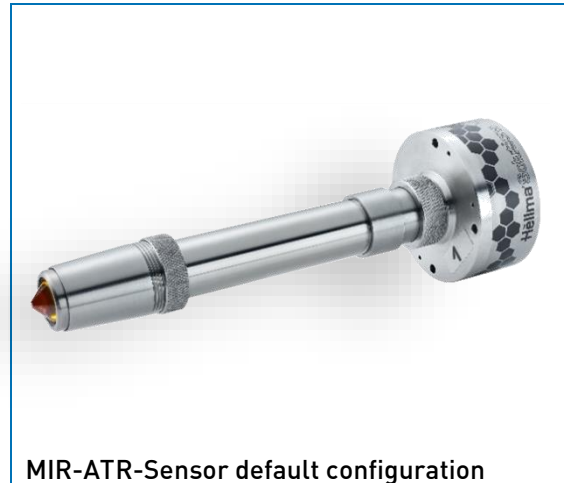


MIR-ATR-SENSOR

Hellma Process Sensors

Hellmas process sensors contain all components of a full-sized spectrometer system combined in one compact device. These predeveloped sensors are ready to be tailored to customer needs and the individual application requirements.



MIR-ATR-Sensor default configuration

DEFAULT PROPERTIES

Designation	MIR-ATR-Sensor	
Measurement principle	attenuated total reflection (ATR)	
Technology	Filter spectrometer	
Measuring range	8 wavelengths selectable in mid infrared (2-14µm) e.g. dedicated filters for technical oil applications: 3876cm ⁻¹ , 3390cm ⁻¹ , 1724cm ⁻¹ , 1536cm ⁻¹ 1151cm ⁻¹ , 974cm ⁻¹ and 2110cm ⁻¹ (2x reference channel)	
Materials	ATR-crystal:	ZnSe (*others on request e.g. diamond, sapphire)
	Housing:	stainless steel / aluminum (*others on request)
	Probe:	stainless steel 316L (*others on request)
Communication interfaces	USB, Ethernet, CanOpen	
Result calculation	PC	
Process interface	tailored to customer requirements	
Sample properties	Fluids, solids, pastes, powders	
Operating pressure	< 30 bar (probe)	
Operating temperature	< 70°C (housing); 260°C (probe)	

All sensor characteristics can be adapted to customer requirements