

For Continuous measurement of powder, solid, liquid

Radar Level Transmitter

MWLM-PR26 Series



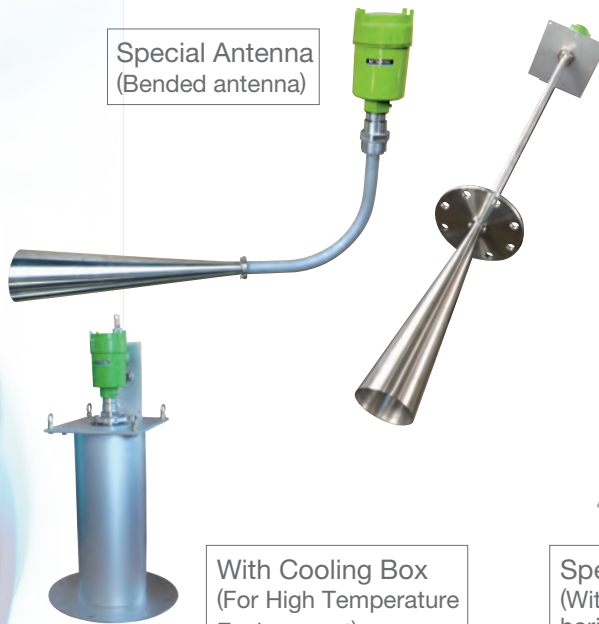
Extended the product

Matsushima's radar level transmitter is manufactured domestically from software to hardware, so it can be delivered quickly with stable supply, and also support our customers with quick maintenance. Since Matsushima has 60 years of experience in measurement control, we are able to meet our customer's requests regarding installation to the facilities.

Customization

Customize the level meter for suitable measuring environments and usage. Able to provide customized level meter in applications that have restrictions under high temperature and high pressure areas.

Special Antenna
(Bended antenna)



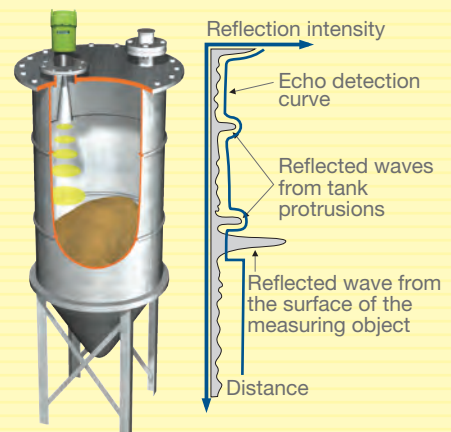
Special Antenna
(With waveguide
extension pipe)

With Cooling Box
(For High Temperature
Environment)

Special Antenna
(With reflection plate for
horizontal installation)

Measuring Principle

The microwave level meter measures the time from when the level meter emits pulse radar waves from the antenna to when the waves (echoes) reflected from the object to be measured return to the meter, which is then calculated into a distance.



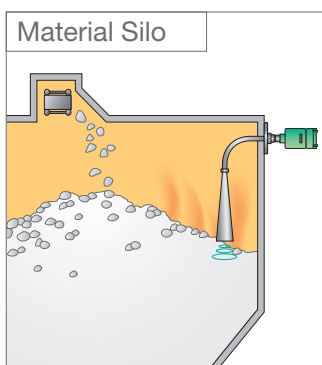
Longest warranty period to 2 years.

Flex
cust
cap

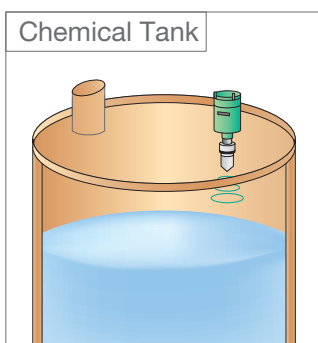
Applications

Applies to a variety of applications and flexible customization capability based on our long experience and know-how.

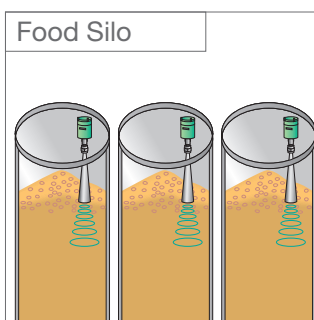
Usage in Applications



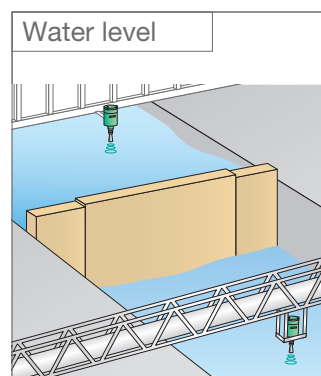
Material Silo
If there's no space to install on top of the silo, it is able to measure from the side of the silo.



Chemical Tank
By attaching the PTFE antenna, it is able to measure corrosive chemicals.



Food Silo
Narrow beam angle allows to measure inside a thin, long grain silos.



Water level
Able to continuously measure without being affected by rain, wind, and snow.

Options

With dust cap
(Dust Prevention)



With Flat Antenna
(Installation Environmental Measure)



With sunshade cover
(Protect against harsh sunlight)



With heat radiation fins
(High temperature Environmental Measure)

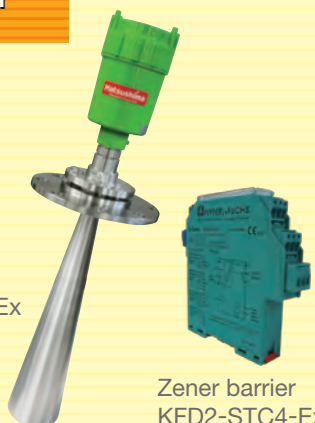


NEW

Explosion-proof Approved

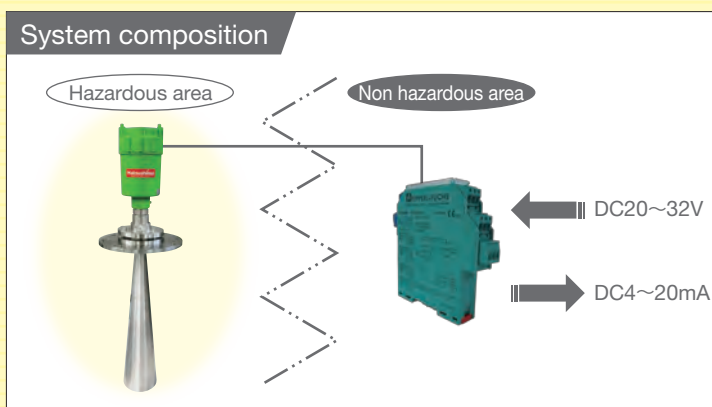
Line up of first domestic explosion-proof microwave level transmitter.
Explosion-proof enclosure : Ex ia IIB T4 (TIIS)

Explosion-proof level meter
MWLM-PR26H7SEx



Zener barrier
KFD2-STC4-Ex1

System composition



Easy Operation

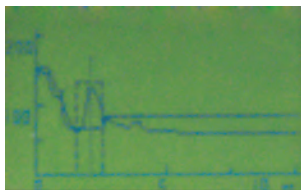
Simple and precise operation possible. Site maintenance with simple hand communicator "GRAPHIC COM 3". Remote operation with customer friendly software.

Local Operation

"GRAPHIC COM 3", a detachable LCD adjuster, has a liquid crystal display with high-visibility. You can see waveforms in real time while monitoring, and you can adjust settings if needed.



GRAPHIC COM on the sensor head



Real time indication for measurement situation

Remote Operation

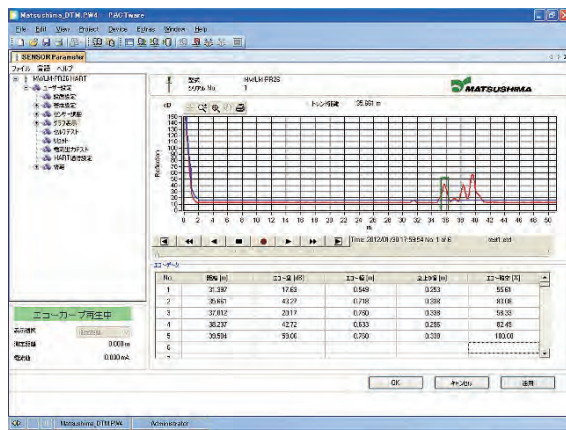
The PC with adjustment software allows easy operation for complex parameter settings.



HART Communication



Data communication cable (option)



Software Features

- Real time indication for measurement situation
- Make adjustment
- Check waveforms while monitoring and store the data
- Record trends
- Languages: Japanese, English, Chinese, and Korean

Speedy Delivery

Standard type model can be shipped immediately. Customized products are manufactured in our own factory under quality control and could deliver with short delivery time. Also will quickly support the customers with any troubles and inquiries.



Arrange the delivery after receiving the orders

Adequate stock allows quick delivery.

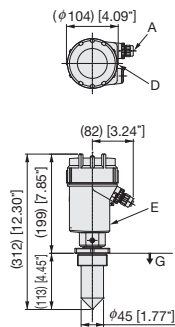
For Liquid		Specifications			
Model	MWLM-PR26C	MWLM-PR26H*			
Product Code	MWLM-PR26C1G	MWLM-PR26H1G	MWLM-PR26H2G*	MWLM-PR26H2F*	
Antenna	Cone		Horn		
Power Supply	DC20 ~ 32V For explosion-proof type, provide the power through the Safety Barrier				
Power Consumption	Standard type: Approx. 704mW, Explosion-proof: Approx. 540mW				
Mounting	G2 Thread	G1 Thread	G1 1/2 Thread	JIS5K50A Flange	
Dead Zone	0.5m (1.64ft) below the antenna				
Max Measurable Distance	10.0m (33ft) from measuring reference zero point		20.0m (66ft) from measuring reference zero point		
Transmitting Frequency	Approx. 26GHz				
Transmitting Cycle	Every 83ms				
Beam Angle	Approx. 24° (approx. 48deg. including side beam)		Approx. 18° (approx. 36deg. including side beam)		
Resolution	1mm				
Allowable Fluctuation Rate	10cm/s				
Accuracy	Repeatability	Within 2m (6.56ft) or less: ±30mm (1.18in), Over 2m (6.56ft) or more: ±20mm (0.78in) or ±0.04% of measurement range (Whichever is greater)			
	Temp. Error	0.06%/10K			
Ambient Temperature	Housing	Standard: -40 ~ +80°C (-40 ~ +176°F), With LCD: -20°C ~ +60°C (-4 ~ +140°F), Ex-proof: -20 ~ +50°C (-4 ~ +122°F) *1 hour is required to warm up the device if the temperature is lower than -20°C (-4°F)			
	Antenna	Standard: -40°C ~ +150°C (-40 ~ +302°F), Ex-proof: -40 ~ +100°C (-40 ~ +212°F)			
Allowable Pressure	500kPa (72.52psi)		1MPa (145psi)		490kPa (71.07psi)
Material	Housing	ADC			
	Antenna	PTFE	SUS304	SUS316L	
Protection	Housing	IP66 (Housing cover and lead outlet must be closed)			
	Antenna	IP67			
Lead Outlet	1-G1/2 (Applicable cable size: φ8 to 12mm (0.31 to 0.47in))				
Output Signal	DC4~20mA×1 (Load resistance when 24VDC power supply is used: 499Ω max), HART communication				
Integral Time	0 ~ 999s				
Mass	Approx. 1.9kg (4.19lbs)	Approx. 1.6kg (3.53lbs)	Approx. 1.9kg (4.19lbs)	Approx. 2.2kg (4.85lbs)	
Accessories (option)	· LCD adjustment unit (GRAPHIC COM 3) · Data Communication cable (MHM-01) · PC adjustment software (M-DTM) Safety barrier (KFD2-STC4-Ex1) is needed to use the explosion proof type. LCD display can't be used since it's a non explosion proof parts.				

* : Explosion Proof model has Ex written at the end of each model. Explosion proof structure is Ex ia IIB T4 (TIIS).

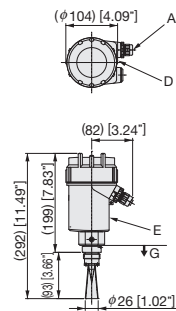
●Dimension mm [in]

Model : MWLM-PR26□□□

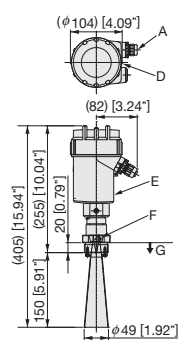
C1G



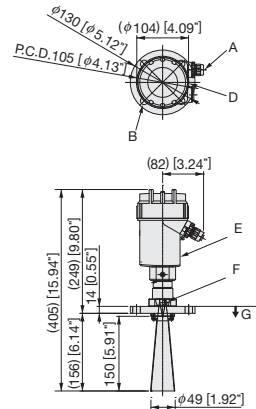
H1G



H2G

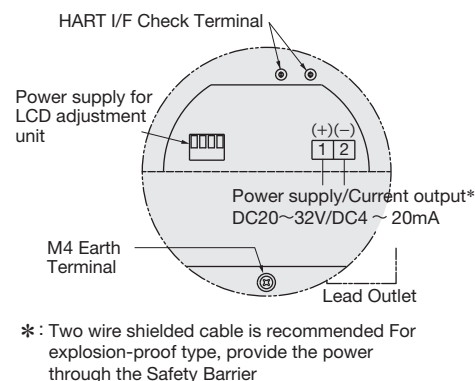


H2F

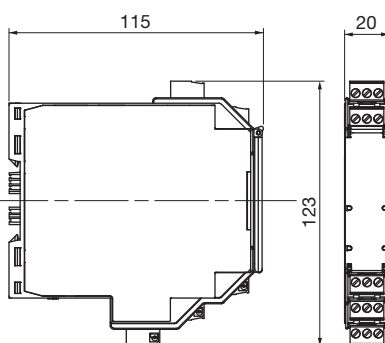


A	Lead outlet: G1/2	Cable: φ8-12mm[0.31-0.47"]
B	4×φ15[0.59"] Mounting hole	
C	8×φ19[0.75"] Mounting hole	
D	Earth terminal (M4)	Be sure to ground the earth terminal. (D-class grounding) (C-class grounding for Ex-proof)
E	Housing	Housing rotatable in 310°.
F	Purge nozzle: G1/8	
G	Measurement reference zero point	

Common for Liquid & Powder Terminal Block



Specs & Dimensions of the safety barrier



Specifications

- Power Specs.
 - Power Supply: DC20 ~ 35V
 - Power Consumption: 1.9kW
- Input Specs.
 - Input Signal: 0/4 ~ 20mA
 - Available voltage: ≥16V at 20mA terminal 1+,3
- Output Specs. (Safety area)
 - Output signal: 0/4~20mA ; load 0~800Ω
 - Pulsating Current: ≤50μA rms
- Mass: 200g

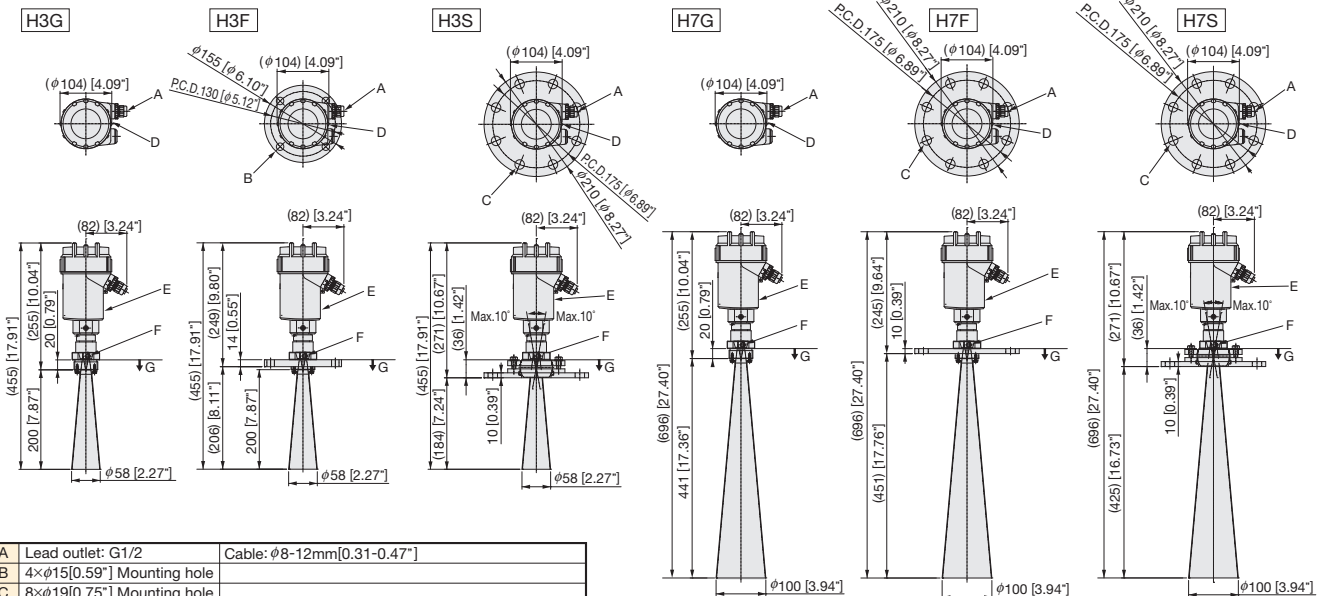
*This product uses a connection to the distributor or isolated interface(HART supported) and a card as a basic connection. For other connection methods and for any questions, please contact us.

For Powder		Specifications					
Model	MWLM-PR26H*						
Product Code	MWLM-PR26H3G*	MWLM-PR26H3F*	MWLM-PR26H3S*	MWLM-PR26H7G*	MWLM-PR26H7F*	MWLM-PR26H7S*	
Antenna	Horn						
Power Supply	DC20 ~ 32V For explosion-proof type, provide the power through the Safety Barrier						
Power Consumption	Standard type: Approx.704mW, Explosion-proof: Approx.540mW						
Mounting	G1 1/2 Thread	JIS5K65A Flange	Swivelling Flange (Equivalent to JIS10K100A)	G1 1/2 Thread	Swivelling Flange (Equivalent to JIS10K100A)	Swivelling Flange (Equivalent to JIS10K100A)	
Dead Zone	0.3m (0.98ft) below the antenna						
Max Measurable Distance	35.0m (115ft) from measuring reference zero point			70.0m (330ft) from measuring reference zero point			
Transmitting Frequency	Approx. 26GHz						
Transmitting Cycle	Every 83ms						
Beam Angle	Approx. 14deg. (approx. 28deg. including side beam)			Approx. 8deg. (approx. 16deg. including side beam)			
Resolution	1mm						
Allowable Fluctuation Rate	10cm/s						
Accuracy	Repeatability	Within 2m (6.56ft) or less: ±30mm (1.18in), Over 2m (6.56ft) or more:±20mm (0.78in) or ±0.04% of measurement range (Whichever is greater)					
	Temp. Error	0.06%/10K					
Ambient Temperature	Housing	Standard: -40 ~ +80°C (-40 ~ +176°F), With LCD: -20°C ~ +60°C (-4 ~ +140°F), Ex-proof: -20 ~ +50°C (-4 ~ +122°F) *1 hour is required to warm up the device if the temperature is lower than -20°C (-4°F)					
	Antenna	Standard: -40°C ~ +150°C (-40 ~ +302°F), Ex-proof: -40 ~ +100°C (-40 ~ +212°F)					
Allowable Pressure	1MPa (145psi)	490kPa (71.07psi)	500kPa (72.52psi)	1MPa (145psi)	250kPa (36.26psi)	500kPa (72.52psi)	
Material	Housing	ADC					
	Antenna	SUS316L					
Protection	Housing	IP66 (Housing cover and lead outlet must be closed)					
	Antenna	IP67					
Lead Outlet	1-G1/2 (Applicable cable size: φ8 to 12mm (0.31 to 0.47in))						
Output Signal	DC4 ~ 20mA×1 (Load resistance when 24VDC power supply is used; 499Ω max), HART communication						
Integral Time	0 ~ 999s						
Mass	Approx. 2.3kg (5.07lbs)	Approx. 4.4kg (9.70lbs)	Approx. 6.1kg (12.35lbs)	Approx. 2.7kg (5.95lbs)	Approx. 5.3kg (11.68lbs)	Approx. 6.5kg (14.33lbs)	
Accessories (option)	· LCD adjustment unit (GRAPHIC COM 3) · Data Communication cable (MHM-01) · PC adjustment software (M-DTM) Safety barrier (KFD2-STC4-Ex1) is needed to use the explosion proof type. LCD display can't be used since it's a non explosion proof parts.						

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●Dimension mm [in]

Model : MWLM-PR26 □□□□



A	Lead outlet: G1/2	Cable: φ8-12mm[0.31-0.47"]
B	4×φ15[0.59"]	Mounting hole
C	8×φ19[0.75"]	Mounting hole
D	Earth terminal (M4)	Be sure to ground the earth terminal. (D-class grounding) (C-class grounding for Ex-proof)
E	Housing	Housing rotatable in 310°
F	Purge nozzle: G1/8	
G	Measurement reference zero poin	

Specifications are subject to change without notice.
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Caution
●Read the instructions to ensure correct and suitable application of products.
●Contact our nearest sales office when using our products for any systems used in situations which may be life threatening.

Distributor



Matsushima Measure Tech Co.,Ltd.

HEAD SALES OFFICE / FACTORY
1-8-18, Norimatu Higashi, Yahatanishi-ku, Kitakyushu,
807-0837, Japan
Tel: +81-(0)93-691-3731 Fax: +81-(0)93-691-3735

SHANGHAI DAHONG MATSUSHIMA MACHINERY CO., LTD.
70 Hengchang Road, Dahong, Malu, Jiading,
Shanghai 201818, China
Tel: +86-(0)21-59514138 Fax: +86-(0)21-59514139

POHANG REPRESENTATIVE OFFICE
Odyssey Bldg. 1F, 41, Jukdo-ro, 28beon-gil, Buk-Gu,
Pohang-Si, Gyeongsangbuk-do, 791-841, Korea
Tel: +82-(0)54-274-3731 Fax: +82-(0)54-274-3731

http://www.matsushima-m-tech.com E-mail: info@matsushima-m-tech.com