GLADIUS XP
Spektroscopic
Reflection Immersion Probe

Ideal for reflection measurements with sample contact or with short focal distance for process applications.

The Hellma Gladius XP is particularly suitable for measuring solids, powders, pastes and sludge. The probe is available in diameters of 12 and 25 mm.

AREA OF APPLICATION

Possible areas of application for this probe include:

- Non-invasive determination of residual moisture
- Qualitative and quantitative analysis of food composition (e.g. fruit content measurement)
- Monitoring of particle size and degree of conversion during a polymerization reaction
- Reaction monitoring of heterogeneous systems
- Monitoring of the water content during spray drying

HYGIENIC DESIGN

Due to its hygienic design, the Hellma reflection probe »Gladius XP« can also be used in highly regulated production environments such as the food industry. Cleaning is easy and can be carried out without disassembly.

REDUCTION OF STRAYLIGHT

The uniform illumination of the probe by ring-shaped optical fibers results in a highly effective reduction of stray light.

SOLDERED VERSION AVAILABLE

This probe model has the option of soldering the sapphire windows to a probe tube made of titanium. With this option, the probe has a high temperature resistance of up to 300 °C.

BENEFITS

- Wide range of fiber optics
- Compact design
- High transmission optics and minimal stray light values

PRODUCT CONFIGURATION

Model	**Gladius XP**
Measurement principle	Diffuse Reflection
Outer diameter	12 mm / 25 mm
Optical path / focus	2 mm / Contact
Optical material	Sapphire
Probe body material	Stainless Steel 1.4435/1.4404 (316L) / Hastelloy C-22 (2.4602)
Sealing technology	EPDM / Kalrez 6221 / solded
Spectral range	UV/Vis (240nm-1100nm), NIR (400 nm - 2300 nm)
Optical connection	F-SMA socket and ATEX PMA housing NW23 / 2m glass fiber with stainless teel coating, 2X F-SMA connector and ATEX PMA housing
Optical connection	Fiber optic bundle with 8 or 14 fibers, 200/400/600 µm
Fiber optic technology	Standard light guides / high temperature lightguides
Process connection	Various EN/DIN flanges (flange according to customer requirements in agreement) / No flange
Pressure	-1 bar to 16 bar
Maximum pressure	Dependent on the selected process connection, max. 40 bar (Class 300, overpressure at RT)
Temperature	5 °C - 300 °C (dependent on lightguide and sealing technology)
Maximum immersion depth	640 mm (Ø 12mm) / 940mm (Ø 25mm) without flange
Probe pipe length	Without flange: immersion depth + 10 mm, with flange: immersion depth + 50 mm
Additional functions	Internal flushing of the probe body as an option (only Ø 12mm)
Delivery scope	Optical immersion probe, user manual, customer technical drawing, certificate of pressure test, report of optical transmission test, transport packaging
ATEX Suitability	ATEX Zone 1/21