

## FMR-9

### *Infrared Multi-Channel Film Measurement System*

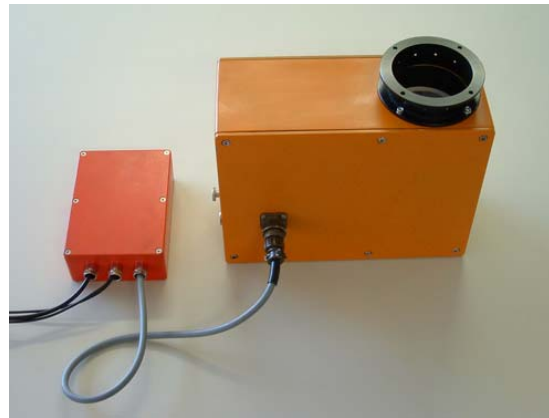
- Contactfree Film Basis Weight -Thickness Measurement
- Excellent Accuracy
- Selective Polymer Measurement

**METHOD :** Polymers and other organic substances show in infrared region strong resonance bands wenn infrared radiation passes through material. The power attenuation at these resonance bands is directly proportional to basis weight (gr/m<sup>2</sup>) or thickness (mm) of the measured film or coating substance.

**META`s FMR-9** gauge makes use of this physical feature to establish a very reliable and high accurate method for continuous on-line measurement of polymer films or coating materials. The use of enhanced infrared technology such as temperature compensated photosensors and multi channel narrow band filters makes the FMR-9 gauge insensitiv against disturbances caused by color-changes and enables a selectiv measurement of film or coating layers simultaneously: e.g. PUR, PC, CAB, PS, PET, CEL, EVOH, PA, SURLYN, PO, PP etc.,.

**APPLICATIONS:** Plastics, Paper- and Card-boards Coating Lines, Coating-Processing Industries etc.

**COMPONENT PARTS:** The gauges placed upper and lower of the web/product or in one side, in case the reflection method is applied can be



used as stand-alone measuring system providing an analogue output of 0-10 VDC resp. 0/4-20mA or they can be integrated into the META versatile QMS-9000 quality control system. Scanners or C-frames are available for fix-position or scanning measurements and controls.

#### **TECHNICAL SPECIFICATIONS:**

**Dimensions** (h x w x d) [ mm] :  
Transmitter/receiver: 250x300X210

**Weight** ≈ 12 Kg

**Measuring Range** : 0-150% abs.

**Transmitter/Receiver Clearance** :  
100 mm ± 10 mm

**Measuring Spot** : Ø 18-50 mm

**Measurement Options** :

Transmission or reflection

**Uncertainty** : Reproducibility

2σ ≤ 0.1% on 1 sec basis

Correlativity to lab

2σ ≤ 0.1% on 1 sec basis

**Outputs** : 0-10 V-0/4-20 mA

**Power Supply:** 24 VDC (Option  
230/110 VAC, 50/60 Hz)

**Enviromental Conditions:**Up to 40  
oC (no cooling ),0-95%r.H.

**Electronic Unit** : (option), LCD-  
display, alphanummeric keypad.