



DEUTSCH

Ultraschallsensor mit Analogausgang Betriebsanleitung

Sicherheitshinweise

- Vor der Inbetriebnahme die Betriebsanleitung lesen.
- Anschluss, Montage und Einstellung nur durch Fachpersonal.
- Gerät bei Inbetriebnahme vor Feuchte und Verunreinigung schützen.
- Kein Sicherheitsbauteil gemäß EU-Maschinenrichtlinie.

Bestimmungsgemäße Verwendung

Der UM30-21...113 ist ein Ultraschallsensor und wird zum berührungslosen Erfassen von Sachen, Tieren und Personen eingesetzt.

Inbetriebnahme

Siehe Ablaufdiagramm. Default-Werte: Analogausgang von min. bis max. Betriebstastweite; steigende Ausgangscharakteristik.

Wartung

SICK-Sensoren sind wartungsfrei. Wir empfehlen, in regelmäßigen Abständen - die Grenzflächen zu reinigen, - Verschraubungen und Steckverbindungen zu überprüfen.

SICK

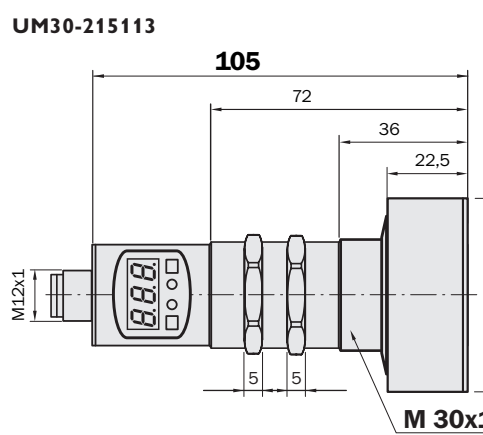
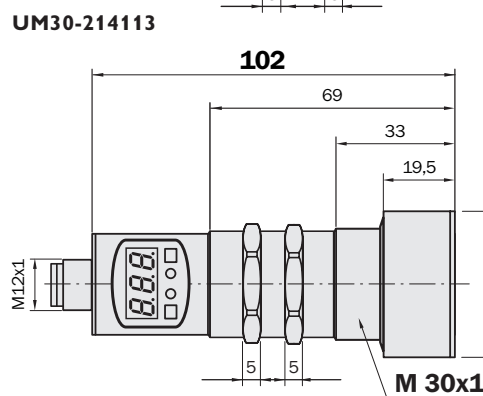
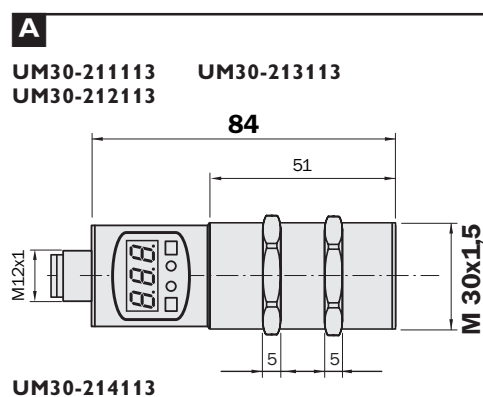
8012872 1108 GO KE

SENSICK UM30-21...113

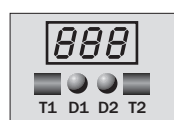
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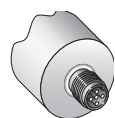
Änderungen vorbehalten. Angegebene Produkteigenschaften und technische Daten stellen keine Garantieerklärung dar.



Alle Typen

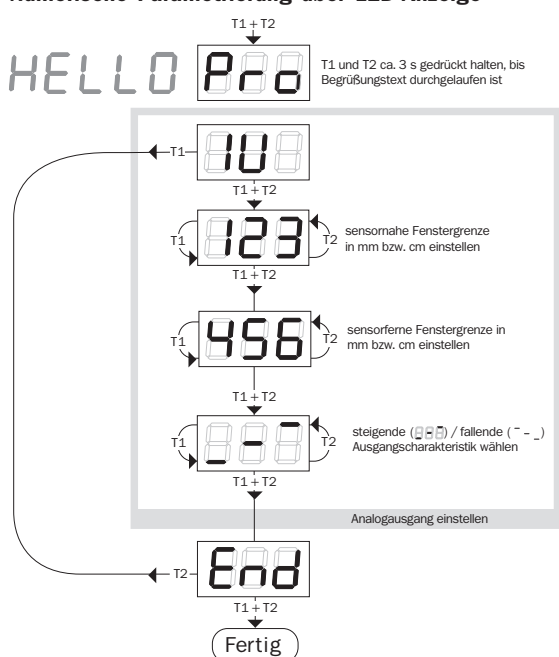


B

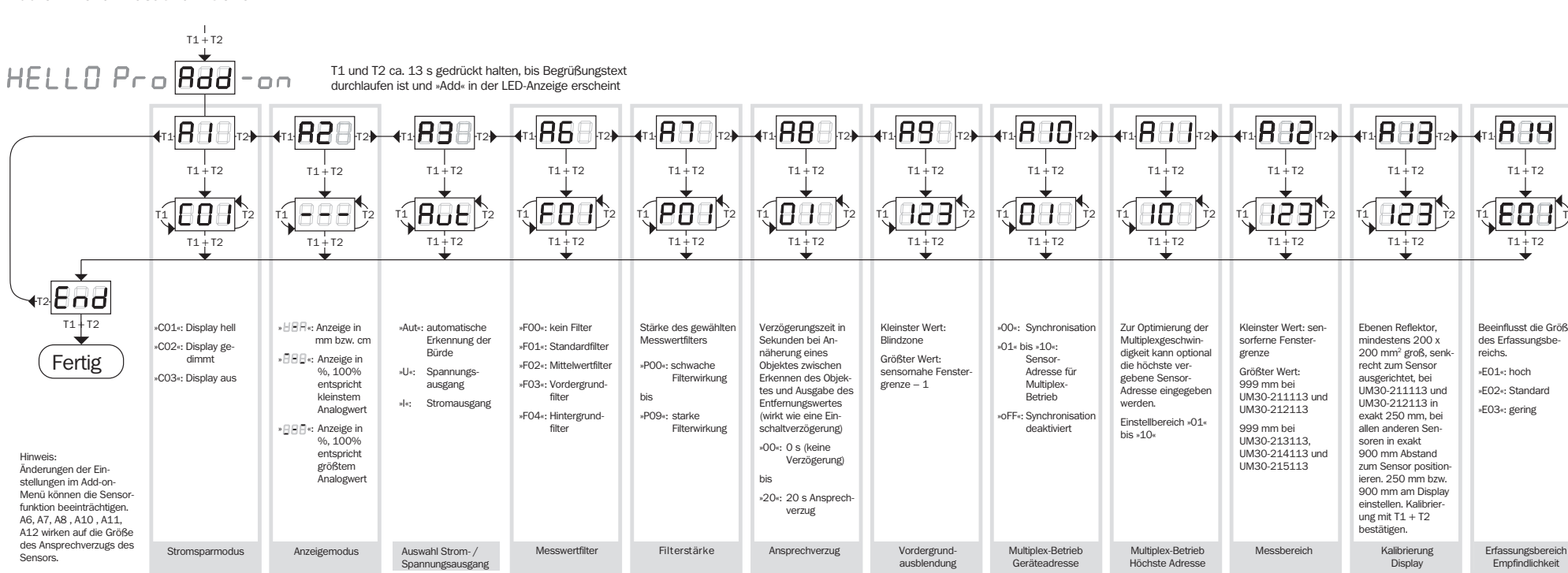


- 1 L+ (brn)
- 2 Q_A (wht)
- 4 NC (blk)
- 5 Sync/Com (grn)
- 3 M (blu)

Ablaufdiagramm Numerische Parametrierung über LED-Anzeige

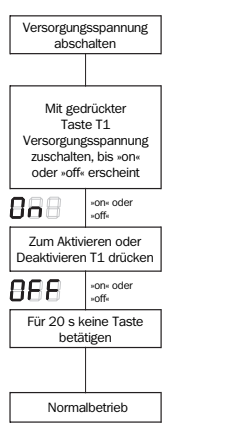


Add-on-Menü: Zusatzfunktionen

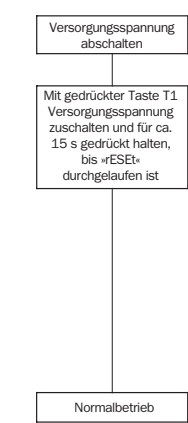


Hinweis: Änderungen der Einstellungen im Add-on-Menü können die Sensorfunktion beeinträchtigen. A6, A7, A8, A10, A11, A12 wirken auf die Größe des Ansprechverzugs des Sensors.

Display Touch Control aktivieren/deaktivieren

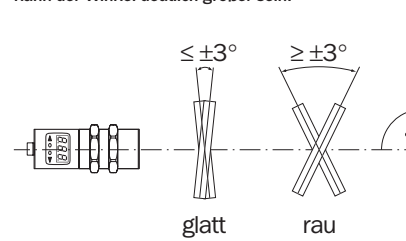


Zurücksetzen auf Werkseinstellung



1

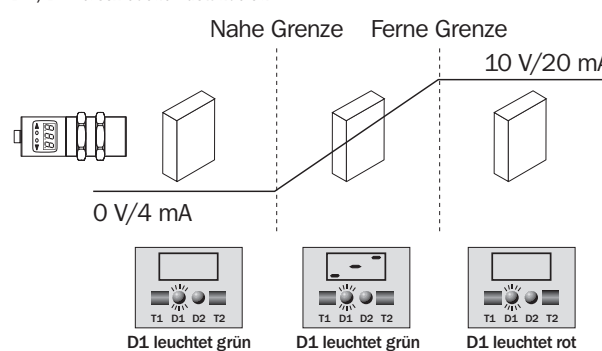
Bei glatten Objektoberflächen sollte der Winkel zwischen Sensorsonde und Objektoberfläche innerhalb von 90° ±3° liegen. Bei rauen Oberflächen kann der Winkel deutlich größer sein.



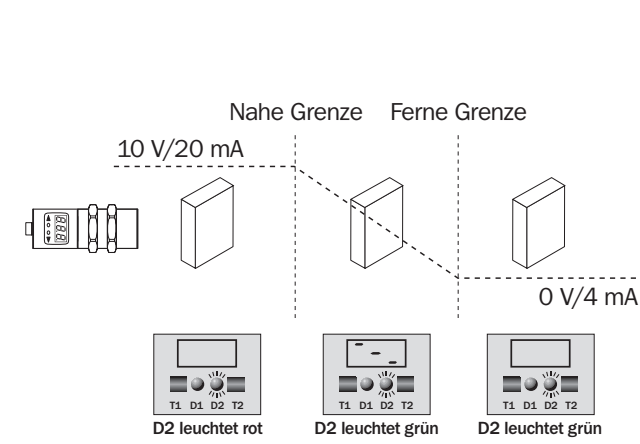
2

Steigende Ausgangscharakteristik

Abhängig von der relativen Lage des zu detektierenden Objekts zur Fenstergrenze nehmen die LEDs D1 / D2 verschiedene Zustände an.



Fallende Ausgangscharakteristik



UM 30	-211113	-212113	-213113	-214113	-215113
Betriebstastweite (Grenztastweite)	30-250 mm (350)	60-350 mm (600)	200-1300 mm (2000)	350-3400 mm (5000)	800-6000 mm (8000)
Ultraschallfrequenz	320 kHz	400 kHz	200 kHz	120 kHz	80 kHz
Auflösung	0,18 mm				
Reproduzierbarkeit	±0,15 % von Grenztastweite				
Genauigkeit	≤ 2 % von Grenztastweite				
Versorgungsspannung ¹⁾	DC 9...30 V				
Restwelligkeit	±10 %				
Stromaufnahme ²⁾	≤ 80 mA				
Bereitschaftsverzug	< 300 ms				
Ansprechzeit ³⁾	50 ms	70 ms	110 ms	180 ms	240 ms
Analogausgang ⁴⁾	4-20 mA/0-10 V				
Anschlussart	M 12, 5-polig				
Schutzart	IP 67				
Betriebsumgebungstemperatur ⁵⁾	-25...+70 °C				

¹⁾ Verpolsicher
²⁾ Ohne Last
³⁾ Erholzeit 32 ms ... 180 ms nach EMV EN 50319
⁴⁾ Kurzschlussgeschützt, invertierbar
⁵⁾ Temperaturkompensiert bei -25...+50 °C, abschaltbar

- 1 Ausgerichtete Platte 500 x 500 mm²
- 2 Rohr-Durchmesser 10 mm
- 3 Rohr-Durchmesser 27 mm
- 4 Betriebstastweite
- 5 Grenztastweite



ENGLISH

Ultrasonic sensor
with analogue output
Operating Instructions

Safety Specifications

- No safety component in accordance with EU machine guidelines.
- Read the operating instructions before starting operation.
- Connection, assembly, and settings only by competent technicians.
- Protect the device against moisture and soiling when operating.

Proper Use

The UM30-21_113 is an ultrasonic sensor and is used for non-contact detection of objects, animals, and people.

Starting Operation

See flow chart. Default values: Analogue output of min. to max. operating scanning distance; increasing output characteristic.

Maintenance

SICK sensors do not require any maintenance. We recommend that you clean the external lens surfaces and check the screw connections and plug-in connections at regular intervals.

SICK

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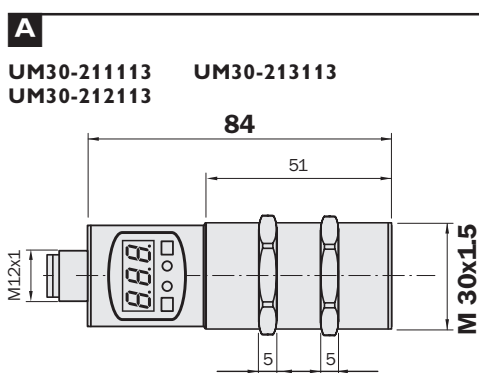
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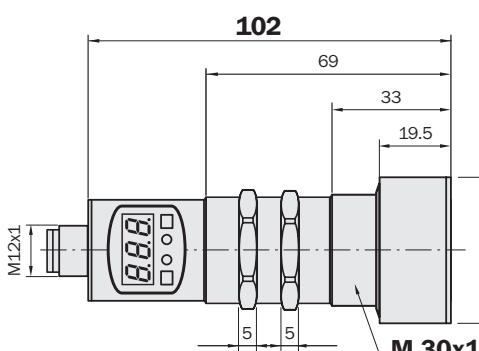
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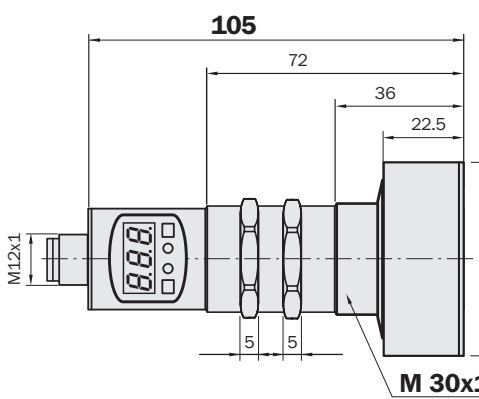
We reserve the right to make changes without prior notification



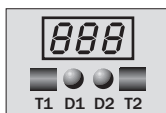
UM30-211113 UM30-212113



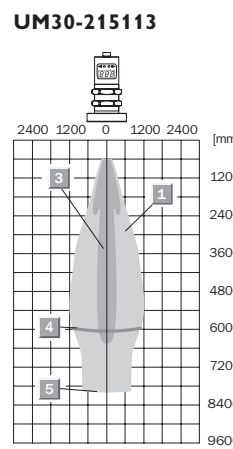
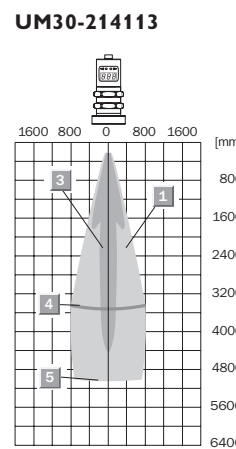
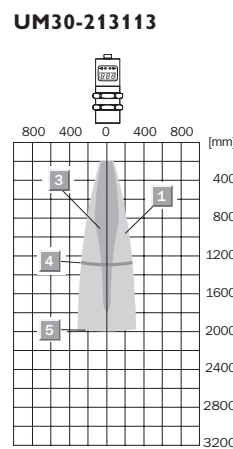
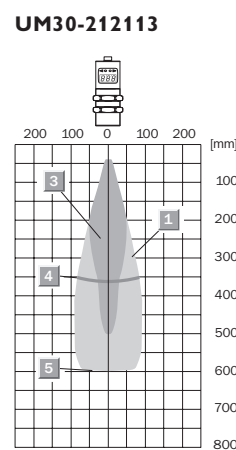
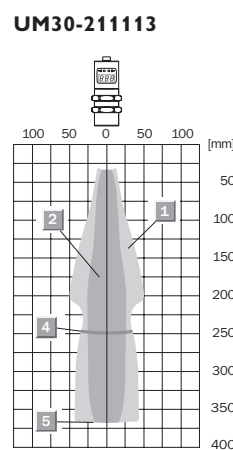
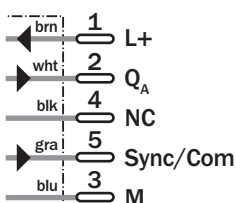
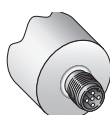
UM30-214113



All types

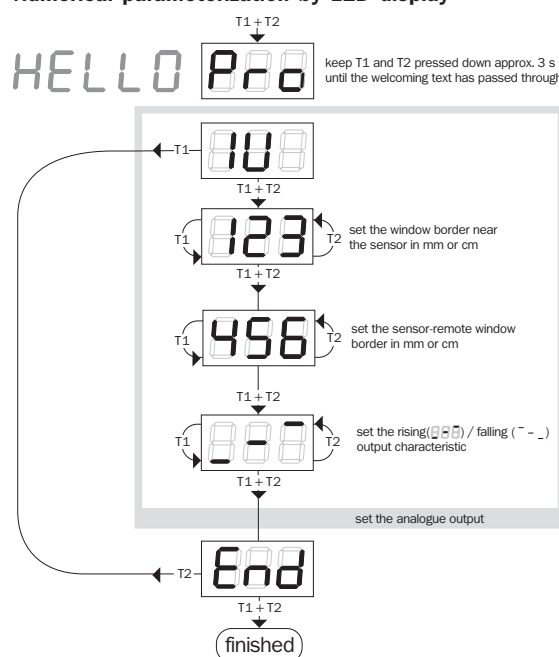


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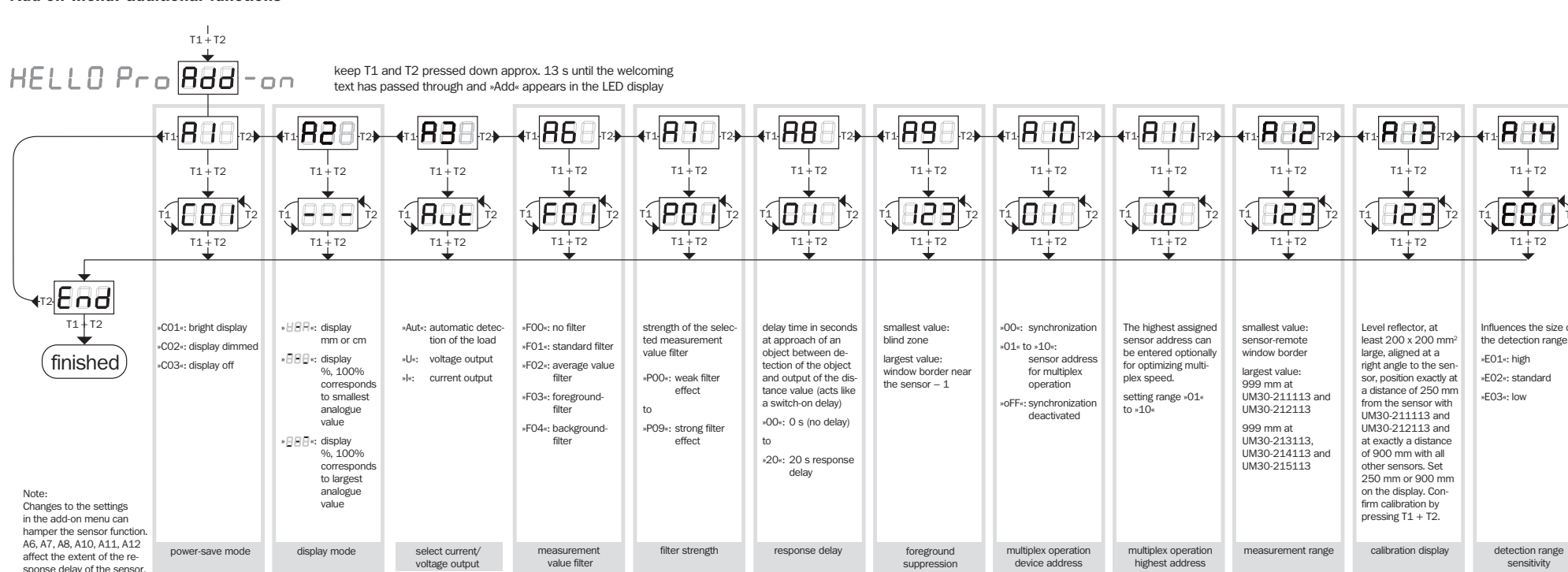


- Aligned plate 500 x 500 mm²
- Pipe diameter 10 mm
- Pipe diameter 27 mm
- Operating scanning distance
- Limiting scanning distance

Flow chart Numerical parameterization by LED display

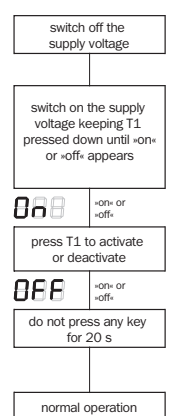


Add-on menu: additional functions

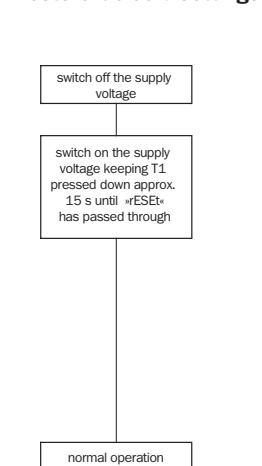


Note:
Changes to the settings in the add-on menu can hamper the sensor function. A6, A7, A8, A10, A11, A12 affect the extent of the response delay of the sensor.

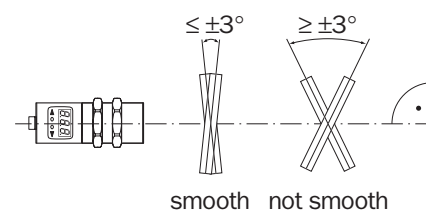
Activate/deactivate display touch control



Restore default settings

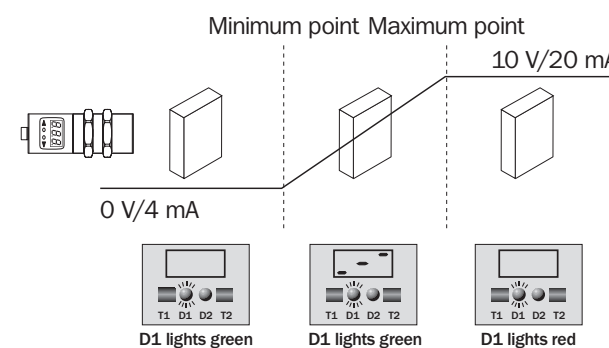


1 Target objects with smooth surfaces should be positioned at 90 degrees, relative to the sensor, ±3 tolerance. This tolerance could be greater for target objects with a rough surface.

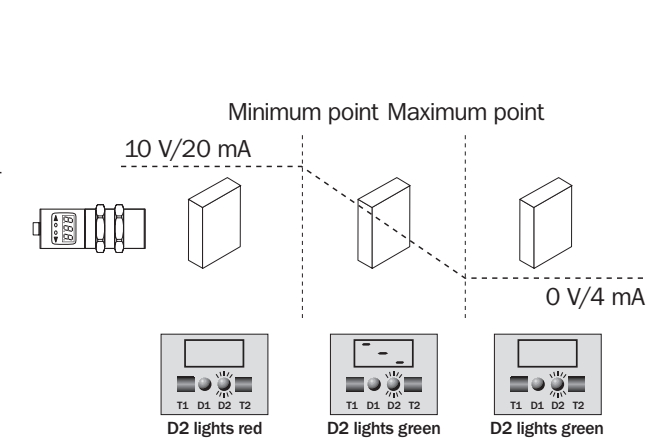


2 Increasing output characteristic

Dependent on the relative position of the object to be detected to the analogue range, the LEDs D1/D2 have different states.



Decreasing output characteristic



UM 30	-211113	-212113	-213113	-214113	-215113
Operating scanning dist. (limiting scanning dist.)	30-250 mm (350)	60-350 mm (600)	200-1300 mm (2000)	350-3400 mm (5000)	800-6000 mm (8000)
Ultrasound frequency	320 kHz	400 kHz	200 kHz	120 kHz	80 kHz
Resolution	0.18 mm				
Reproducibility	±0.15 % of limiting scanning distance				
Accuracy	≤ 2 % of limiting scanning distance				
Supply voltage ¹⁾	9...30 V DC				
Ripple	±10 %				
Current consumption ²⁾	≤ 80 mA				
Standby delay	< 300 ms				
Response time ³⁾	50 ms	70 ms	110 ms	180 ms	240 ms
Analogue output ⁴⁾	4-20 mA/0-10 V				
Connection type ⁵⁾	M 12, 5-pin				
Enclosure rating	IP 67				
Ambient operating temperature ⁵⁾	-25...+70 °C				

¹⁾ Reverse-polarity protected
²⁾ Without load
³⁾ Recovery time 32 ms ... 180 ms according to EMC EN 50319
⁴⁾ Short-circuit protected, reversible
⁵⁾ Temperature compensation at -25 ... +50 °C, can be switched off

00 82 m32: The specified product features and technical data do not represent any guarantee