

# VEGA

## Sensor documentation



### VEGA DTM Collection 10 / 2003

Date  
Generated using

26.11.2003 18:35  
Ultrasonic-DTM Version 1  
(Service License)

Notes  
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## Sensor documentation

### Device data

Serial number	13712942
Device name	VEGASON 61
Electronics	Two wire HART
Target address	0
Device address	0
Software version	3.06
First saved using DTM version	1.36.0.0
Last saved with DTM-version	1.36.0.0

### Standard parameter

#### Basic adjustment

Sensor tag	HYPTECH
Units of measurement	m
WHG certification	No

#### Min-Max adjustment

Min. adjustment	0,00 %
Min. adjustment	5,000 m(d)
Max. adjustment	100,00 %
Max. adjustment	0,350 m(d)

#### Application

Product type	Liquids
Vessel type	unknown
Additional adjustment	Fast change of level > 1m/min

#### Damping

Integration time	0 s
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#### Linearization

Linearization	User programmable
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#### Display

Menu language (PLICSCOM)	English
Parameter shown on display	Distance [m(d)]
Scaling 0%	0
Scaling 100%	100
Parameter	Volumen
Units	l
Graph	Measurement value with units, sensor tag and bar graph

## Diagnostics

Distance (minimum)	0,35 m(d)
Distance (maximum)	4,793 m(d)
Temperature (maximum)	23,35 °C
Temperature (minimum)	18,55 °C

## Device trend

Measured value	Distance
At time interval	60 sec
At measurement value difference	non active
Temperature recording	No
Start at	non active
Stop at	non active
Stop recording when memory full	No

## Current output

Output characteristics	4...20 mA
Failure mode	< 3,6mA
Min. current	3,8 mA

## PIN

Activate PIN	not activated
PIN	0000

## Info

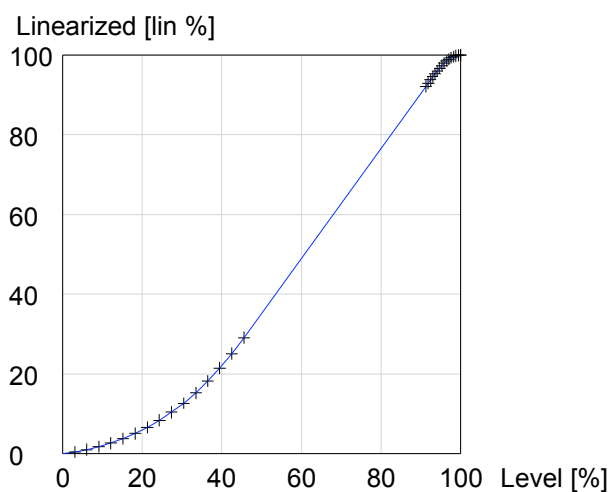
Date of manufacture	10.11.2003
Last change	26.11.2003 18:32

## Sensor details

Details	Version
Approval	without
Version / Process temperature	Standard / 80°C
Process connection / Material	Thread G1½A/PVDF
Electronics	4...20mA HART®
Housing/Protection	Plastic/IP66
Cable entry/Plug connection	M20x1.5/without
Indicating-adjustment module (PLICSCOM)	mounted

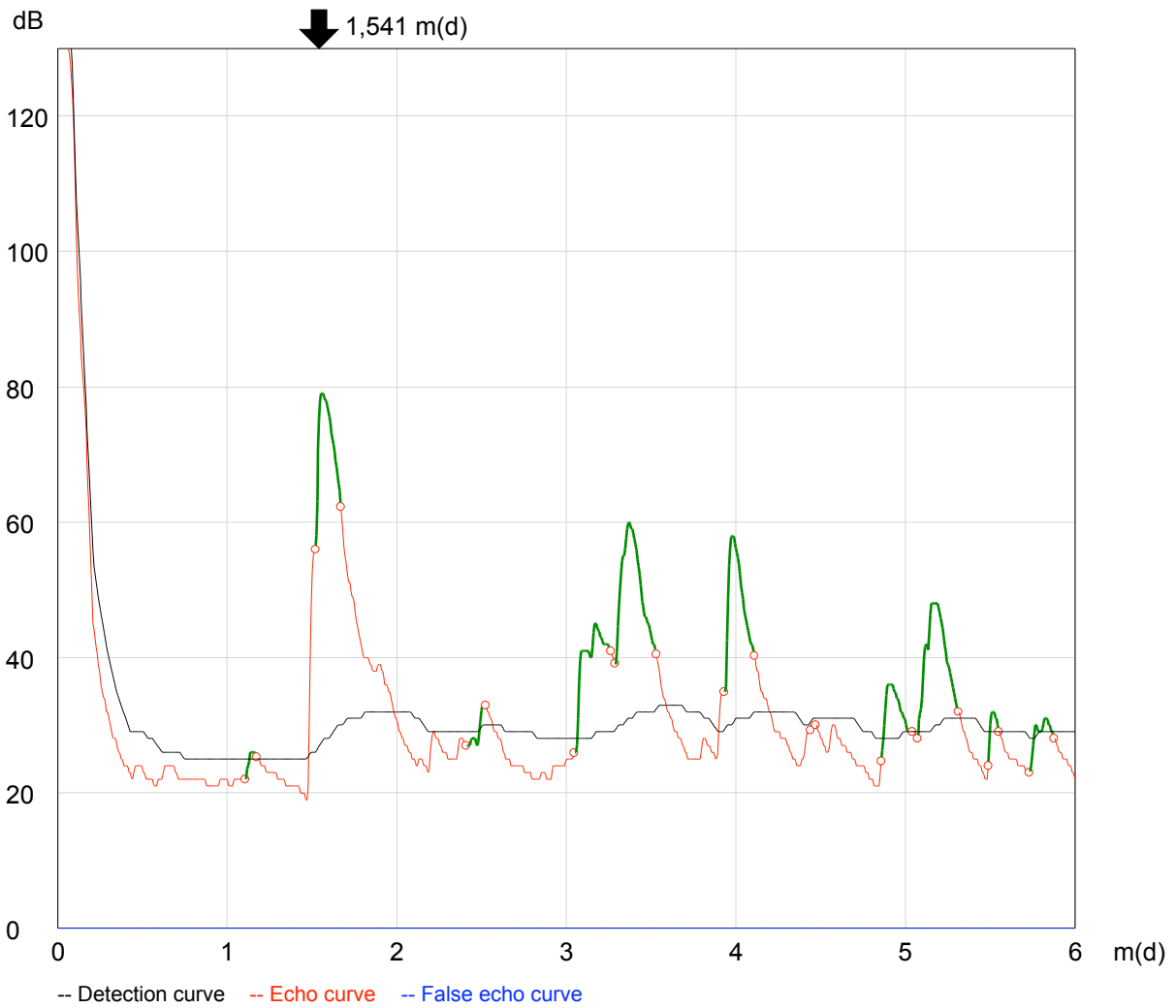
## Used linearization curves

No.	Level [%]	Linearized [lin %]
0	0	0
1	3,04	0,44
2	6,08	1,01
3	9,12	1,74
4	12,16	2,64
5	15,19	3,74
6	18,23	5,04
7	21,27	6,56
8	24,31	8,34
9	27,35	10,37
10	30,39	12,69
11	33,43	15,31
12	36,47	18,25
13	39,51	21,52
14	42,54	25,15
15	45,58	29,15
16	91,17	92,07
17	91,76	92,88
18	92,34	93,69
19	92,93	94,49
20	93,52	95,26
21	94,11	96,02
22	94,7	96,73
23	95,29	97,4
24	95,88	98
25	96,47	98,53
26	97,06	98,97
27	97,64	99,34
28	98,23	99,63
29	98,82	99,83
30	99,41	99,96
31	100	100



## Echo curve

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## Echo data

Distance [m(d)]	Amplitude [dB]	Width [m(d)]	Effective echo probability [%]	Relative amplitude [dB]	Threshold value [dB]
1,11	27	0,07	52,2	52	25
1,54	79	0,16	100,0	0	21
2,42	32	0,12	55,3	48	26
3,08	44	0,22	64,7	35	26
3,34	61	0,25	78,8	19	29
3,96	58	0,19	76,9	21	26
4,44	31	0,04	54,9	48	29
4,88	37	0,19	58,8	42	28
5,14	49	0,25	68,6	31	29
5,50	32	0,07	55,3	48	26
5,75	34	0,15	56,9	45	28

## Special parameters

1. Begin of operation range	0,35 m
2. End of operation range	5 m
3. Additional security at start of operating range	Yes
4. Additional security at end of operating range	100 cm
5. Sound velocity	331,600 m/sec
6. Averaging factor on increasing amplitude	2
7. Averaging factor on decreasing amplitude	2
8. Smooth raw value curve	Yes
9. Minimum offset of detection curve	5 dB
10. Correction of offset detection curve	0 dB
11. Minimum echo amplitude	0 dB
12. Minimum measurement reliability	0 dB
13. Additional amplitude of learned false echoes	6 dB
14. Echo compression	Off
15. Difference in echo amplitude	7 dB
16. Difference in echo distance	50 cm
17. First large echo will be displayed as distance	No
18. Threshold for first large echo detection	10 dB
19. Focus range for solids	200 cm
20. Focus range for liquids	100 cm
21. Sensitivity outside the focus range	6 dB
22. Consider the fill rate ?	No
23. Time for opening of the focus range	600 s
24. Filling speed	2 m/h
25. Emptying speed	2 m/h
26. Fault signal on loss of echo	No
27. Delay of fault signal on loss of echo	120 s
28. Measured value offset	0 m
29. Switchable filter for measured value with hysteresis	standard
30. Sensitivity of the receiver	automatic