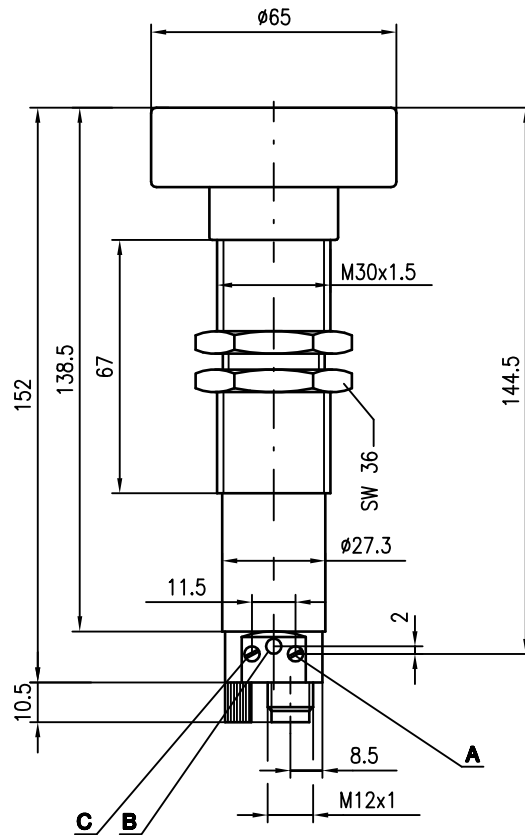


**VRTU 430**

**Ultrasonic distance sensors**

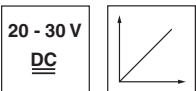


**Dimensioned drawing**



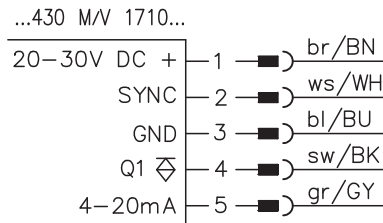
- A** Potentiometer for end of switching range Q1
- B** Indicator diode Q1
- C** Potentiometer for start of switching range Q1

**600 ... 6000 mm**



- 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

**Electrical connection**

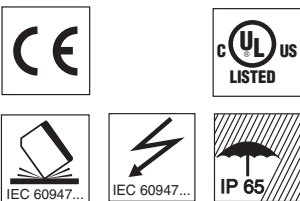


**Accessories:**

(available separately)

- Cable with M12 connector (K-D ...)
- "USDS-Config" configuration software (free download from [www.leuze.com](http://www.leuze.com))
- PGU 01 (programming unit)

We reserve the right to make changes • USDS\_07gb.fm



## Specifications

### Ultrasonic specifications

Operating range <sup>1)</sup>	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.) <sup>2)</sup>	1Hz
Response time (max.) <sup>2)</sup>	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 <sup>3)</sup>	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

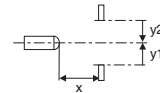
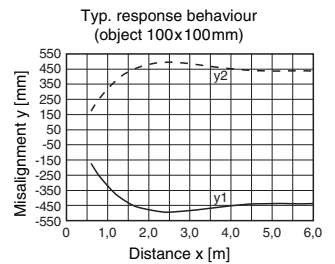
- **Approved purpose:**  
The ultrasonic distance sensors are used for acoustic, contactless detection of objects.

## Order guide

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

## Tables

## Diagrams



## 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