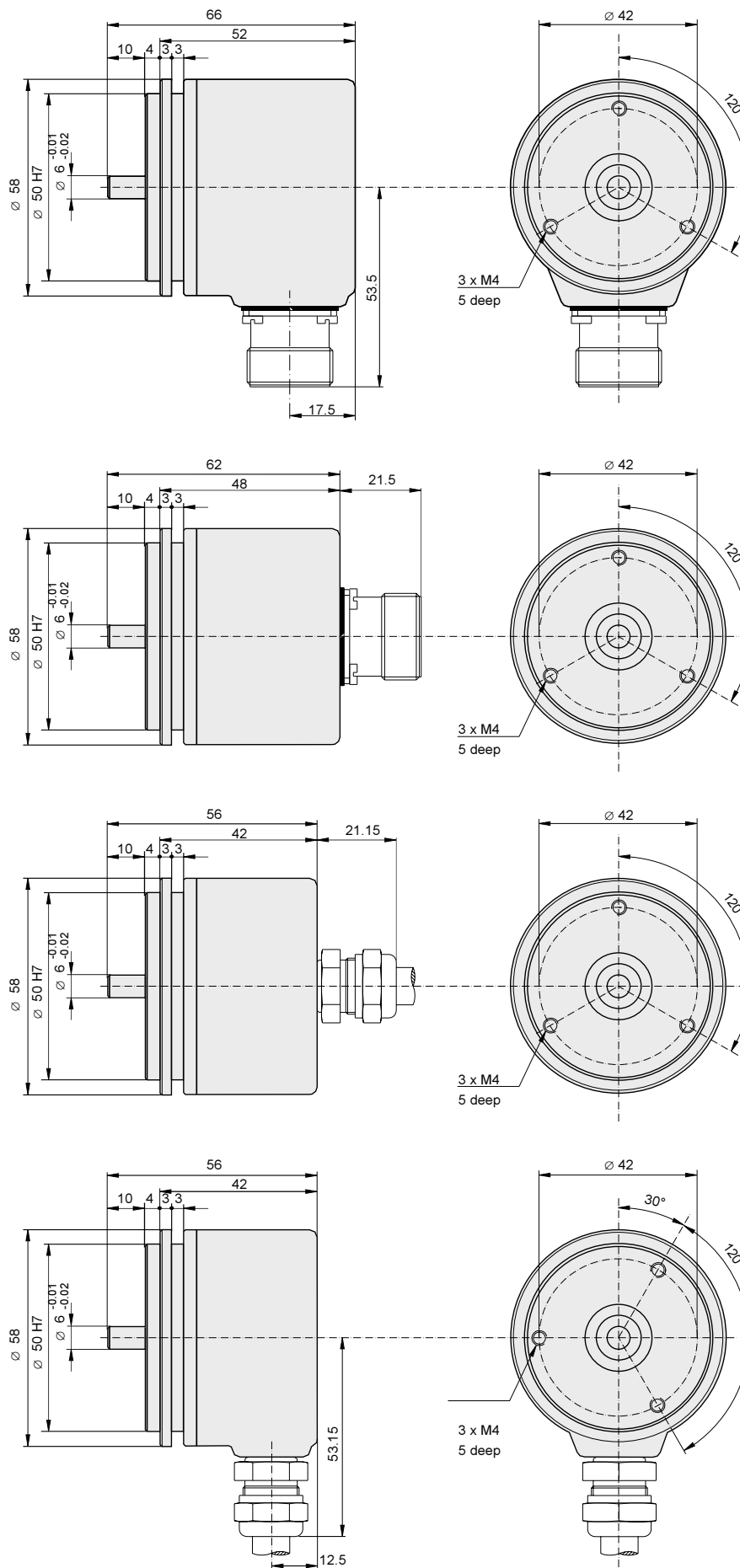
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## Mechanical Dimensions:



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Subject to reasonable modifications due to technical advances.

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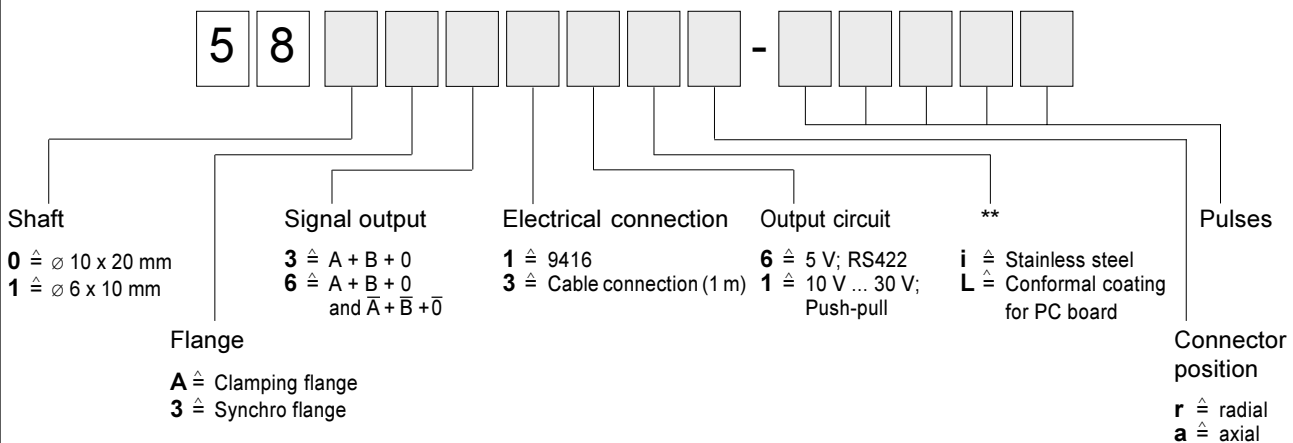
## Mechanical Specifications:

Housing		Aluminum or stainless steel
Flange		Aluminum or stainless steel
Pulse disc		Glass or plastic
Shaft		Stainless steel
Bearings		2 grooved ball bearings
Weight (incl. connector 9412)	[g]	295
Maximum rotation	[min <sup>-1</sup> ]	12000
Inertia	[gcm <sup>2</sup> ]	24
Starting torque (20 °C)	[Ncm]	1.0
Torque (20 °C)	[Ncm]	1.0
Maximum shaft load, axial F <sub>a</sub>	[N]	≤ 6000 min <sup>-1</sup> : 40
	[N]	≤ 12000 min <sup>-1</sup> : 10
Maximum shaft load, radial F <sub>r</sub>	[N]	≤ 6000 min <sup>-1</sup> : 60
	[N]	≤ 12000 min <sup>-1</sup> : 20
Minimal mechanical life	[revolutions]	F <sub>a</sub> ≤ 40 N, F <sub>r</sub> ≤ 60 N: 5 x 10 <sup>9</sup>
	[revolutions]	F <sub>a</sub> ≤ 10 N, F <sub>r</sub> ≤ 20 N: 2.5 x 10 <sup>11</sup>

## Environmental Conditions:

Storage temperature	[°C]	Glass disc: -40 ... 70    Plastic disc: -40 ... 60
Working temperature	[°C]	Glass disc: -20 ... 80    Plastic disc: -20 ... 60
Climate check acc. to IEC 68-2-3		40 °C, 98 % rel. humid. (non-condensation), 6 days
Interference output acc. to		EN 50081-2, 1993
Interference resistance acc. to		EN 50082-2, 1995
Shock resistance acc. to IEC 68-2-27		100 g, 1 ms
Protection class acc. to DIN 40050		IP 65

## Key to Model Number:



\*\* Not applicable with standard version.