



Chemical Instrument

MS1204p Moisture Transducer

Insert Family of Moisture Analyzers

Ref:MS1204p_DS_E

Revision:200502

___ Range 0-100% , Best performance in 0-70% of oil moisture applications

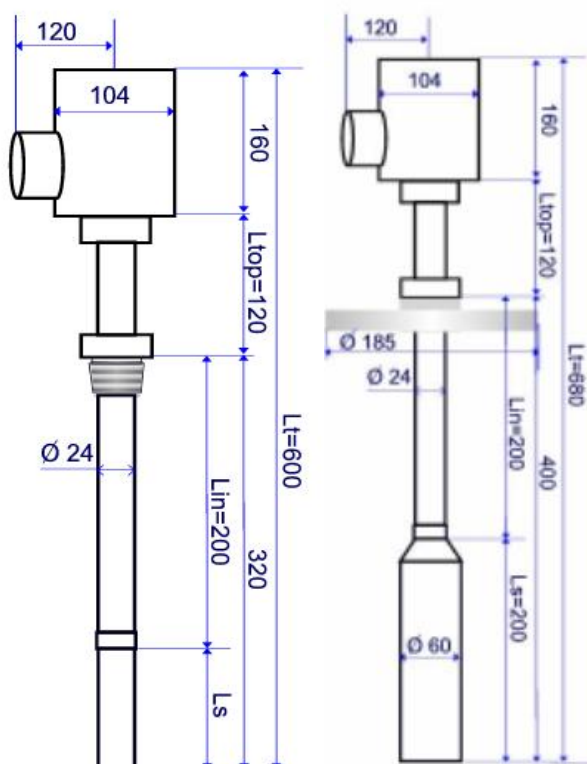
Features

- High sensitivity over wide range
- Simple tank or pipeline installation
- High on-line accuracy and repeatability
- No moving parts, no maintenance



Specification

Size of Transducer:



Transducer

Moisture Accuracy: +/-1.0%FS or 2 %relative, whichever is great(for same sample as calibrated)

*Equal to repeatability for chemical pure samples that dielectricity constant <30, and/or dissolved salts <0.03%; Otherwise would suffer from diversity of salt content;

Samples in constant salt content could be corrected by sample calibration,
Max absolute err for 70-100% range <1%, while the variety of salt content <3%;

Moisture Repeatability: < 0.1% Relative for oil

Resolution: +/-50ppm for R10; +/-0.1 % for R30-60; +/-1 % for R100

Range: R10:0-10%;R60:0-60% (before Inversion); R10:0-100%

Temperature Range (sensor): -40°C to 400°C

Pressure Range: 1.6MPa (standard) , up to 4.0Mpa

Connection: 1" NPT(Standard for pp and pc); D185 Flange for pm

Overall length: 620mm

Insertion Part:: Dia. 24 mm, Wet length 310 mm

Weight: 4 kg

Wet Materials: SS, PAA; Optional by order

Safety Certification: Ex ia

Environmental Rating:

Class 1,Group A/B/C/D(PL); Class II,Group E/F/G(AL)

NEMA 7, with BD5_M,PL; NEMA 8, with BD5_M,PL; NEMA 9, with BD5_M,AL

Standard Model:

Thread Connection: T-BD5xCD+MS1204pp NPT1" _T100_R60_P1.6

Flange connection:T-BD5xCD+MS1204pm F150_T100_R60_P1.6

- Note: Extended temperature and pressure range instruments also available

Sensor Variety:

-pc for general purpose application;

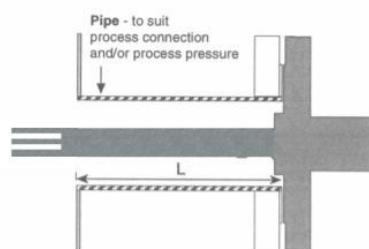
-pp for heavy EMC protection;

Application Requirement: well mixed water in oil; other liquids need verification by support engineers

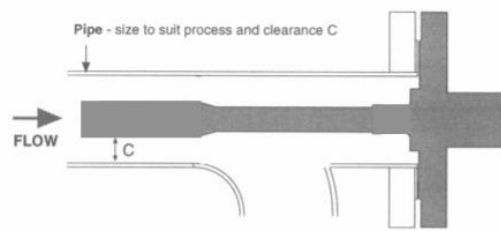
Installation:

Basic requirement: Against stream

Fitting Set



TANK / PIPE SIDE ENTRY MOUNTING
For maximum exposure to fluid L is as small as is practical



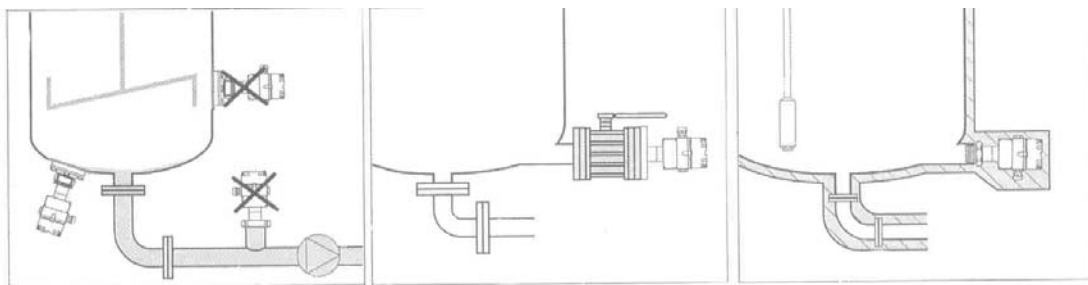
PIPE ELBOW MOUNTING - OPTIMUM INSTALLATION
Minimum pipe clearance C = 8mm

NOTE: PIPE OR TANK, TEE, FITTING AND TRANSDUCER BODY SHOULD BE LAGGED WHERE THERE IS RISK OF LOCAL TEMPERATURE CHANGE DUE TO HEAT DISSIPATION. ALWAYS ENSURE MATERIAL AROUND TRANSDUCER IS AT SAME TEMPERATURE AS BULK OF FLUID

Pot, Reactor Set

Call: 010-8264.0226; 8264.0225; Fax: 010-8264.0221;

P.o.Box: 603 BDTI Beijing, China 100080 Web: <http://www.fullsense.com>



Signal Processor

Processor Unit: BD5xM / BD5xMD (Included)

Power Supply: 9-24 v DC. @ 50mA

Analogue Output: 0/4 - 20mA, Fully configurable, representing setup

Communication: RS232 & R485, IEEE1451.2 STIM, STIMcom/ ModBus support

Alarm/Switch: one isolated voltage free contact, 1 5V switch control

Optional Accessory

Remote operator: BD4CCD Controller: Human interface by field bus

Remote Indicator: XM Digitalizer

Power supply regulator: 9-24V DC regular

Application Note

- 1) For high moisture detect, better choose pm type. Another more simple method to gain stable reading is to set up the data processing function to long time average , to smooth the fluctuation of moisture.
- 2) If environ temperature too low than that of the flow, please build heat insulation to protect the sensor body from heat dissipation.
- 3) MS1204 tech moisture sensor is not sensitive to oil pressure. but stable pressure is good for high resolution detect.
- 4) Salinity is the common problem to this kind of technology, suggest user calibration by sample at field, it is the most reliable method to assure the high accuracy.
- 5) Otherwise environ temperature should be taken care, especial for outdoor installation. It is recommended to select MC or IC industrial level transducer to keeping proper working. For over low temperature circumstance installation, a small PCB heater could be ordered. DC heating power <100W. (note the explosive-proof degree would be reduced to isolated safety).
- 6) Space <300mm beyond transducer should not be obstacles.

BigDipper TechnoChem Insitute

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For quick selection to moisture measuring system, refer to <Selection Guiding>.

URL: http://www.fullsense.com/Products/Moisture/liqMoisture/LiqMS_SG_E.htm

Further Information about BD4/5xC electronics, please refer to:

URL: <http://www.fullsense.com/Products/Meters/>

For system design and configuration, Refer to:

URL : http://www.fullsense.com/Products/Moisture/liqMoisture/liqMS_Cfg_E.htm

For more details for selection, Refer to

URL: http://www.fullsense.com/Products/Moisture/liqMoisture/LiqMS_Sel_E.htm

To lean information of moisture detecting technology, refer to:

URL : http://www.fullsense.com/Products/Moisture/liqMoisture/liqMS_TB_E.htm

If you need help from our specialist, please down load the <User application data from>

URL: http://www.fullsense.com/Products/Moisture/liqMoisture/IMS_AS_E.htm [.doc]