

# UT 20-240

Ultrasonic sensor with switching output



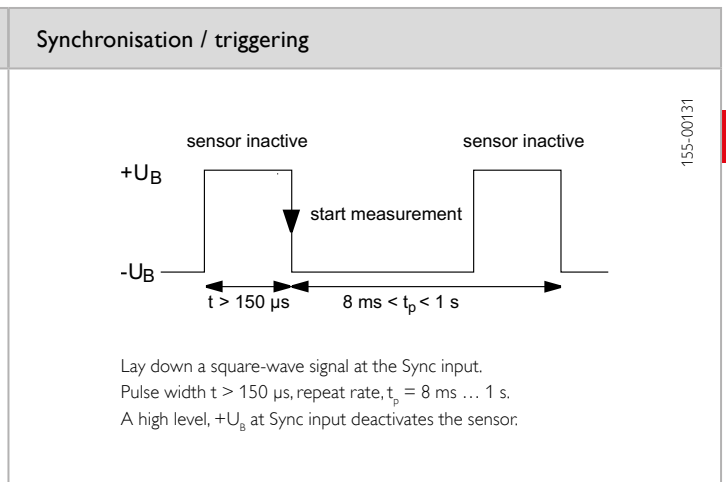
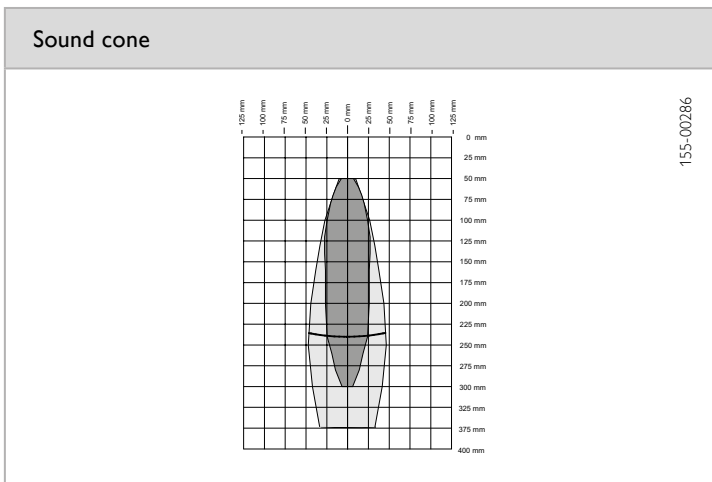
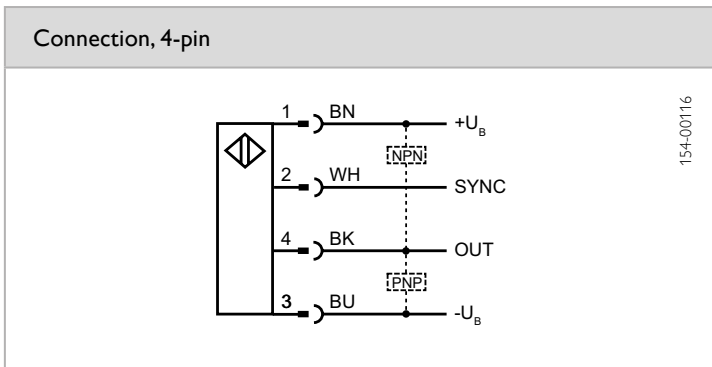
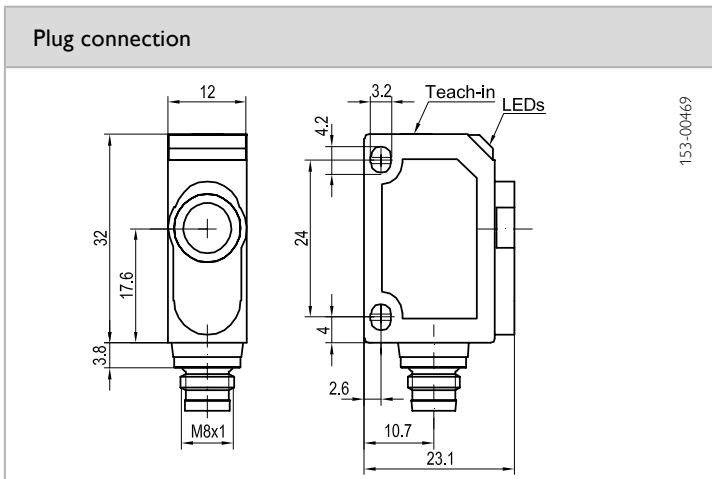
## PRODUCT HIGHLIGHTS

- Ideal for monitoring filling levels, e.g. of liquids
- Reliable detection of highly transparent objects
- Detection regardless of object colour and surface
- Compact miniature housings for use when machine space is limited

Sensor data		Functions	
Limit scanning distance	350 mm	Indicator LED, green	Operating voltage indicator
Operating scanning distance	50 ... 240 mm	Indicator LED, yellow	Switching output indicator
Ultrasonic frequency	~500 kHz	Scanning distance adjustment	Via Teach-in button
Resolution	0.20 mm	Teach-in modes	Mode 1: set switching point Mode 2: set window operation Mode 3: set two-way / retroreflective sensor
Repeatability	± 0.15 % <sup>1</sup>	Adjustment possibilities	N.O. / N.C. via Teach-in button Button lock via Teach-in button Synchronisation via control input Default settings via Teach-in button
Hysteresis	2 mm	Default settings	Max. sensitivity and N.O.
Temperature drift	0.17 % / °C		
Electrical data		Mechanical data	
Operating voltage, +U <sub>B</sub>	20 ... 30V DC <sup>2</sup>	Dimensions	32 x 23.1 x 12 mm
No-load current, I <sub>0</sub>	≤ 25 mA	Enclosure rating	IP 67 <sup>3</sup>
Output current, I <sub>e</sub>	200 mA	Material, housing	ABS
Protective circuits	Reverse polarity protection, U <sub>B</sub> / short-circuit protection (Q)	Material, ultrasonic converter	Polyurethane foam, epoxy resin with glass content (See Selection Table)
Protection Class	2	Type of connection	-25 ... +70 °C
Power On Delay	< 300 ms	Ambient temperature: operation	-40 ... +85 °C
Switching output, Q	PNP / NPN (see Selection Table)	Ambient temperature: storage	10 g
Output function	N.O. / N.C.	Weight	Vibration and impact resistance
Switching frequency, f (ti/tp 1:1)	25 Hz		EN 60947-5-2
Response time	24 ms		
Connection, WH	Sync.		

<sup>1</sup> From end-value of limit scanning distance    <sup>2</sup> Max. 10 % ripple, within U<sub>B</sub>    <sup>3</sup> With connected IP 67 plug

Operating scanning distance	Switching output	Type of connection	Part number	Article number
50 ... 240 mm	PNP	Metal plug, M8x1, 4-pin	UT 20-240-PSM4	693-11002
50 ... 240 mm	NPN	Metal plug, M8x1, 4-pin	UT 20-240-NSM4	693-11003



**Accessories**

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