

# ULTRASONIC SENSORS

- \* High degree of accuracy
- \* Analog and Binary outputs
- \* Function in dirty, dusty, foggy conditions
- \* Insensitive to light
- \* Custom versions available



Characteristics	Unit	Model						
		SUM-P20 PNP NO H	SUM-P20 I H	SUM-P20 U H	SUC-P100 PNP NO H1	SUC-P100 PNP NO 1 H1	SUC-P100 PNP NO U H1	SUF-40 U H1
Range (min - max)	mm	20-200			180-1000			13
Dead zone	mm	20			180			0
Power supply ( residual ripple 10%)	Vdc	10-30	15-30	10-30	18-33			8-30
Protection (electrical)		Reverse Polarity			Reverse Polarity & Short Circuit			
Binary Output	max 0.1A	NO/NC	-	-	PNP NO			-
Hysteresis of the binary output	mm	1	-	-	60-30			-
Mean consumption, switched w/o load	mA	30			35	55	35	35
Analogue output RL max. 500 ohms	mA	-	4-20		-	4-20	-	-
RL min 10 Kohms	Vdc	-	-	0-10	-	-	0-10	0-10
Full Scale Resolution	%	-	-	-	±2			±0.1
Analog output ripple	mV	-	-	-	-	-	± 100	-
Full Scale Linearity	%	-	< 1	< 1	< 1			≤ 5
Accuracy over temperature range	%	± 1.5			± 2			
Operating frequency	kHz	400			180			130
Switching frequency	Hz	13	-	-	7			
Operating temperature	°C	-20 to 50						0 - 60
Pressure	mbar	-	-	-	900-1100			
Protection class	IP	65			67			65*
Housing diam. and thread	mm	M12 x 1 nickered brass			M18 x 1 polyamide			Anodized Aluminum
Connector type / Wires		M12 / 4			M8 / 3	M8 / 4		M8 / 4

\* IP67 upon request

**≡ Z-TRAUQ INC. ≡**

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Characteristics	Unit	Model							
		SUEL-P15 PNP NO H1	SUEL-P50 PNP NO H1	SUP-P250 NO+NC H1	SUP-P250 PNP NO I H1	SUP-P250 PNP NO U H1	SUP-P500 NO+NC H1	SUP-P500 PNP NO I H1	SUP-P500 PNP NO U H1
Range (min - max)	mm	60-150	120-500	250-2500			400 - 5000		
Dead zone	mm	60	120	250			400		
Power supply ( residual ripple 10%)	Vdc	12-28			15-30				
Protection (electrical)		Reverse Polarity & Short Circuit							
Binary Output	max 0.1A	PNP NO		2 x PNP NO	PNP NO		2 x PNP NO	PNP NO	
Hysteresis of the binary output	mm	10 - 40%	10%	40			80		
Mean consumption, switched w/o load	mA	45	55	60	80	60	65	85	65
Analogue output RL max. 500 ohms	mA	-			4-20	-		4-20	-
RL min 10 Kohms	Vdc	-			-	0-10	-		0-10
Full Scale Resolution	%	<1		±0.1					
Analog output ripple	mV	-			± 15		-		± 20
Full Scale Linearity	%			< 1	< 1			≤ 5	
Accuracy over temperature range	%	± 1							
Operating frequency	kHz	350	175	120			80		
Switching frequency	Hz	15	2	3			2		
Operating temperature	°C	-20 to 50							
Pressure	mbar	900-1100							
Protection class	IP	67							
Housing diam. and thread	mm	Polyamide / Stainless Steel			Polyamide glass fiber reinforced				
Connector type / Wires		M8 / 3			M8 / 4				