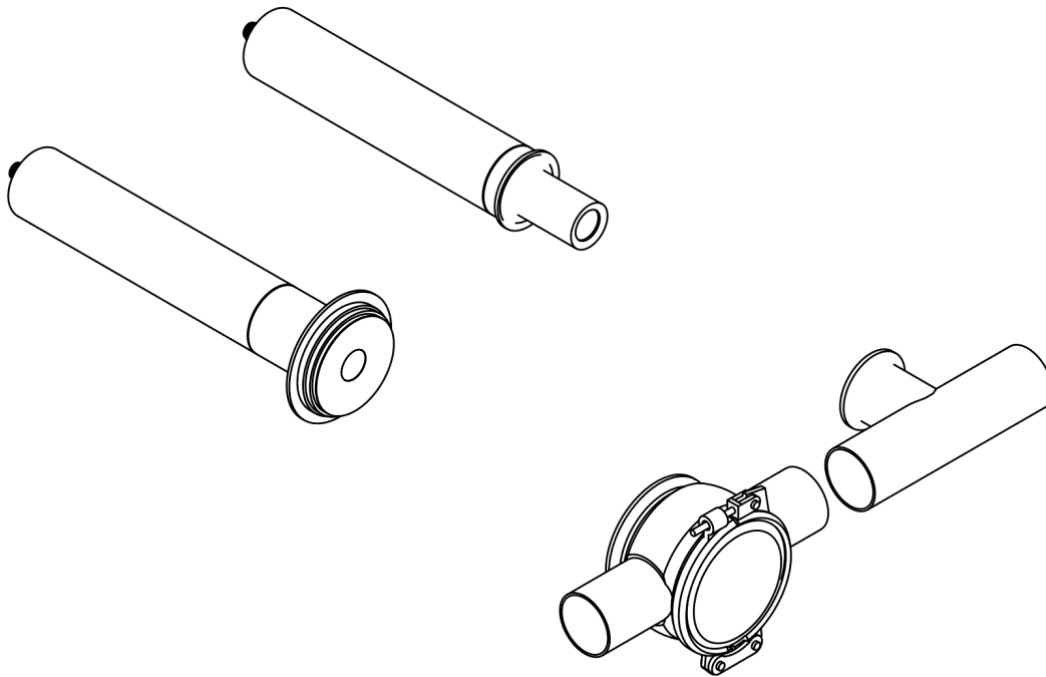


## Collo 320 series Inline Analyzers

### Technical Specifications



#### Measurement

##### Measurement variables

CIV, Collo Ion Viscosity  
 CP, Collo Permittivity  
 $Z_i$ ,  $T_i$   
 Hydrogap value  
 Process temperature

##### Unit selection

Hydrogap index  
 CP-CIV fingerprint  
 Concentration model output

##### Measurement range:

0..1200 CIV  
 0..1800 CP  
 0...3000 Hydrogap

##### Accuracy

with respect to calibration reference

< 0.1 % full span CP, CIV, Hydrogap

##### Repeatability

< 0.05 % full span

##### Temperature sensor

F0.1 IEC60751, +/- 0.1 °C at 20 °C

##### Response time

1 s

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### Operating conditions

<b>Maximum Working Pressure and Temperature</b>	16 bars (Varinline type N)
<b>Process temperature</b>	0..95 °C
<b>Ambient temperature</b>	10..45 °C operating
<b>Humidity</b>	0..100 %RH operating
<b>Storage temperature</b>	10..80 °C, non-condensing
<b>Maximum operating altitude</b>	2000 m
<b>IP rating</b>	IP65 (with M12 connector or cap)

### Mechanical

<b>Weight</b>	< 900 g
<b>Mechanical coupling</b>	DIN36767 (1.5" Triclamp) (model F323) Varinline Type N (model FH324)
<b>Gaskets</b>	1.5" sanitary gasket 60 x 3 mm (Varinline type N) Sensor gasket material: FFKM

### Electrical

<b>Operating voltage</b>	12..48 VDC passive PoE
<b>Power consumption</b>	< 5W
<b>Protection class</b>	Class 3, Protected Extra Low Voltage device
<b>Connector</b>	M12-8M A-coded
<b>Cable jacket material</b>	PUR
<b>Maximum cable run</b>	30 m
<b>Output</b>	Ethernet 10/100 BASE-T MQTT proprietary format
<b>Connected devices</b>	Collo ECU Edge Computing Unit

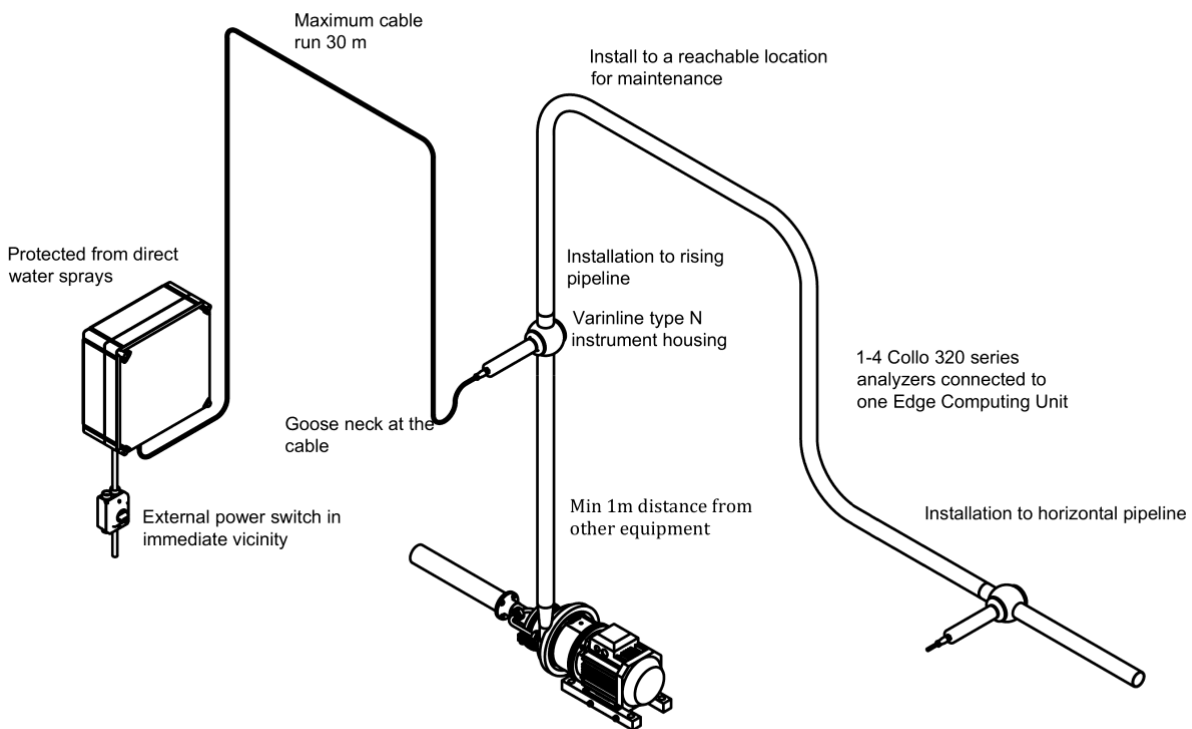
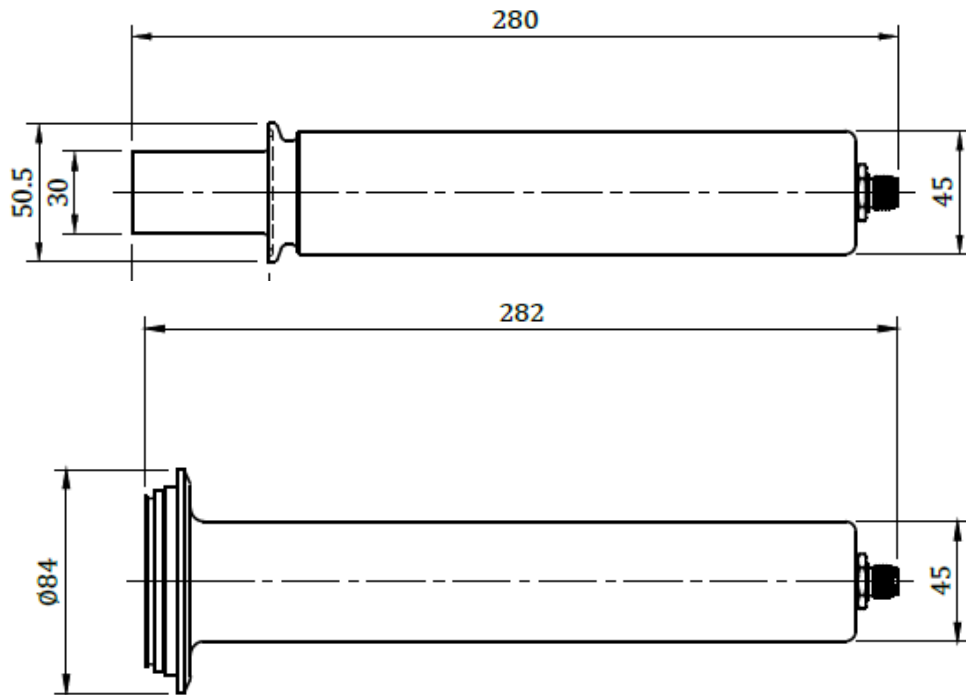
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## Compliance

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<b>EMC compatibility</b>	<p>EN IEC 61000-6-2:2019 Industrial environment, emissions</p> <p>EN IEC 61000-6-4:2019 Industrial environment, immunity</p>
<b>Safety</b>	IEC 61010.1:2010 + A1:2016/2019
<b>Material compliance</b>	<p>Wetted materials include PEEK, sapphire (Al<sub>2</sub>O<sub>3</sub>), and FFKM elastomers</p> <p>FFKM components comply with FDA 21 CFR 177.2600, as applicable</p> <p>PEEK components comply with FDA 21 CFR 177.2415, EC 1935/2004 and EU 10/2011, as applicable</p> <p>Sapphire components are migration tested for compliance to EC 1935/2004</p> <p>The product is manufactured in accordance with the principles of Regulation (EC) No 2023/2006 on Good Manufacturing Practice (GMP).</p>
<b>Hygienic design</b>	Certified to EHEDG EL Class I FH324
<b>Compliance marks</b>	CE, RoHS, WEEE, EHEDG

Mechanical Installation Notes



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- Installation to Varinline type N instrument housing. The housing, Varinline gasket or blind flanges are not included to analyzer delivery
- Install in upward flow direction to avoid air pockets and ensure proper sensor immersion.
- Maintain at least 1 m distance after elbows, valves, pumps, and other flow disturbances to minimize turbulence.
- Ensure at least 1 m clearance to other equipment to reduce interference.
- Ensure the sensor tip remains fully always submerged in the process medium.
- Avoid installing the sensor at the highest point of the piping where gas or air could accumulate.
- Choose correct cable length to avoid loops or coiling that could interfere with measurements or cause mechanical stress.
- Avoid installation on vibrating structures or near vibration sources (e.g., pumps, agitators).
- If vibration is unavoidable, use flexible couplings or vibration-damping mounts to isolate the sensor.
- Position the sensor in a location that allows for easy removal and maintenance.
- Do not install near welding operations – install the sensor only after welding is complete to avoid any damage.