600 … 6000 mm

20 - 30 V DC

- Ideal for detection of levels of liquids, bulk materials, transparent media, …
- Distance information largely independent of surface properties
- Analogue current output, 1 switching output
- PC-configuration software for configuring sensor and switching output / analogue output
- Up to 10 devices can be synchronised via the SYNC input
- Separate adjustment of start and end of switching range (Q1) via potentiometer and PC

CE | ISO 9001 | c(UL)us LISTED

IEC 60947... | IEC 60947... | IP 65

Accessories:

(available separately)

- Cable with M12 connector (K-D …)
- "USDS-Config" configuration software (free download from _www.leuze.com_)
- PGU 01 (programming unit)

Dimensioned drawing

ø65
M30x1.5
SW 36
ø27.3
152
138.5
67
144.5
11.5
2
10.5
8.5
M12x1

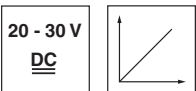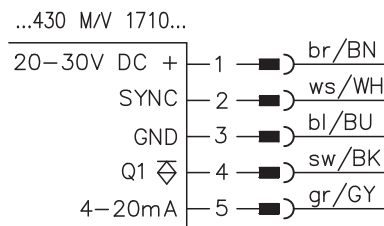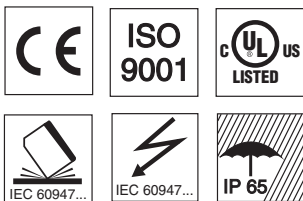**A** Potentiometer for end of switching range Q1
B Indicator diode Q1
C Potentiometer for start of switching range Q1

Electrical connection

...430 M/V 1710...

20−30V DC +	1	br/BN
SYNC	2	ws/WH
GND	3	bl/BU
Q1	4	sw/BK
4−20mA	5	gr/GY

Specifications

Ultrasonic specifications	VRTU…-1710-6000…
Operating range [1]	600 … 6000mm
Ultrasonic frequency	80kHz
Opening angle	6°
Resolution	≥ 1mm
Absolute measurement accuracy	± 1.5% of the measurement range end value
Reproducibility	± 9mm
Switching hysteresis	60mm

Timing	
Switching frequency (min.) [2]	1Hz
Response time (max.) [2]	400ms
Delay before start-up	280ms

Electrical data	
Operating voltage U_B	20 … 30VDC (incl. ± 10% residual ripple)
Residual ripple	± 10% of U_B
Bias current	< 60mA
Outputs	1 PNP transistor, 1 analogue output
Function characteristics	switching in case of object recognition
Output current (PNP/analogue)	300mA/4 … 20mA
Analogue output	R_L 0 … 300Ω
Characteristic curve	ascending
Switching range adjustment	potentiometer 270°

Indicators	
Yellow LED	output activated
Flashing yellow LED	programming error

Mechanical data	
Housing	metal / CuZn
Weight	380g
Connection type	M12 connector, plastic, 5-pin

Environmental data	
Ambient temp. (operation/storage)	-25°C … +70°C/-40°C … +85°C
Protective circuit [3]	1, 2, 3
VDE safety class	III
Protection class	IP 65
Standards applied	IEC 60947-5-2
Fitting position	any

1) For the complete temperature range, measured object ≥ 100x100 mm
2) Can be configured up to 3 times faster using "USDS-Config"
3) 1=short-circuit and overload protection, 2=no polarity reversal protection, 3=wire break and inductive protection
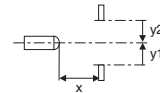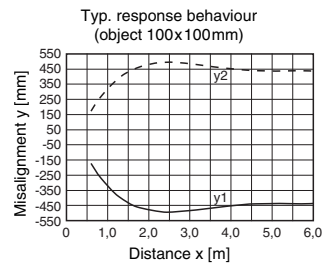
Remarks

- **Approved purpose**:
  The ultrasonic distance sensors are used for acoustic, contactless detection of objects.

Order guide

Designation	Part No.
VRTU 430M/V-1710-6000-S12	500 36269

Tables

Diagrams

Typ. response behaviour (object 100x100mm)

Remarks

- Synchronisation:
  Mutual interference is excluded by connecting the sensors with the SYNC input.

Configuration software "USDS-Config"

The configuration software runs under Windows 95/98/NT/2000/XP and offers the following features:

- Configuration of multiplex operation
- Configuration of the sensor (attenuation, switching frequency, response time)
- Adjustment of the switching output (start/end of switching range, hysteresis, object present yes/no)
- Adjustment of the analogue output
- Support of various languages