Kansai Automation

HYCONTROL

REFLEX/SCANFLEX
MULTIFLEX
MINIFLEX LR
MICROFLEX-C

ULTRASONIC LEVEL INDICATOR

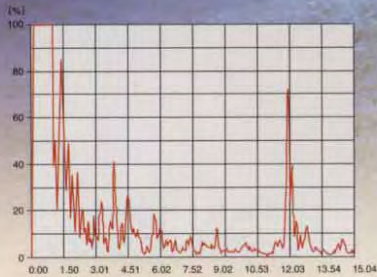
REFLEX/SCANFLEX

MULTIFLEX

MINIFLEX LR

MICROFLEX-C

TYPICAL NON-CONTACT LEVEL METER !
OUTSTANDING SOFWARE MAKES HIGHLY STABLE AND RELIABLE.
A WIDE RANGE OF APPLICATIONS FROM SOLIDS TOLIQUIDS ,
MEASUREMENT IN LONGER RANGE WITH
MULTI-POINT SCANNING SYSTEM

KANSAI Automation Co., Ltd.

From Long-range Measurement to Multi-point Scanning,
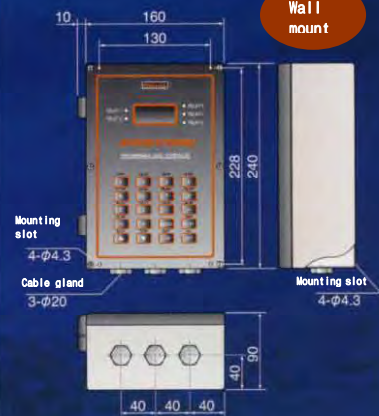Excellent Ultrasonic Level Meter !

REFLEX CONTROLLER

Wall mount

Mounting slot
4-Φ4.3

Cable gland
3-Φ20

Mounting slot
4-Φ4.3

Accuracy : ± 0.25% (ambient temp. 20)
Resolution: 2mm or 0.1%FS whichever greater
Blanking : Programmable
(min 0.5m dependent on transducer)
Transducers: RVY /RYT /RVW /RWT /
RXM9 series
Power Supply: 110/230VAC ± 10%
50/60Hz 12VA selectable
or 24VDC +25% - 10% 9W
Relay output: 5SPDT 250VAC 8A
30VDC 8A (Resistance load)
Analogue output: 4-20/20-4mA 750
Serial output: RS232/ RS485
Display   : Graphics LCD module
(120 x 32 dot)
5 red LED s for relay status
Ambient Temp : -40 - +70
Enclosure   : IP65 Polycarbonate
Dimensions: 240 x 160 x 90mm
Weight   : 1.75kg

APPLICATION

Measure Level
Measure Empty distance
Measure Volume

ATEX
EExmIIT6

VERSATILE

Multi-channel non-contact ultrasonic level controller for liquids, slurries & solids from 1 up to 10 points of level measurement. It can store data and output orderly or arbitrarily. Its measuring range up to 50 meters.
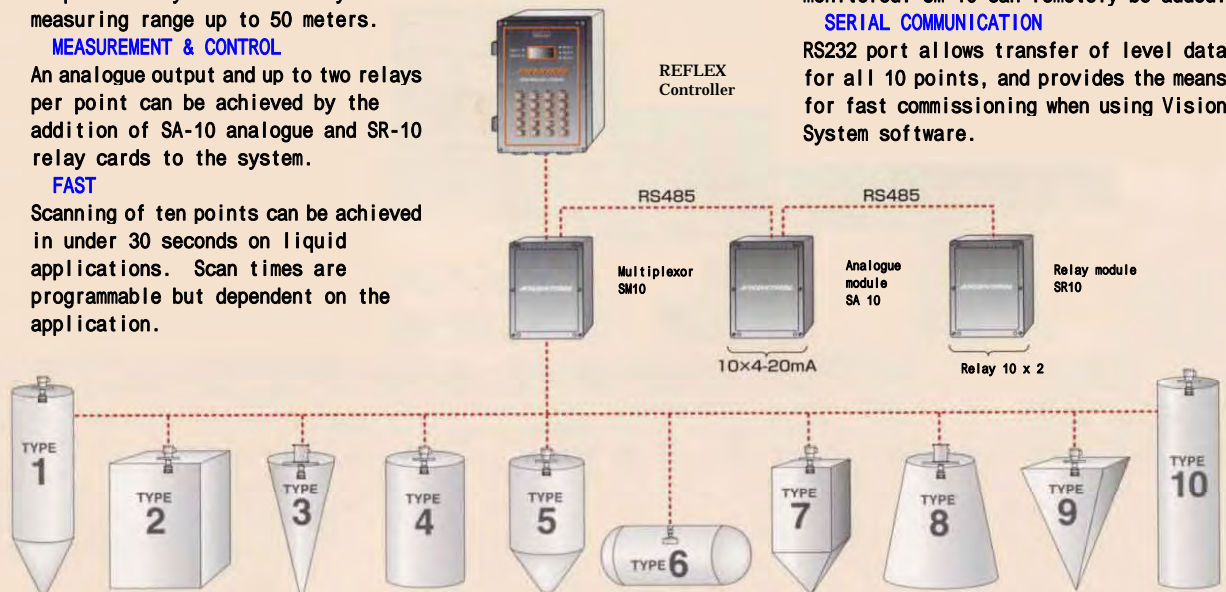
MEASUREMENT & CONTROL

An analogue output and up to two relays per point can be achieved by the addition of SA-10 analogue and SR-10 relay cards to the system.

FAST

Scanning of ten points can be achieved in under 30 seconds on liquid applications. Scan times are programmable but dependent on the application.

REDUCING COST PER POINT

The Multiplexor SM10, added to the Reflex, enables to scan up to 10 separate points of level, thus reducing the cost per point for each additional tank or silo monitored. SM10 can remotely be added.
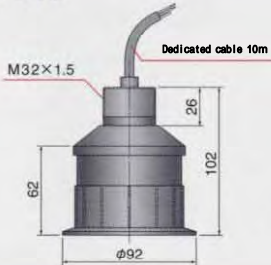
SERIAL COMMUNICATION

RS232 port allows transfer of level data for all 10 points, and provides the means for fast commissioning when using Vision System software.
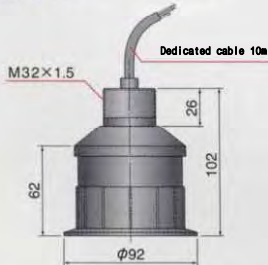
HYCONTROL
Multi-control System

REFLEX
Controller

RS485   RS485

Multiplexor
SM0

Analogue
module
SA 10

Relay module
SR10

10×4-20mA   Relay 10 x 2

TYPE 1
TYPE 2
TYPE 3
TYPE 4
TYPE 5
TYPE 6
TYPE 7
TYPE 8
TYPE 9
TYPE 10

REFLEX TRANSDUCER

RYV15
RYT15 (Inbuilt Temp Sensor)

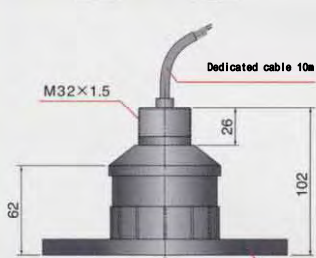M32×1.5
Dedicated cable 10
26
102
62
φ92

Body material: PVDF
Face material: Epoxy
Frequency : 41.5KHz
Beam angle: 12°
Min dead band: 0.3m
Max range liquids: 20m
Max range solids: 10m
Ambient temp: -40 - +90
Haz. area: EExmIIT6
Protection: IP68
Mounting: M20 x P1.5
Weight: 2.0kg

RWV15
RWT15 (Inbuilt Temp Sensor)

M32×1.5
Dedicated cable 10m
26
102
62
φ92

Body material: PVDF
Face material: PVDF
Frequency : 41.5KHz
Beam angle: 12°
Min dead band: 0.3m
Max range liquids: 20m
Max range solids: 10m
Ambient temp: -40 - +90
Haz. area: EExmIIT6
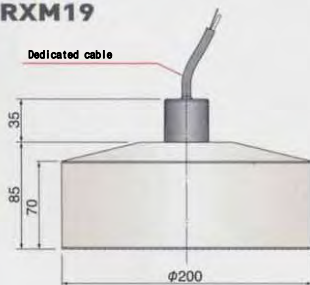Protection: IP68
Mounting: M20 x P1.5
Weight: 2.0kg

RYVF☐☐/RWVF☐☐ (Inbuilt Temp Sensor)
RVTF☐☐/RWTF☐☐

M32×1.5
Dedicated cable 10m
26
102
62

Flange(plastic)
4"/3" ASME, DN80/100

Body material: PVDF
Face material: Epoxy /PVDF
Frequency : 41.5KHz
Beam angle: 12°
Min dead band: 0.3m
Max range liquids: 20m
Max range solids: 10m
Ambient temp: -40 - +90
Haz. area: EExmIIT6
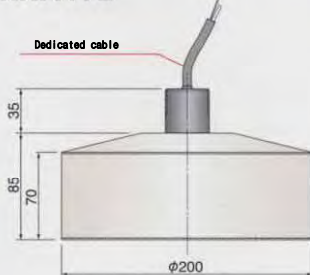Protection: IP68
Mounting: M20 x P1.5
Weight: varied by flange size

RXM19

Dedicated cable
35
85
70
φ200

Body material: Polypropylene
Face material: Polyethylene
Frequency : 19KHz
Beam angle: 8°
Min dead band: 0.75m
Max range liquids: 30m
Max range solids: 20m
Ambient temp: -20 - +60
Haz. area: No
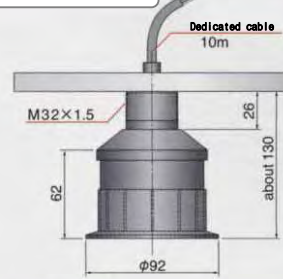Protection: IP65
Mounting: M20 x P1.5
Weight: 2.8kg

RXM19E

Dedicated cable
35
85
70
φ200

Body material: Polypropylene
Face material: Polyethylene
Frequency : 17KHz
Beam angle: 5°
Min dead band: 1.0m
Max range liquids: 50m
Max range solids: 35m
Ambient temp: -20 - +60
Haz. area: No
Protection: IP65
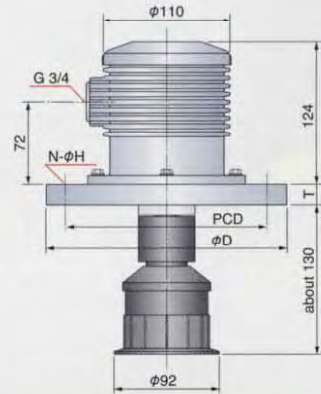Mounting: M20 x P1.5
Weight: 4.8kg

*The min. dead band and the max. range are varied by the operating temperature and environments.

OPTION

Mounting Flange

Dedicated cable 10m
M32×1.5
26
62
about 130
φ92

Mounting Flange | Terminal Box

φ110
G 3/4
72
124
N-φH
PCD
φD
T
about 130
φ92

Mounting Flange | Terminal Box
Aiming kit

φ195
φ165
70
about 210
N-φH
PCD
φD
T
L
20° 20°
φ200
Adjustable angle

ISOLATION KIT

Kit to prevent oscillation loss of ultrasonic wave(standard)

M20 P1.5
20
48
Isolation kit
ISOLATION KIT ONLY
DO NOT USE AS LOCKING NUT

Attached | Unused

APPLICATION

Measure Level
Measure Empty
distance
Measure Volume
Measure Differential
level
Measure Open channel
flow
Pump control

ATEX EExm II T6
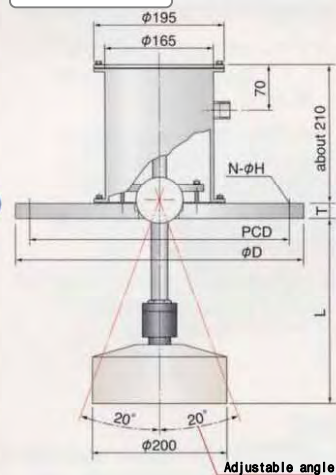
MULTIFLEX

Providing all the functionality of level control ranging from solids to liquids whatever the conditions may be.

MULTIFLEX CONTROLLER

Wall mount

Mounting slot
4-φ4.3

Cable gland
3-φ20

Mounting duct
4-φ4.3

Accuracy : ± 0.25% (ambient temp. 20)
Resolution: 2mm or 0.1%FS whichever greater
Blanking : Programmable
(min 0.5m dependent on transducer)
Transducers: RYV /RYT /RW /RWT
Power Supply: 110/230VAC ± 10%
50/60Hz 12VA selectable
or 24VDC +25% - 10% 9W
Relay output: 5SPDT 250VAC 8A
30VDC 8A (Resistance load)
Analogue output: 4-20/20-4mA 750
Serial output: RS232/ RS485
Display   : 4 digit 12mm LCD
5 red LED's for relay status
Ambient Temp : -40 - +70
Enclosure : IP65 Polycarbonate
Dimensions : 240 x 160 x 90mm
Weight   : 1.75kg

FEATURES

It can operate in dirty, dusty environments, and a high degree of resolution and functionality enables it to apply to diversified applications.

It can be protected from any unauthorized access if a password is used. It maintains the high level of security.

Linearisation for 7 different vessel shapes held in memory, its volume conversion is easier.

It can accept power supplies of either DC or AC volt.

There is no need for separate programmers or computers to set up but all you need is to set up necessary parameters using the keypad.

DIVERSITY

In applications on solids, it can operate in adverse environments such as dirt and dust. For liquids, it can achieve a high-degree of resolution and functionality. It can satisfy the requirements necessary for liquid and solid applications in one instrument, in either a panel or wall mount enclosure.

SECURITY

It can be protected from any unauthorized access if a password is used.
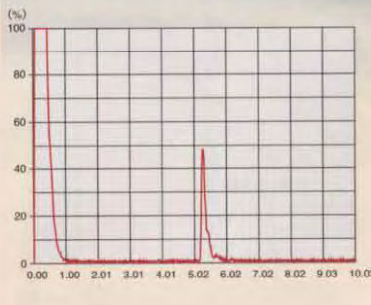
MULTIPLE POWER SUPPLIES

It can accept power supplies of either 110 or 230 volt AC. A separate 24 volt DC input is provided on every unit for those who want to operate on a safe DC voltage or provide back-up in case of power failure.

INTEGRAL CONSOLE

Neither complex codes or programming nor separate programmers or computers to set up are required.   All you need is to set up necessary parameters using the keypad.
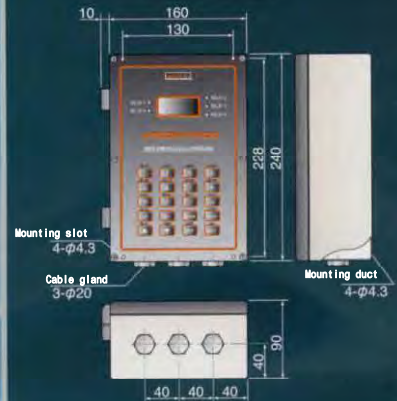
VOLUME CONVERSION

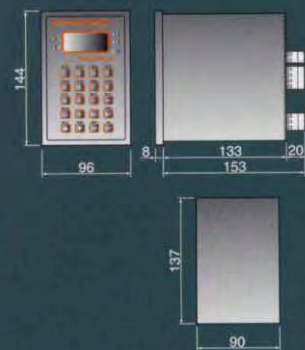Linearisation for 7 different vessel shapes is held in memory

Panel mount
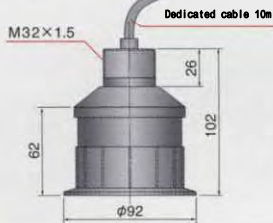
Accuracy : ± 0.25% (ambient temp. 20)
Resolution: 2mm or 0.1%FS whichever greater
Blanking : Programmable
(min 0.5m dependent on transducer)
Transducers: RYV /RW /RXM
Power Supply: 110/230VAC ± 10%
50/60Hz 12VA selectable
or 24VDC +25% - 10% 9W
Relay output: 5SPDT 250VAC 8A
30VDC 8A (Resistance load)
Analogue output: 4-20/20-4mA 750
Serial output: RS232/ RS485
Display   : 4 digit 12mm LCD
Ambient Temp : -40 - +70
Enclosure : IP65 Polycarbonate
Dimensions : 144 x 96 x 140mm
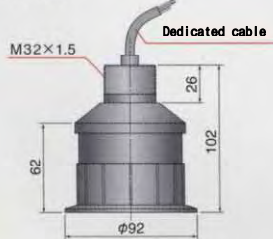Weight   : 1.75kg

MULTIFLEX LR TRANSDUCER

RYV15
RYT15 (Inbuilt Temp Sensor)

M32×1.5
Dedicated cable 10m
26
102
62
φ92

Body material: PVDF
Face material: Epoxy
Frequency : 41.5KHz
Beam angle: 12°
Min dead band: 0.3m
Max range liquids: 15m
Max range solids: 10m
Ambient temp: -40 - +90
Haz. area: EExmIIT6
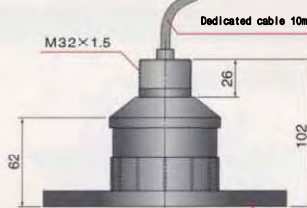Protection: IP68
Mounting: M20 x P1.5
Weight: 2.0kg

RWV15
RWT15 (Inbuilt Temp Sensor)

M32×1.5
Dedicated cable
26
102
62
φ92

Body material: PVDF
Face material: PVDF
Frequency : 41.5KHz
Beam angle: 12°
Min dead band: 0.3m
Max range liquids: 15m
Max range solids: 10m
Ambient temp: -40 - +90
Haz. area: EExmIIT6
Protection: IP68
Mounting: M20 x P1.5
Weight: 2.0kg

RYVF□□/RWVF□□ (Inbuilt Temp Sensor)
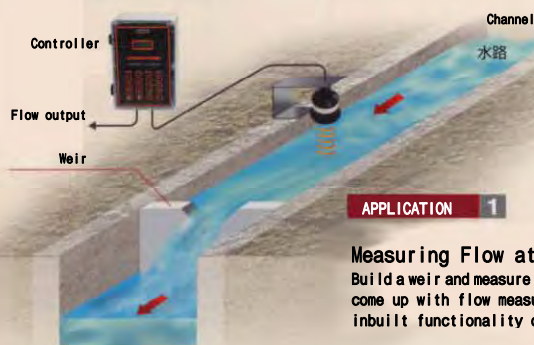### RVTF□□/RWTF□□

M32×1.5
Dedicated cable 10m
26
102
62
Flange(plastic)
4"/3" ASME, DN80/100

Body material: PVDF
Face material: Epoxy /PVDF
Frequency : 41.5KHz
Beam angle: 12°
Min dead band: 0.3m
Max range liquids: 15m
Max range solids: 10m
Ambient temp: -40 - +90
Haz. area: EExmIIT6
Protection: IP68
Mounting: M20 x P1.5
Weight: varied by flange size

*The min. dead band and the max. range are varied by the operating temperature and environments.

Controller
Flow output
Weir
Channel
水路

APPLICATION 1

Measuring Flow at Open Channel Weir
Build a weir and measure the upstream level. It can
come up with flow measurement in setting up the
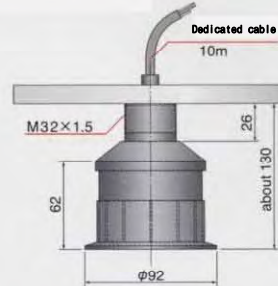inbuilt functionality of Weir Flow Conversion.

Controller
Output of differential
Upstream sensor
Dust extractor
Downstream sensor
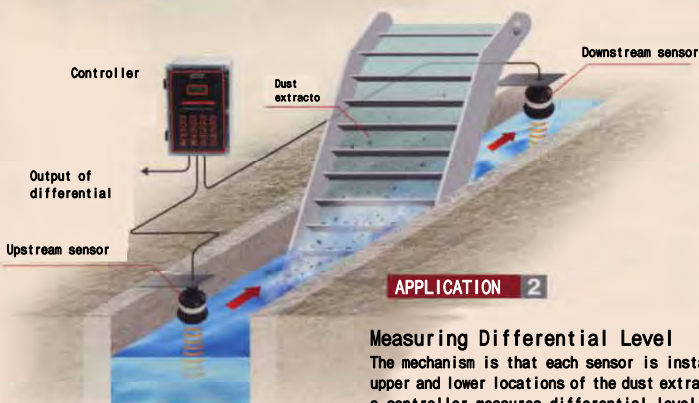
APPLICATION 2

Measuring Differential Level
The mechanism is that each sensor is installed at
upper and lower locations of the dust extractor and
a controller measures differential level. The
device is used for the automatic operation of a
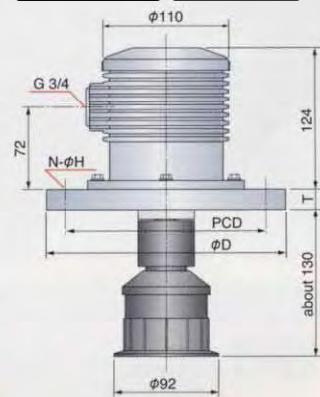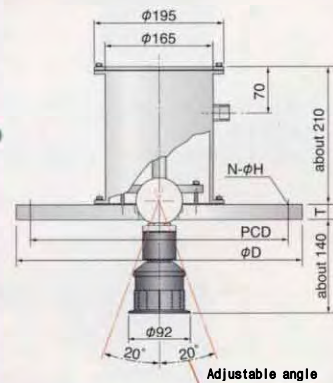dust extractor and can be applied to floodgate

OPTION

Mounting flange

Dedicated cable 10m
M32×1.5
26
about 130
62
φ92

Mounting flange | Terminal box

φ110
G 3/4
72
124
N-φH
PCD
φD
about 130
φ92

Mounting flange | Terminal box
Aiming kit

φ195
φ165
70
about 210
N-φH
PCD
φD
about 140
φ92
20° 20°
Adjustable angle

ISOLATION KIT

Kit to prevent oscillation loss of ultrasonic wave(standard)

M20 P1.5
20
48
ISOLATION KIT ONLY
DO NOT USE AS LOCKING NUT
Isolation kit

Attached   Unused

MINIFLEX CONTROLLER

MINIFLEX LR
For Liquids

Compact but Highly Functional
User Friendly

APPLICATION
Measure Level
Measure Empty
 distance
Measure Volume
Measure
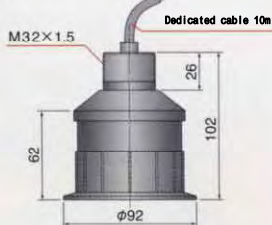 Differential level
Pump control
Weir flow

ATEX
EExm II T6

Accuracy : ± 0.25% (ambient temp. 20)
Resolution: 2mm or 0.1%FS whichever greater
Blanking : Fully Programmable
Transducers: RYV /RYT /RWV /RWT
Power Supply: 95/110/230VAC ± 10%
            50/60Hz 12VA selectable
            or 24VDC +25% - 10% 9W
Relay output: 3SPDT 250VAC 8A
            30VDC (Resistance load)
Analogue output: 4-20/20-4mA 750
Display   : Multiline
Ambient Temp : --20 - +70
Enclosure   : IP65 Polycarbonate
Dimensions: 185 x 213 x 119.5mm
Weight   : 1.55kg

Dimensions: 106.5, 31, 228, 137, 10, 198, 213, Ø5.4, 119.5

MINIFLEX LR TRANSDUCER

RYV15
RYT15 (Inbuilt Temp Sensor)
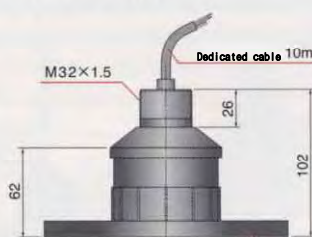
M32×1.5   Dedicated cable 10m
26, 102, 62, Ø92

Body material: PVDF
Face material: Epoxy
Frequency : 41.5KHz
Beam angle: 12°
Min dead band: 0.3m
Max range liquids: 10m
Max range solids: 5m
Ambient temp: -40 - +90
Haz. area: EExmIIT6
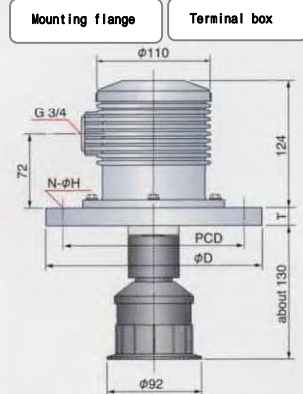Protection: IP68
Mounting: M20 x P1.5
Weight: 2.0kg

RWV15
RWT15 (Inbuilt Temp Sensor)

M32×1.5   Dedicated cable 10m
26, 102, 62, Ø92
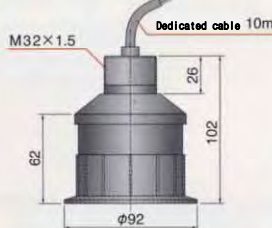
Body material: PVDF
Face material: PVDF
Frequency : 41.5KHz
Beam angle: 12°
Min dead band: 0.3m
Max range liquids: 10m
Max range solids: 5m
Ambient temp: -40 - +90
Haz. area: EExmIIT6
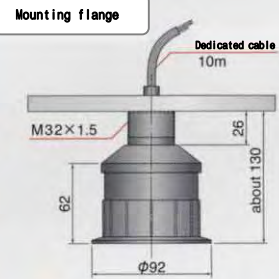Protection: IP68
Mounting: M20 x P1.5
Weight: 2.0kg

RYVF☐☐/RWVF☐☐
RVTF☐☐/RWTF☐☐ (Inbuilt Temp Sensor)

M32×1.5   Dedicated cable 10m
26, 102, 62

Body material: PVDF
Face material: Epoxy /PVDF
Frequency : 41.5KHz
Beam angle: 12°
Min dead band: 0.3m
Max range liquids: 10m
Max range solids: 5m
Ambient temp: -40 - +90
Haz. area: EExmIIT6
Protection: IP68
Mounting: M20 x P1.5
Weight: varied by flange size

Flange(plastic)
4"/3" ASME, DN80/100

OPTION

Mounting flange

Dedicated cable 10m
M32×1.5   26, about 130, 62, Ø92

Mounting flange   Terminal box

Ø110, G 3/4, 124, 72, N-ØH, PCD, ØD, about 130, T, Ø92

ISOLATION KIT

Kit to prevent
oscillation
loss of
ultrasonic
wave

Isolation kit

M20 P1.5
20, 48

ISOLATION KIT ONLY
DO NOT USE AS LOCKING NUT

Attached   Unused

*The min. dead band and the max. range are varied by the operating temperature and environments.

Integral Amplifier Two-wire Loop Powered
Simple to Calibrate and Use
Empty Distance and Span can be entered

TWO WIRE ULTRASONIC LEVEL TRANSMITTER
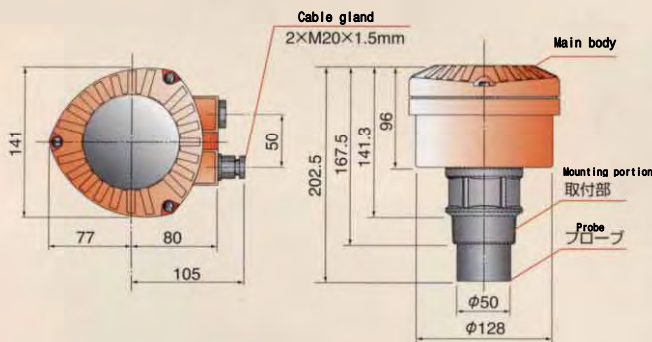
MICROFLEX-C For Liquids

Principle of Operation
An ultrasonic pulse is emitted from a sensor down towards the media and is reflected back from the surface. The time it takes to travel from/to the sensor is proportional to the distance travelled.

FEATURES

The setup is simple as you set up with push buttons while seeing the LCD.

You can select to indicate LCD either by meter, feet or inch

The transducer material consisting of PVDF that is corrosion resistant, it can have a wide range of applications.

It has a False Echo Rejection function that enables the instrument to identify two fixed obstructions, memorize their position and ignore them during the measuring process.
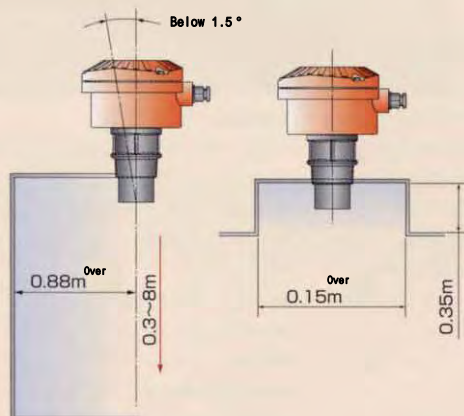
OUTLINE DIMENSIONS

Cable gland
2×M20×1.5mm

Main body

141

50

167.5

202.5

141.3

96

Mounting portion
取付部

Probe
プローブ

77   80

105

φ50

φ128

Accuracy : ± 5mm (<1m) / ± 0.5%FS (>1m)
Resolution: 1mm
Max. range: 8m
Beam angle: 12°
Min. dead band: 0.3m
Power Supply: 12-30VDC(two wire loop powered)
Analogue output: DC4-20mA 750
Serial output: ---
Display   : digital LCD
Ambient Temp : -40 - +70
Housing   : Glass filled nylon
Wet side   : PVDF
Protection : IP67
Weight   : 850g
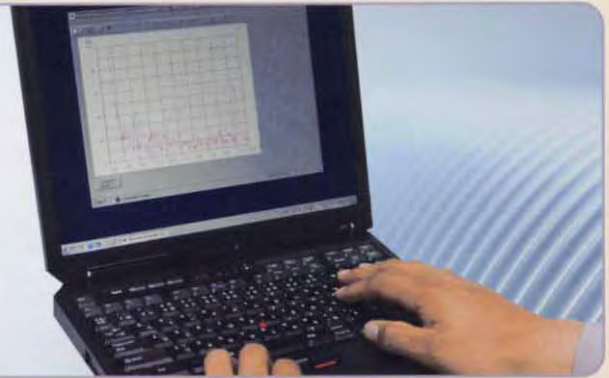

Display

3.354

Push buttons for setup

INTERIOR

MOUNTING GUIDELINES
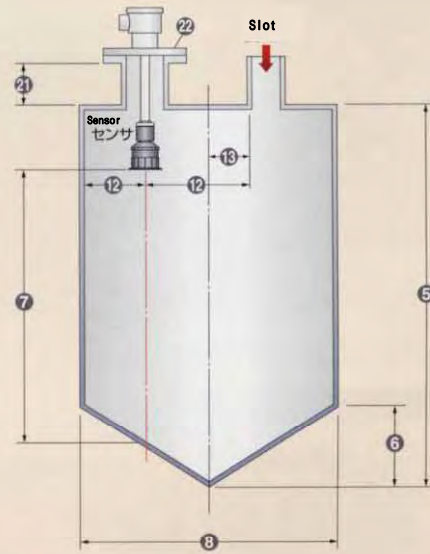

Below 1.5°

0.88m Over

0.3~8m

Over
0.15m

0.35m

HYCONTROL VISION SYSTEM

REFLEX/SCANFLEX & MULTIFLEX can be connected to PC with serial outputs. A dedicated software (option) can be used to allow all echoes of ultrasonic waves to be viewed in trend analysis, thus enabling to make a higher degree of setup.

Please inform us of the following when referring and ordering.

① Object to be measured [   ]

② Type [Powder   Solids   Lump   Liquids   ]

③ Shape [   ]

④ Repose angle [Degree   ]

⑤ Hopper height [m   ]

⑥ Cone height [m   ]

⑦ Measurable range [m   ]

⑧ Hopper diameter [m   ]

⑨ Umbo [Yes   /   No   ]

⑩ Agitator [Yes   /   No   ]

⑪ Means of carriage [   ]

⑫ Mounting position [From slot   (   )m]
[From tank wall (   )m]

⑬ Slot position [Center / From center (   )m]

⑭ Temp in a tank [(   )℃ ~ (   )℃]

⑮ Ambient Temp. [Sensor   (   )℃~(   )℃]
[Control Unit (   )℃~(   )℃]

⑯ Pressure in a tank [Yes (KPa) / None]

⑰ Moisture [(   )% ~ (   )%]

⑱ Dust [Yes   /   No   ]

⑲ Corrosion [Yes   /   No   ]

⑳ Aiming kit [Yes (   ) / No]

㉑ Nozzle height [mm   ]

㉒ Mounting standard [Flange size   ]

---

* The specifications herein may be subject to change without advance notice
* Please be sure to read USER'S GUIDE, Installation & Operation Instructions when using the Instrument.

代理店 /Agent