

dimensions **M18x1**

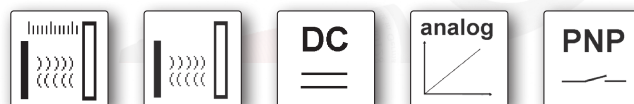
dif. reflection sensors	measuring range	60 to	300mm
		100 to	600mm
		200 to	1500mm

dif. reflection sensors	sensing range	60 to	300mm
		100 to	600mm
		200 to	1500mm

- ✓ synchronization option for the operation of multiple sensors
- ✓ very accurate position detection of any objects with high repeat accuracy
- ✓ LED display
- ✓ adjustable switching point of PNP output
- ✓ connection with M12-connector



analog output for measurement tasks
adjustable PNP switching output



description

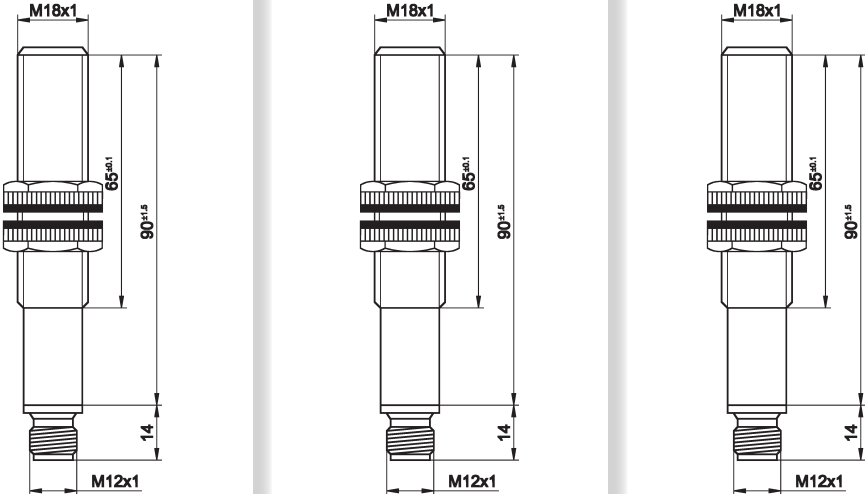
ipf ultrasonic sensors operate as contactless and non-contacting position switches that determine distances according to the echo propagation time process. The propagation time measurement is temperature compensated and makes possible very accurate position detection of sound-reflecting objects of any color and material over a large temperature range. Thanks to the high sound frequency, the ultrasonic sensor is insensitive to interference.

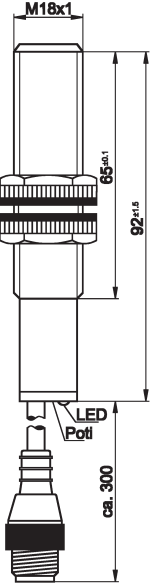
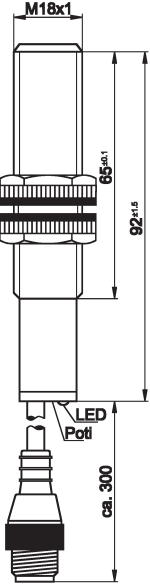
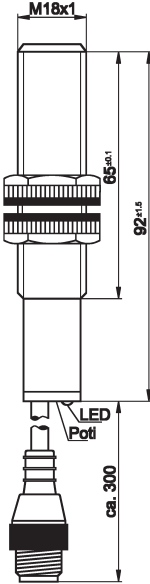
The synchronization line remains open in standard mode for the devices in this data sheet. The connection to 0V interrupts transmission operation. The switching distance remains stored according to the last measurement. Multiple sensors can be synchronized by connecting them together. This is recommended if sensors are arranged close together in order to prevent mutual interference of two or

more sensors of the same type.

application examples

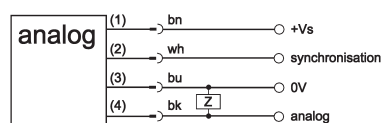
- ▶ detection of optically undetectable materials
- ▶ filling level measurement of bulk materials and liquids in containers
- ▶ measurement of heights, e.g., packages on conveyor belts, pallets and stacking devices
- ▶ distance measurement, e.g., with driverless vehicles
- ▶ winding and unwinding control of any type of foil
- ▶ detection of thicknesses and diameters
- ▶ regulation of material tension through sag measurement
- ▶ positioning of goods in automatic storage systems
- ▶ length measurement systems

article-no.	-	UT180025	UT180024
measuring range	-	100 ... 600mm	200 ... 1500mm
output	-	4 ... 20mA	4 ... 20mA
article-no.	UT180026	UT180027	UT180028
measuring range	60 ... 300mm	100 ... 600mm	200 ... 1500mm
output	0 ... 10V	0 ... 10V	0 ... 10V
			
TECHNICAL DATA			
measuring range	60 ... 300mm	100 ... 600mm	200 ... 1500mm
sound cone (angle of beam spread)	8°	8°	8°
output	analog (see above)	analog (see above)	analog (see above)
operating voltage	19 ... 30V DC	19 ... 30V DC	19 ... 30V DC
current consumption (w/o load)	≤ 35mA	≤ 35mA	≤ 35mA
output current (max. load)	-	-	-
carrier frequency	330kHz	300kHz	180kHz
linearity deviation	< 0.3%	< 0.3%	< 0.3%
repeat accuracy	0.2%	0.2%	0.2%
response time	< 60ms	< 60ms	< 120ms
display (signal)	-	-	-
adjustment	-	-	-
input	release / lock / sync	release / lock / sync	release / lock / sync
short-circuit protection	+	+	+
reverse polarity protection	+	+	+
dimensions	M18x1	M18x1	M18x1
length (thread/complete)	65mm / 104mm	65mm / 104mm	65mm / 104mm
housing material	plastic	plastic	plastic
operating temperature	-15 ... +70°C	-15 ... +70°C	-15 ... +70°C
degree of protection (EN 60529)	IP67	IP67	IP67
connection	M12-connector, 4-pin	M12-connector, 4-pin	M12-connector, 4-pin
connection accessories	e.g. VK205325	e.g. VK205325	e.g. VK205325
mounting accessories (clip)	e.g. AY000051	e.g. AY000051	e.g. AY000051
mounting accessories (universal holder)	AY000117	AY000117	AY000117
accessories	90° deflection reflector AU000012	90° deflection reflector AU000012	90° deflection reflector AU000012

article-no.	UT180126	UT180127	UT180128
sensing range	60 ... 300mm	100 ... 600mm	200 ... 1500mm
output	pnp, no	pnp, no	pnp, no
			
TECHNICAL DATA			
sensing range	60 ... 300mm	100 ... 600mm	200 ... 1500mm
sound cone (angle of beam spread)	8°	8°	8°
output	pnp, no	pnp, no	pnp, no
operating voltage	19 ... 30V DC	19 ... 30V DC	19 ... 30V DC
current consumption (w/o load)	≤ 35mA	≤ 35mA	≤ 35mA
output current (max. load)	500mA	500mA	500mA
carrier frequency	330kHz	300kHz	180kHz
hysteresis	2.5%	2.5%	2.0%
repeat accuracy	0.2%	0.2%	0.2%
switching frequency	20Hz	20Hz	10Hz
display (signal)	yellow LED	yellow LED	yellow LED
setting	potentiometer	potentiometer	potentiometer
control input	release / lock / sync	release / lock / sync	release / lock / sync
short-circuit protection	+	+	+
reverse polarity protection	+	+	+
dimensions	M18x1	M18x1	M18x1
length (thread/complete)	65mm / 92mm	65mm / 92mm	65mm / 92mm
housing material	plastic	plastic	plastic
operating temperature	-15 ... +70°C	-15 ... +70°C	-15 ... +70°C
temperature compensation	0 ... +60°C	0 ... +60°C	0 ... +60°C
degree of protection (EN 60529)	IP67	IP67	IP67
connection	M12 cable connector, 4-pin	M12 cable connector, 4-pin	M12 cable connector, 4-pin
connection accessories	e.g. VK200325	e.g. VK200325	e.g. VK200325
mounting accessories (clip)	e.g. AY000051	e.g. AY000051	e.g. AY000051
mounting accessories (universal holder)	AY000117	AY000117	AY000117
accessories	90° deflection reflector AU000012	90° deflection reflector AU000012	90° deflection reflector AU000012

connection

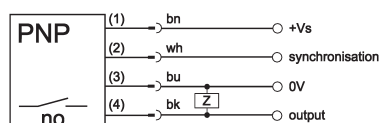
analog output



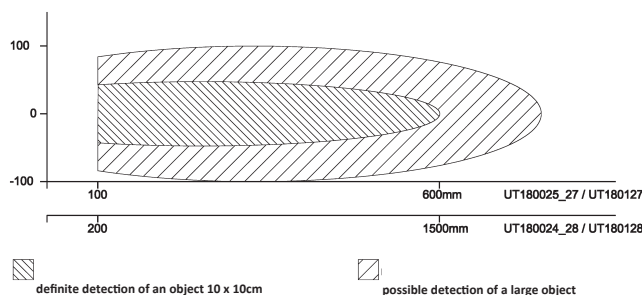
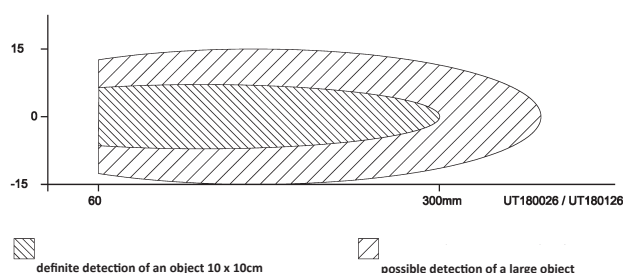
wire colors: bn = brown (1), wh = white (2), bu = blue (3), bk = black (4)

sensor blocked: connect PIN 2 with 0V
 synchronization: connect PIN 2 with +Vs
 release: PIN 2 not assigned

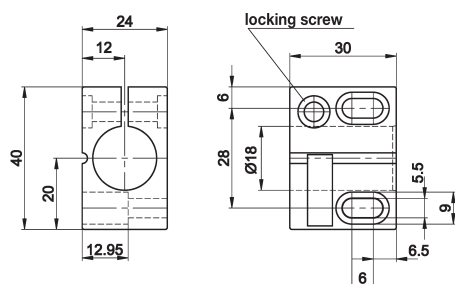
switching output



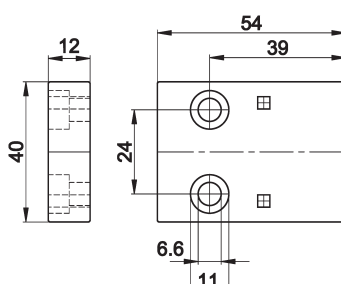
detection range of the ultrasonic sensors



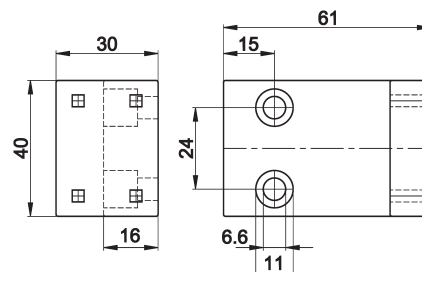
AY000051



AY000053



AY000054



ACCESSORIES

article-no.	description	note
AY000051	quick clip 18, round, plastic	for M18-sensor, round
AY000053	base, straight, plastic	for quick clip 12 and 18, round
AY000054	base, angular, plastic	for quick clip 12 and 18, round
AY000117	mounting accessories (universal holder)	fitting panel made of stainless steel

This data sheet only contains the available standard variants. For other output / connection variants, we kindly ask that you contact us.

We are happy to supply the right cable socket for the plug equipment. You will find a list in the "accessories" section of the catalog under **ipf-SENSORFLEX®** "cable sockets" or in the search window on our homepage www.ipf-electronic.com (using the search term "VK").

Warning: Never use these devices in applications where the safety of a person depends on their functionality.

You also find this data sheet, as well as contact details under www.ipf-electronic.com