



U FK

ULTRASONIC FULL METAL TUBULAR M18 SENSOR



M18 full metal ultrasonic sensors for extreme applications (food and pharma).

- Stainless Steel AISI 316L housing
- IP68, IP69K mechanical protection degree
- ECOLAB certification
- IO-Link models



CODE DESCRIPTION

U FK 1 - A / H P - 1 E IO

series	U FK	M18 ultrasonic sensor full metal
housing type	1	Standard housing
nominal sensing distance Sn	A	50 - 400 mm direct diffuse
	B	100 - 1,000 mm direct diffuse
adjustment	H	Remote teaching via cable
output	1	0...10 V single voltage analogue output
	2	4...20 mA single current analogue output
	P	PNP - NO/NC single digital output
	W	IO-Link + PNP, two digital outputs with standard window and adjustable hysteresis function
	6	IO-Link + 4 ... 20 mA current analogue output
	7	IO-Link + 0 ... 10 V voltage analogue output
housing material	1	Axial AISI 316L (DIN 1.4404) stainless steel housing
cable / exit connector	E	M12 plug cable exit
communication protocol	IO	IO-Link

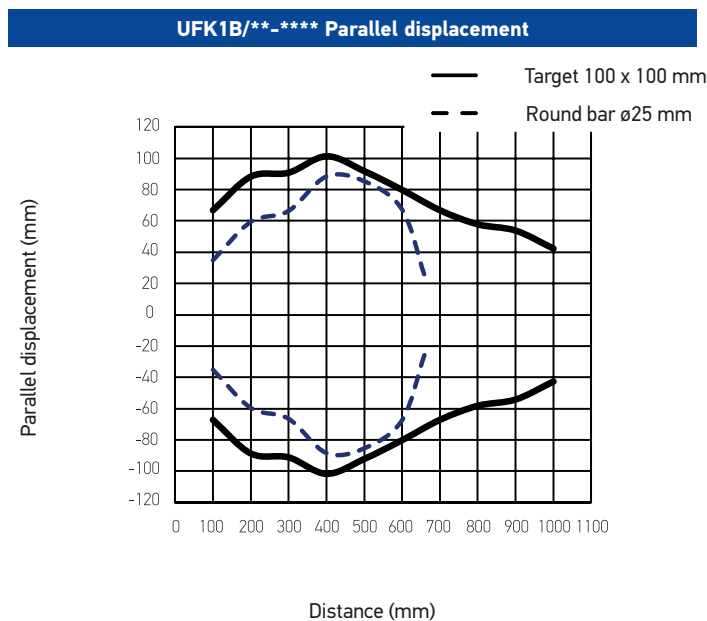
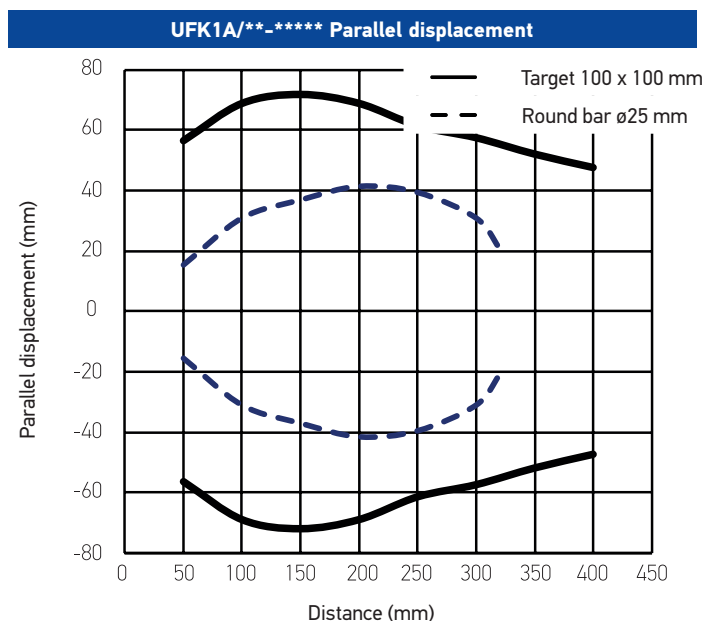
TECHNICAL SPECIFICATIONS

	UFK1A/**_****	UFK1B/**_****
GENERAL DATA		
Operating principle	Diffuse reflection	
DETECTION CAPABILITIES		
Nominal sensing distance	50 ... 400 mm	100 ... 1000 mm
Thermal drift	± 2%	
Repeatability	0,5% of full scale value	
Resolution	1 mm	
Hysteresis	1 %	
EMISSION DATA		
Beam angle	8±1 °	
300	300 kHz	200 kHz
FUNCTIONS		
Sensitivity adjustment	Io-Link, Remote Teaching via cable	
INPUT/OUTPUT		
Maximum switching frequency	10 Hz	6 Hz
Response time max	200 ms	
Output type	0...10 V, 4...20 mA, PNP, IO-Link + 0...10 V, IO-Link + 4...20 mA, IO-Link + PNP	
Output function	Analogue Output, Digital Output, Io-Link + Analogue Output, Io-Link + Digital	
ELECTRICAL DATA		
Supply voltage	10 ... 30 V	
Maximum residual ripple	5%	
Leakage current	≤ 10 µA @30 V	
Maximum No-load absorption	50mA	
Maximum DC load current	100 mA	
Short circuit protection	●	
Reverse polarity protection	●	
Impulsive overvoltage protections	●	
Delay to availability	300 ms	
MECHANICAL DATA		
Dimensions	M18/ L = 98.6 mm	
Material	Stainless Steel AISI-316L	
Active part material	Stainless Steel AISI-316L	
Connections	M12	
Weight	75.00 g	
ENVIRONMENTAL DATA		
Operating Temperature	-10 ... 70 °C	-20 ... 70 °C
Mechanical Protection	IP67, IP68, IP69K	

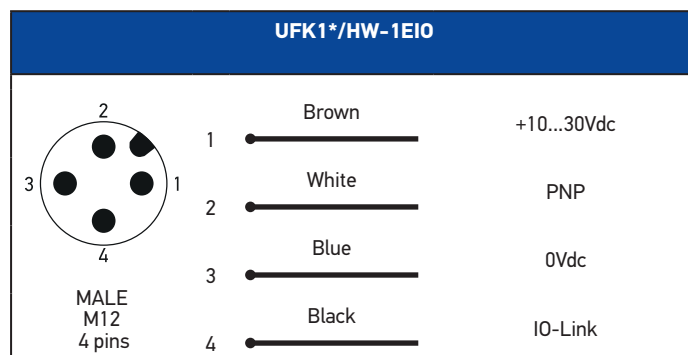
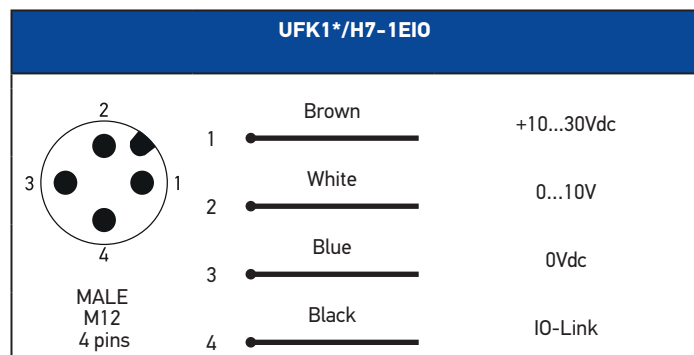
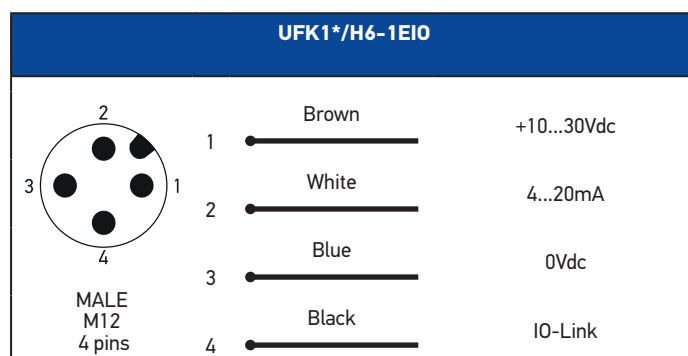
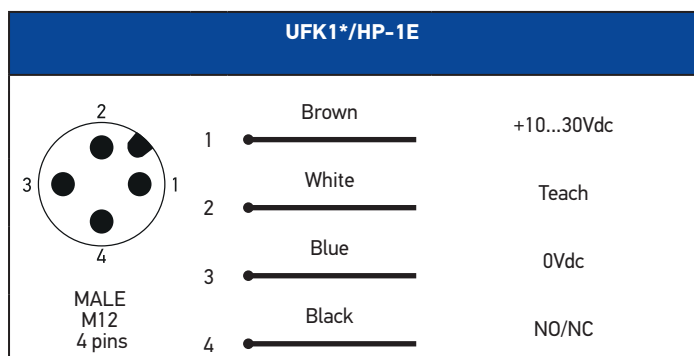
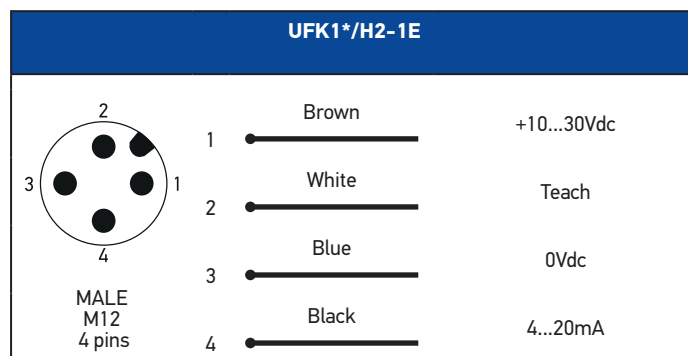
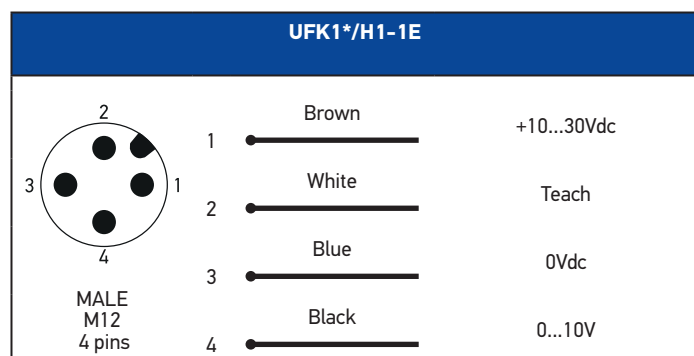
AVAILABLE MODELS

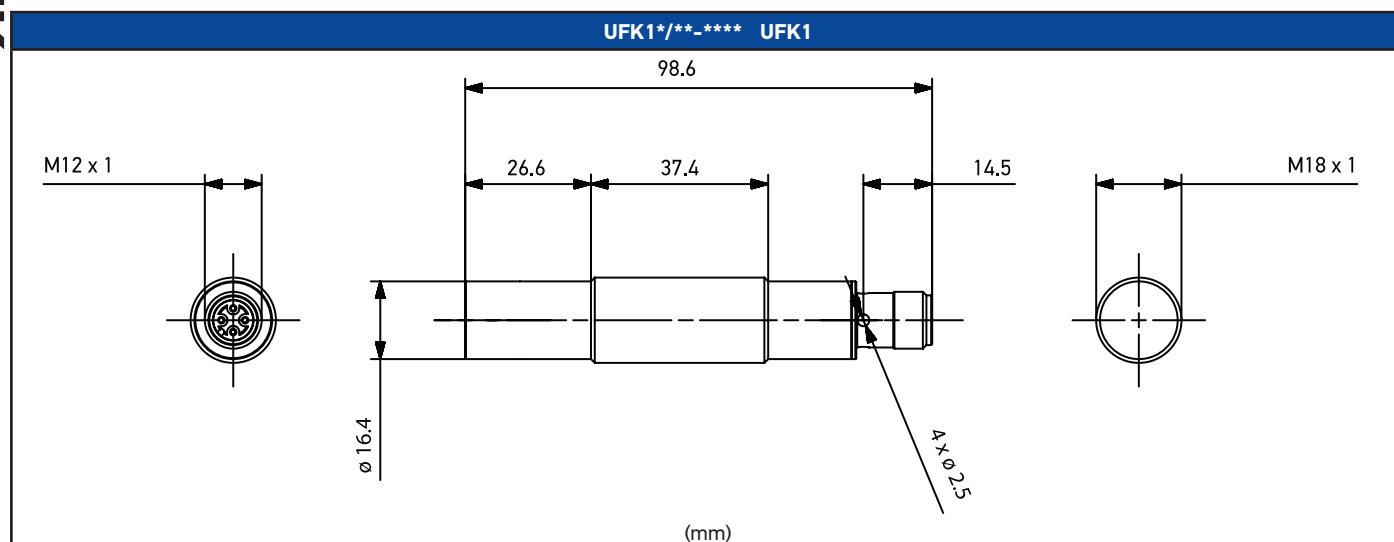
Nominal sensing distance	Sensitivity adjustment	0...10 V	4...20 mA	PNP	IO-Link + 0...10 V	IO-Link + 4...20mA	IO-Link + PNP
50 ... 400 mm	Remote Teaching via cable	UFK1A/H1-1E	UFK1A/H2-1E	UFK1A/HP-1E	-	-	-
	Io-Link	-	-	-	UFK1A/H7-1EIO	UFK1A/H6-1EIO	UFK1A/HW-1EIO
100 ... 1000 mm	Remote Teaching via cable	UFK1B/H1-1E	UFK1B/H2-1E	UFK1B/HP-1E	-	-	-
	Io-Link	-	-	-	UFK1B/H7-1EIO	UFK1B/H6-1EIO	UFK1B/HW-1EIO

RESPONSE DIAGRAMS



CONNECTIONS





ACCESSORIES

Cables		
Model	Description	Article code
CD12F/0B-050A4	Connect.M12-F,4 poles-5m,PP/EPDM,Axial	CD12F/0B-050A4
CD12F/0B-050C4	Connect.M12-F,4 poles-5m,PP/EPDM,90°	CD12F/0B-050C4
CD12F/0B-100A4	Connect.M12-F,4 poles-10m,PP/EPDM,Axial	CD12F/0B-100A4
CD12F/0B-100C4	Connect.M12-F,4 poles-10m,PP/EPDM,90°	CD12F/0B-100C4
CD12F/0B-200C4	Connect.M12-F,4 poles-20m,PP/EPDM,90°	CD12F/0B-200C4
CD12F/LB-050C4	Connect.M12-F,4 poles-5m-LED,PP/EPDM,90°	CD12F/LB-050C4
CD12F/LB-100C4	Connect.M12-F,4 poles-10m-LED,PP/EPDM,90°	CD12F/LB-100C4
Mounting brackets		
Model	Description	Article code
ST 18-A7W	Bracket M18 axial AISI316L	ST 18-A7W
ST 18-C7W	Bracket M18 90° AISI316L	ST 18-C7W