

ACCURATE HEAVY-DUTY  
INSTRUMENT FOR IN-LINE  
MEASUREMENT OF  
CONCENTRATIONS

**K-PATENTS**  
PROCESS INSTRUMENTS

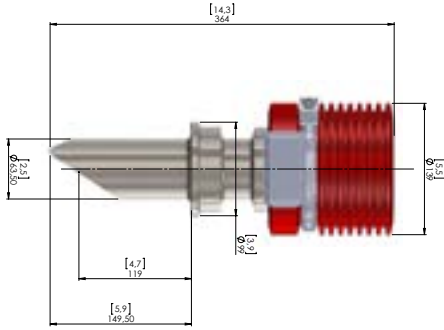
**t** techmation bv



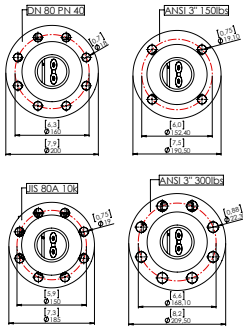
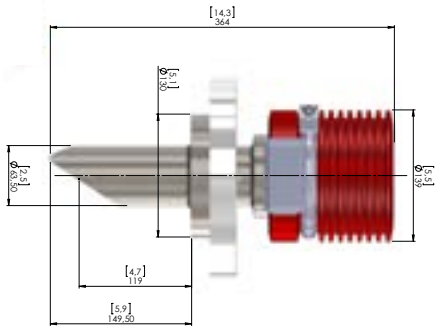
K-PATENTS PROCESS REFRACTOMETER PR-21-S

# SPECIFICATIONS

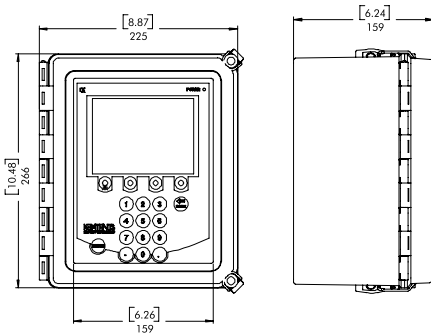
Sensor PR-21-S with Sandvik clamp



Sensor PR-21-S with ANSI/DIN/JIS flange



Indicating transmitter DTR



Refractive Index range:	Low range R.I. 1.320...1.460 High range R.I. 1.380...1.530
Max span:	R.I. 0.120
Accuracy:	Typically $\pm 0.1\%$ by weight (depending on the process medium). Repeatability and stability correspond to accuracy.
Speed of response:	1.0 s undamped, damping time selectable up to 5 min
Calibration:	With Cargille standard R.I. liquids
Temperature compensation:	Automatic, digital compensation
Instrument verification:	According to ISO 9000 quality system: with standard R.I. liquids and Transmitter's menu guided procedure
Process temperature:	max. 150°C (300°F) (for higher temp. consult factory)
Ambient temperature:	Sensor: max. 45°C (113°F), min. -20°C (-4°F) Indicating transmitter: max. 50°C (122°F), min. 0°C (32°F)
Process pressure:	Flange connections up to 25 bar (350 psi), Sandvik clamp static pressure up to 20 bar (300 psi)/operational pressure up to 10 bar (150 psi)
Sensor protection class:	IP65, Nema 4X
<b>SENSOR PR-21-S-STD (STANDARD PROBE) AND PR-21-S-LPL/LPS (LONG PROBE):</b>	
Process connection:	Sandvik L-clamp, 88 mm; DIN-flange 2656. PN 25, DN80; ANSI-flange, 150 psi, 3inch; ANSI-flange, 300 psi, 3 inch; JIS-flange, 10K 80 A
Process wetted parts:	AISI 316L stainless steel, prism gaskets Kalrez (prism pads teflon)
Sensor insertion length:	-STD = standard; -LPL = Long probe 302 mm; -LPS = Long probe 150 mm
Sensor weight:	Sandvik-clamp 7 kg (15 lbs)/Flange DIN/ANSI/JIS 10.5 kg (23 lbs)
<b>SENSOR PR-21-S-LPH (RETRACTABLE LONG PROBE):</b>	
Process connection:	Sandvik L-clamp, 88 mm
Process wetted parts:	AISI 316L stainless steel, sensor tip SAF2205, prism gaskets Kalrez (prism pads teflon)
Sensor weight:	10.5 kg (23 lbs)
<b>INDICATING TRANSMITTER DTR:</b>	
Display:	320x240 pixel graphical LCD with LED backlight
Keypad:	18 membrane keys
Current output:	4-20 mA/0-20 mA, max. load 1000 Ohm, Galvanic isolation 1500 V DC or AC (peak), Built-in hold function during prism wash
Ethernet connection:	10/100 Mbit/s, data acquisition over UDP/IP Protocol with K-Patents PR-11111 data logging software
Power:	AC input 100-240 VAC/50-60 Hz, optional 24 VDC, 30 VA
Alarms/Wash relays:	Two built-in signal relays, max. 240 V AC, 3 A
Sensor connectivity:	One or two sensors can be connected to the DTR. Sensors independent of each other: own parameter sets and usable in different applications. Two current outputs configurable independently to indicate process concentration or temperature of either sensor.
Transmitter protection class:	Enclosure IP66, Nema 4X
Indicating transmitter weight:	4.5 kg (10 lbs)
<b>INTERCONNECTING CABLE:</b>	
	PR-8230 cable. A paired cable with shielded ground. Screwed connector PR-8031 to connect cable to sensor PR-21-S
Interconnecting cable length:	Standard 10 m (33 ft), max. 200 m (660 ft)
OPTIONS:	Prism wash, intrinsic safety and hazardous area approvals, cable fittings to

ORDERING INFORMATION:	- Sensor type and process connection	- Process flow range and pipe diameter
	- Desired scale	- Supply voltage and frequency
	- Properties of process solution	- Length of interconnecting cable
	- Process temperature and pressure range	- Options and accessories

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We reserve right to technical alterations.