

PULP AND PAPER

KPM KC5 Rotating Consistency Transmitter

Testing and industry-specific instruments



The KPM KC5 Rotating Consistency Transmitter requires no compromising. With excellent consistency measurement performance, light weight construction, simple installation, and dramatically reduced maintenance, KPM KC5 is the most advanced consistency transmitter on the market.

Fast and accurate measurement

Through ABB's state-of-the-art torque measurement technology the KC5 provides an accurate consistency measurement—instantly. Our sensitive, wide-range measurement sensor is applicable to all consistencies between 1.5-16 percent. Built-in temperature compensation assures performance in all process conditions.

Low installation costs

KPM KC5 is easy to install. Replace your existing model rotary transmitter with KPM KC5 using our special adapter to fit your current rotary installation. For new installations, use the KPM measurement chamber included with the transmitter. All required hardware is included.

Powerful user interface

Experience unparalleled ease and efficiency with our state-of-the-art touch screen display. The intuitive navigation allows you to access all functions effortlessly, ensuring even first-time users can operate the device with confidence. Stay informed with real-time updates and clear visualizations, making it easy to monitor consistency sensor diagnostics, historical data and process variables. Built to withstand demanding environments, supports various communication protocols for seamless integration with control systems.

Dramatically reduced maintenance

With no drive belt to change, the Direct Drive Servo Motor rarely requires routine maintenance. Our unique mechanical seal system enables infrequent, low-cost maintenance. Simply replace the seals, on site, in an hour or less.

Self-diagnostics and smart features

Automatic maintenance features include reverse direction rotation to automatically loosen foreign objects. Calibration verification with Autozero is possible while the KPM KC5 is operating in the line.

No shutdown required

Built-in gate valve assembly allows you to retract the transmitter on the fly, at full process pressure, without having to shut down or drain the line. Flange installation is also available as an alternate option.

Specifications



Sensor type	Rotating consistency transmitter
Output signal	Analog output 4 –20 mA + HART®, Foundation Fieldbus and Profibus PA with optional converter
Binary inputs	4 x 24 VDC (internally powered) process stop, grade change (2) and sampler input
Binary output	Alarm output; 24 VDC, 2A; opening or closing dry contact
Power requirements	85–264 VAC, 47–63 Hz, 320W, single phase
Motor	Integrated Direct Drive Servo Motor
Measuring range	KPM KC5-S: 2 – 16% consistency KPM KC5-100: (0.8% SW) 1.5 – 5% consistency
Sensitivity	Better than 0.003% Cs
Pressure rating	Sensor PN25 Gate valve DN80 for KPM KC5-S: PN10, PN16 or PN25 Gate valve DN125 for KPM KC5-100: PN16
Process temperature	0–120° C (32–248° F)
Ambient temperature	Sensor 0–60° C (32–124° F), display unit 0–50° C (32–122° F)
Flow velocity	0–5 m/s (0–15 f/s)
Seal water	Mill seal water, 6–8mm hose connection (¼")
Housing	IP65 (better than Nema 4X) enclosure
Cabling	10 m (32 ft) interconnect cable from sensor to display unit; 20m (65 ft) and 30 m (98 ft) optional DN80 (3") AISI 316L standard, 254SMO and titanium available PN10, PN16 or PN25 DN125 (5") AISI 316L, PN16
Gate valve	Measurement chamber fits pipe diameters of 150 mm (6") and larger KPM KC5-100, 200mm or larger), AISI 316L standard, SAF2205, titanium. Adapter available for other manufacturer's measuring vessels. All required installation hardware included in the delivery.
Process connection	
Sensor material	Wetted parts AISI 316L or titanium
	Sensor: 520 × 140 × 180 mm (20.5 × 5.5 × 7.1"), 14,8 kg (33 lbs); KPM KC5-100, 19kg (42 lbs)
Dimensions (L × H × W) and weights	Display unit: 200 × 300 × 150 mm (7.9 × 12 × 6"); 6 kg (13 lbs) Installation assembly: 430 × 560 × 200 mm (17 × 22 × 8"), 19 kg (42 lbs); KPM KC5-100, 28kg (62 lbs)

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