CAT.No.CEE220E-1

OVAL

Liquid Gas

ALTImass series + dedicated distributor

OVAL 2-wire solution

- The existing 2-wire cable can be used as it is.
- The existing host system can be used as it is.
- Coriolis flowmeter ALTImass series can be used as it is.
- No restrictions on the compatible bore size and high cost performance.
- Simultaneous 4 to 20 mA output and pulse output are possible. Mechanical flowmeters (contact pulse output) that do not require a power supply can be replaced with our Coriolis flowmeters.
- Cable cost can be reduced in the case of new installation.





Japanese patent granted

We add value to the flow

OVAL Corporation

Application example

－CASE 1－ At the consideration new installation of Coriolis flowmeter …



We want to adopt high-accuracy / high-reliability OVAL ALTImass series with abundant supply reference!, but ...

Long-distance cables need to be laid between the factory floor and the host system.
Cables are steeping price rise, so we want to use a 2-wire system...
ALTImass series (with output) requires at least a 3-wire cable...

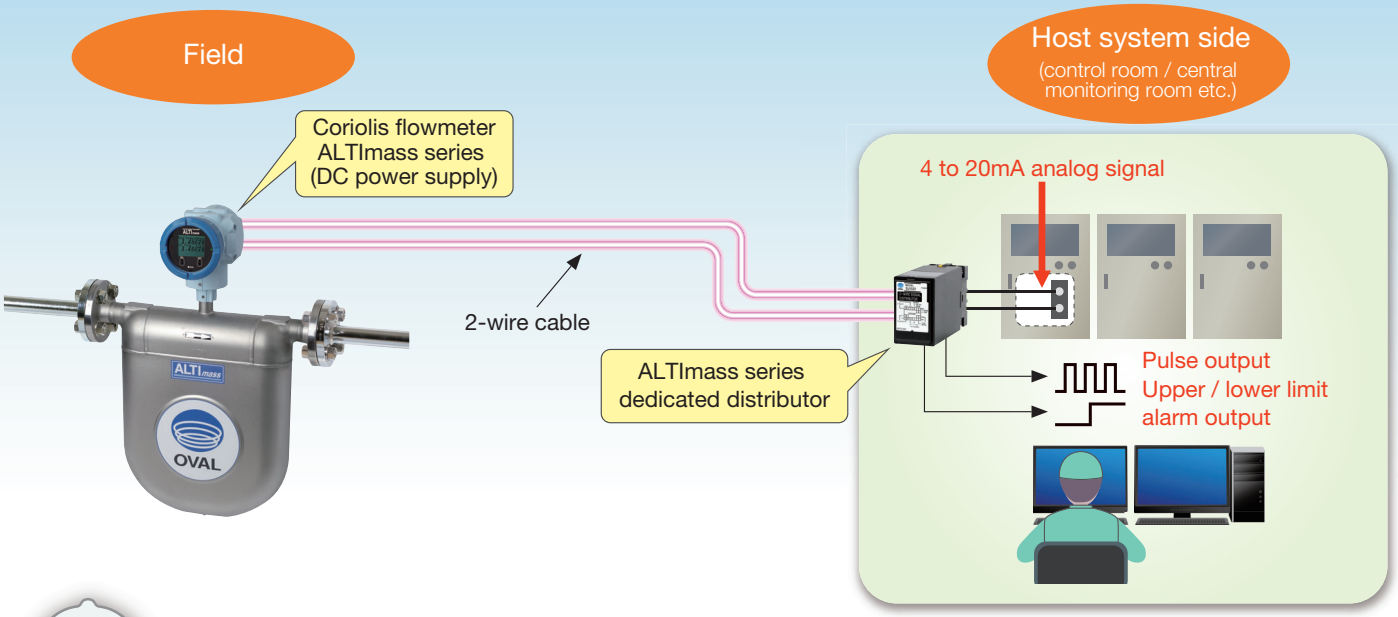
With a 2-wire system, only analog signals (instantaneous flow rate) can be obtained.
If possible, I would also like a real-time pulse signal...

You can use a 2-wire cable!
The installation cost can be reduced!



Please leave it to OVAL 2-wire solution!

2-wire transmission system using Coriolis flowmeter (ALTImass series) can be constructed by inserting "ALTImass series dedicated distributor" near the host system!



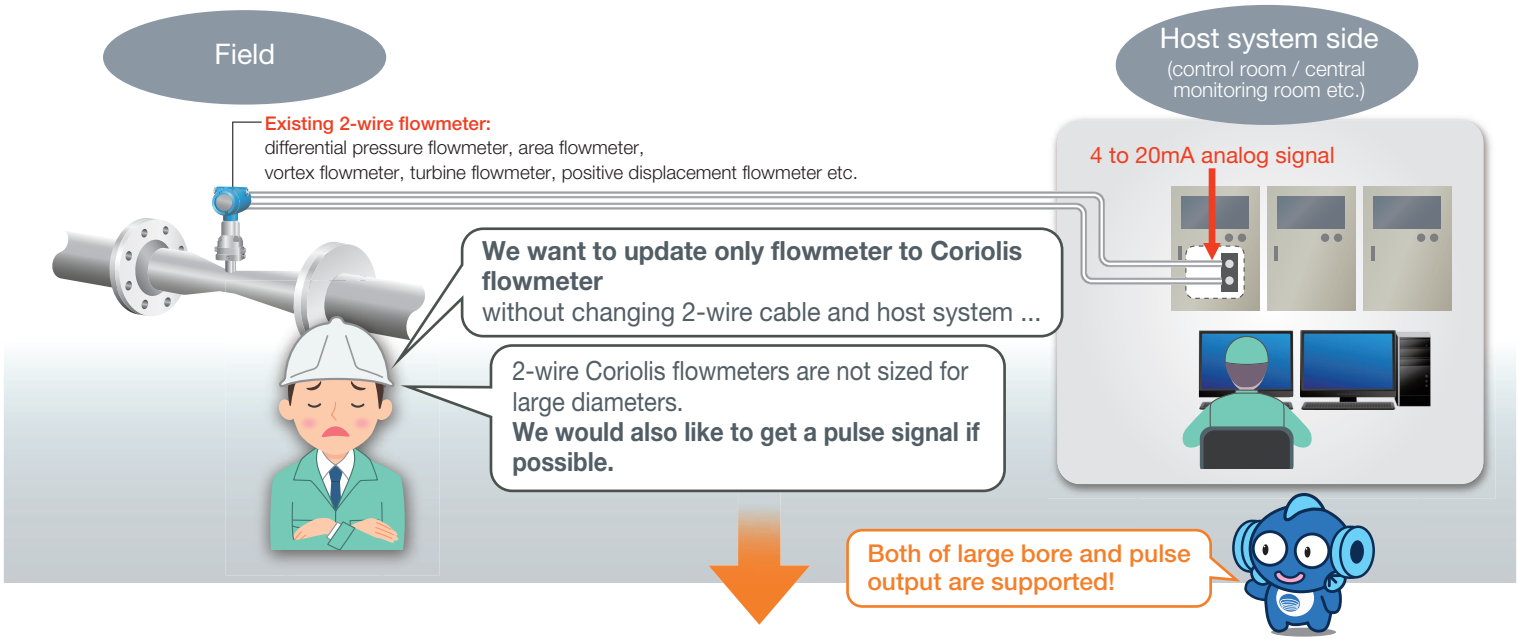


- 2-wire cable could reduce the cable cost!
- Even 2-wire transmission can obtain pulse signal and upper / lower limit alarm signal!
- ALTImass series is high-accuracy and high-reliability because it has abundant supply reference!

- The cost can be reduced by adopting a 2-wire cable for the long-distance laying cable between the field and the host system.
- A dedicated distributor provides general-purpose analog and also pulse outputs.
  It is also possible to manage integrated flow in real-time, which is difficult to handle with a general "2-wire dedicated Coriolis flowmeter".
- It can also handle "large bore" applications that cannot be handled with general "2-wire dedicated Coriolis flowmeter".
- Instead of "2-wire dedicated Coriolis", the proven, high-performance, and reliable "ALTImass series" can be used.

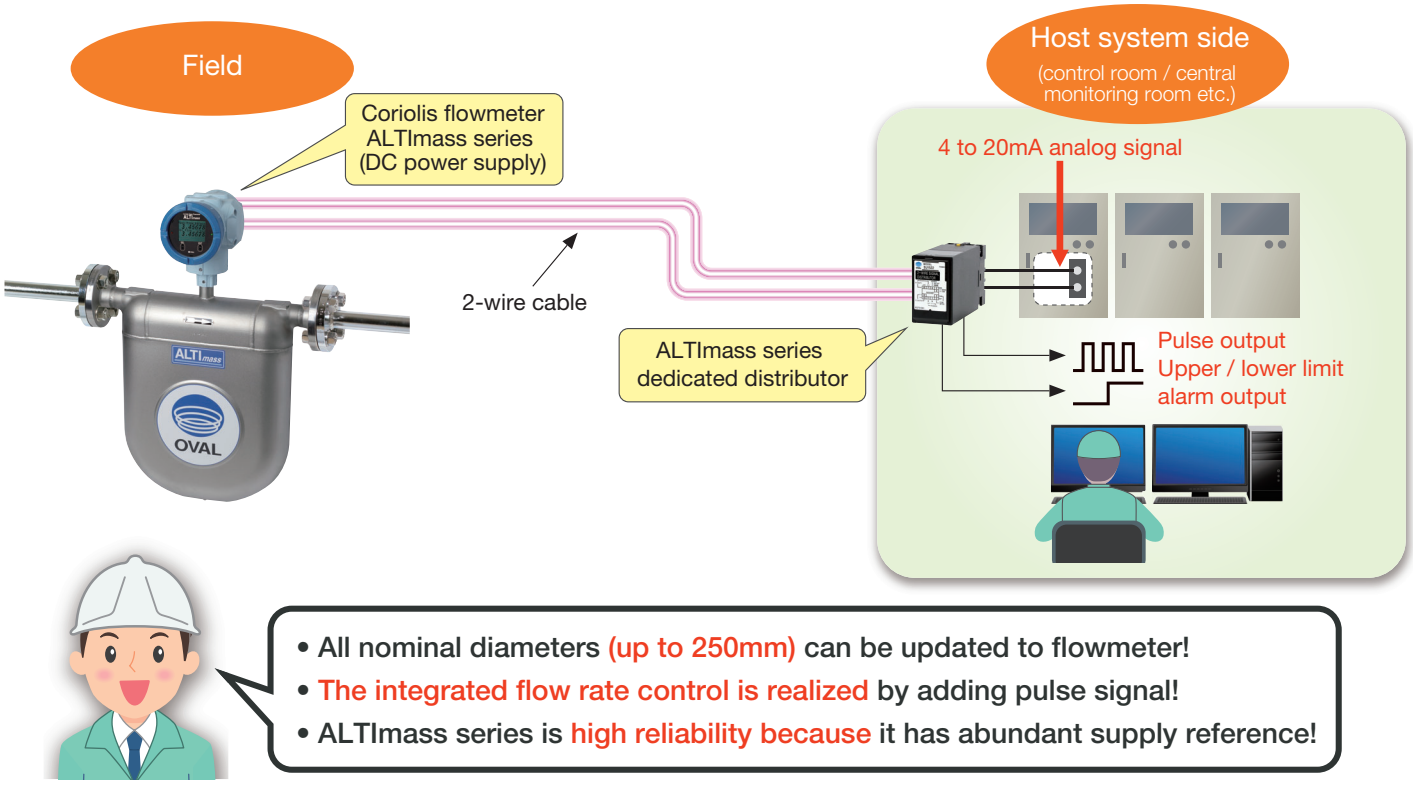
Application example

-CASE 2- At the update of existing 2-wire flowmeter ...



Please leave it to OVAL 2-wire solution!

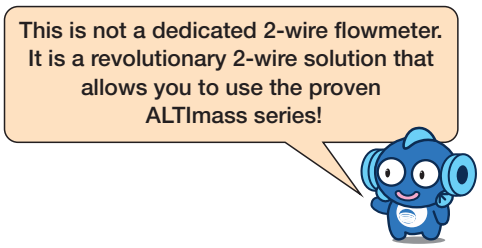
The existing 2-wire flowmeter can be updated to Coriolis flowmeter (ALTImass series) without changing existing 2-wire cable and host system by inserting "ALTImass series dedicated distributor" near the host system!



- This instrument allows 2-wire cable Coriolis flowmeters to be upgraded to the ALTImass series without having to re-lay the cables.
- It can also be used for "large bore" applications that cannot be handled by the common "2-wire dedicated Coriolis flowmeter".
- Despite the 2-wire transmission, not only analog signals but also flow pulses and flow alarms can be acquired.
- As a pulse output can be obtained, mechanical totalizing flowmeter of the type with pulse output without an external power supply can also be updated to the ALTImass series. (2-wire cable for pulse transmission can be diverted.)
- Instead of "2-wire dedicated Coriolis", the proven, high-performance, and reliable "ALTImass series" can be used.

Difference from general 2-wire dedicated Coriolis flowmeter

Comparison item	General 2-wire dedicated Coriolis flowmeter	OVAL 2-wire solution (ALTImass series + dedicated distributor)	
4 to 20mA analog output	○	○	Simultaneous output available
Flow rate pulse output	×	○	
Upper / lower limit flow rate alarm output	×	○	
Large bore exceeding 100mm supported	×	○	



ALTImass series dedicated distributor

■Features

1. It can configure a 2-wire system, by using it in combination with the ALTImass series Coriolis flowmeter, which is renowned for its high performance, reliability, and abundant supply reference.
2. It can provide pulse output, analog output (source or sink), and upper/lower limit alarms.
3. Distributors can be applied to replace existing 2-wire flow meters such as differential pressure and area flow meters with precision Coriolis flow meters.
4. A mechanical totalizing flowmeter that outputs pulses without an external power supply can also be upgraded to a high-precision Coriolis flowmeter by applying a 2-wire cable for pulse transmission.
5. The 2-wire system configuration reduces cabling costs, even for new installations of the ALTImass series.



Distributor (SU1522)

■General Specifications

Item	Description
Combinable flowmeter	ALTImass satisfying all the following specifications • DC power supply • Open collector pulse output
Analog output (Instantaneous flow rate output)	Signal: 4 to 20mA output (can be switched to sink output or source output depending on the wiring method)
Digital output 1	Signal: Open collector output (NPN transistor output) Assignment: ① Input synchronization pulse (synchronized with the pulse output of the ALTImass series) or ② Instantaneous flow rate upper or lower limit alarm
Digital output 2	Signal: Open collector output (NPN transistor output) Assignment: ① Factored pulse (input synchronous pulses output in arbitrary units after dividing) or ② Instantaneous flow rate upper or lower limit alarm
LED display	POWER lamp and digital output monitor lamp
Rated supply voltage	AC power specifications: 100 to 240VAC 50Hz/60Hz *Allowable voltage range: 85 to 264VAC 50Hz/60Hz DC power specifications: 20-30VDC *DC power supply capacity is 24VDC. 1.2A or more is recommended.
Operating temperature range	−10 to +50°C
2-wire transmission length	Max. 300m
Installation	Plug-in type (attached to wall or DIN rail)
Housing	Resin (black)

• The specification as of November, 2024 is stated in this catalog. Specifications and design are subject to change without notice.
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