UMT 30-1300

Ultrasonic sensor with switching output

PRODUCT HIGHLIGHTS

- Ideal for monitoring the filling levels of liquids such as fats and oils
- With one or two switching outputs as option
- Sensor adjustment via teach-in or numerically via 7-segment display
- Synchronisation of up to 10 devices in restricted spaces
- Additional features with numerous supplementary functions

Sensor data	
Limiting scanning distance	2000 mm
Operating scanning distance	200 … 1300 mm
Ultrasonic frequency	~ 200 kHz
Resolution	0.18 mm
Repeatability	± 0.15 %[1]
Hysteresis[2]	20 mm
Accuracy[2]	± 1 % (Temperature drift internal compensated, may be deactivated, 0.17 % / K without compensation)

Functions	
Display	Parameterisation
LED indicator 1	Switching output indicator
LED indicator 2	Switching output indicator
Scanning distance adjustment	Via Teach-in buttons and numerically via 7-segment display
Teach-in modes	Mode 1: set switching point Mode 2: set Window Mode Mode 3: set two-way reflex switch
Adjustment possibilities	N.O. / N.C. via teach-in button Button lock via teach-in button Default settings via teach-in button
Supplementary functions	– Energy-saving Mode – Hysteresis – Measurement value filter – Filter strength – Response delay – Foreground suppression – Multiplex Mode, device address – Multiplex Mode, highest address – Measurement range – Calibration display – Detection range, sensitivity
Default settings[3]	Measurement range: limit scanning distance Switching distances: scanning distance Switching output: N.O.
Default settings[4]	Measurement range: limit scanning distance Switching distances: scanning distance and half scanning distance Switching output: N.O.

Electrical data	
Operating voltage, $+U_B$	9 … 30 V DC[5]
No-load current, I_0	≤ 80 mA
Output current, Ie	200 mA
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q)
Power On Delay	< 300 ms
Switching output, Q	1 x PNP / 2 x PNP (see Selection Table)
Output function	N.O. / N.C.
Switching frequency, f (ti/tp 1:1)[2]	6 Hz[3] / 8 Hz[4]
Response time[2]	110 ms[3] / 92 ms[4]
Connection, GY	Sync. / Com.

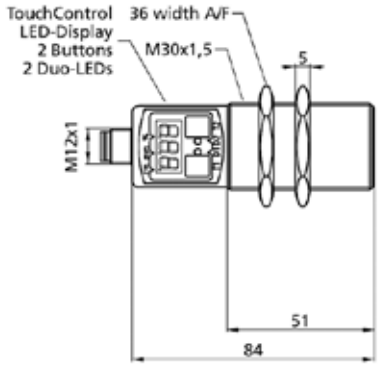
Mechanical data	
Dimensions	M30 x 84 mm
Enclosure rating	IP 67[6]
Material, housing	Brass, nickel-plated, plastic content: PBT,TPU
Material, ultrasonic converter	Polyurethane foam, epoxy resin with glass content
Type of connection	(See Selection Table)
Ambient temperature, operation	-25 … +70 °C
Ambient temperature, storage	-40 … +85 °C
Weight	150 g
Vibration and impact resistance	EN 60947-5-2

[1] Related to current measurement value [2] Parameterisable via control panel [3] 1 x PNP [4] 2 x PNP [5] Max. 10 % ripple, within U_B [6] With connected IP 67 plug

Version: 07/2016. Subject to changes; diagrams similar

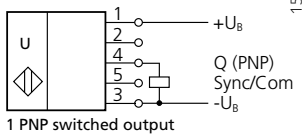
Operating scanning distance	Switching output	Type of connection	Part number	Article number
200 … 1300 mm	1 x PNP	Plug, M12x1, 5-pin	UMT 30-1300-PSD-L5	690-51563
200 … 1300 mm	2 x PNP	Plug, M12x1, 5-pin	UMT 30-1300-2PSD-L5	690-51564

Plug connection



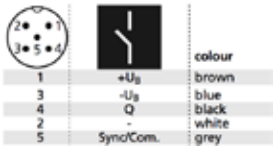
153-00952

Connection, 5-pin (1 x PNP)



1 PNP switched output

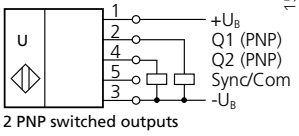
154-00322



		colour
1	+UB	brown
3	-UB	blue
4	Q	black
2	-	white
5	Sync/Com.	grey

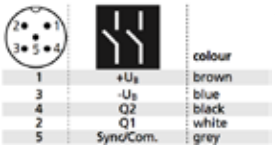
154-00306

Connection, 5-pin (2 x PNP)



2 PNP switched outputs

154-00323



		colour
1	+UB	brown
3	-UB	blue
4	Q2	black
2	Q1	white
5	Sync/Com.	grey

154-00307

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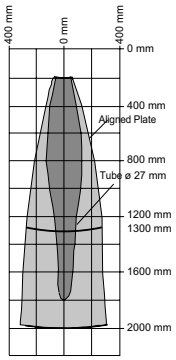
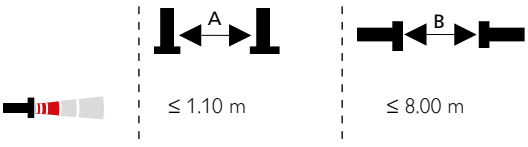
Sound cone



155-01562

Synchronisation / multiplex



155-01580

Mounting distances below which synchronisation / multiplex should be used.

Accessories

Connection cables	From Page A-38
Brackets	From Page A-4