Universal Plug-on Display Signal Converter

measuring • monitoring • analysing

U-PACE

IO-Link

POD



- Modern measuring value display / signal converter for sensors with current/voltage/frequency or pulse output
- No additional auxiliary power required
- 2 x outputs incl. IO-Link, arbitrarily configurable by the customer
- Easily scalable due to optical keys
- Good readability due to TFT color display
- Including partial/total quantity counter and dosing function for flow sensors with frequency/pulse output
- Hotkeys as shortcut keys for customised assignment

POD with optional wall mounting kit (sold separately)

Z2

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Description

The universal evaluation electronics or signal converter model POD (Plug On Display) is used for upgrading or Retrofitting of process sensors with pulse / frequency, current or voltage output and standardized sensor connector M12x1 with signal output at PIN4. The output is provided via a colored TFT display as well as via two customizable outputs.

For this purpose, the POD offers a freely configurable signal input with the possibility of simulating the individual sensor characteristic curve in the evaluation electronics with up to 10 contact points.

Combined with frequency or pulse generating flow sensors, a measurement of volume and partial volume is also possible.

The electronics record the input signal for the configured sensor measurement value, scale it and provide it via display and outputs. For frequency or pulse generating flow sensors, the outputs can also be configured as a batching function with an external control input.

The POD can be mounted either directly on the M12x1 sensor plug or via an extension sensor cable. The orientation of the display can be individually adapted to the installation situation by software or IO-Link, the housing of the POD is rotatable about the plug axis by 300°.

Technical Details

Pulse input:	
Frequency measuring range:	0.1 to 2500 Hz NPN, PNP, NAMUR, Reed, Hall, Active (configuration via software)
Physical input options:	0 - 25 mA; 0 - 25 V, fully programmable, e.g., using standard signals 0(4) ... 20 mA, 0...5 V_{DC}, 1 ... 5 V_{DC}, 0(2) ... 10 V_{DC}
Linearity / accuracy:	0.15 % of measured value
High/Low threshold:	approx. 1.1 V
Temperature drift:	within linearity / accuracy
Sensor Connector:	
Sensor side:	M12x1, 4-pin, socket, A-coded
Maximum cable length from / to sensor:	20 m
Compatible sensors:	see table with device types

Electrical data

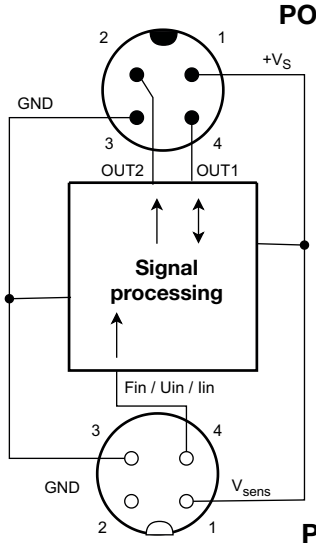
Supply voltage:	19 - 30 V_{DC}, internal power consumption max. 70 mA
Display:	TFT display, 128 x 128 pixels, 1.4" display orientation in 90° steps adjustable
Display repetition rate:	0.5 ... 10 s, adjustable
Pulse output	Push-Pull, freely scalable, configurable for partial and accumulated totaliser
Frequency output	Push-Pull, freely scalable, 2 kHz @ overflow f_{min} @ FS = 50 Hz f_{max} @ FS = 1000 Hz
Alarm output:	NPN, PNP, Push-Pull, configurable max. 30 V_{DC}, max. 200 mA short-circuit proof
Analogue output:	active, 3 wire, 0(4)-20 mA, max. load 500 Ω or 0(2)-10 V_{DC}, (R_i = 500 Ω) (factory calibrated with R_L = 1 MΩ)
Control input:	active signal U_{high} max. 30 V_{DC} 0 <Low <10 V_{DC} 15 V_{DC} <High <Vs
Dosing function:	Dosing output OUT2: Push-Pull, High active Control input OUT1: START/STOP 0.5 s <t_{high} <4 s RESET t_{high} >5 s
Display:	1.4", color TFT display, 128x128 pixels Rotatable by software in 90° steps Mechanically rotatable by 300° on connector axis
Operation:	4 optical keys, conditionally operable with glove
Material:	Electronic housing PA, orange
Material:	Connector brass nickel-plated
Shock resistance:	DIN EN 60068-2-27:2010: 20g (11ms)
Vibration resistance:	DIN EN 60068-2-6:2008: 5 g (10 … 2000Hz)
Environmental testing:	DIN EN 60068-2-302006: severity b*
Protection class:	IP67
Weight:	140 g

* in preparation

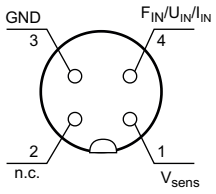
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POD Output



POD input (sensor side)

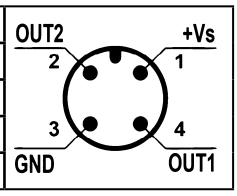


Electrical connection

External connection POD output

Connector: M12x1, plug 4-pin

Pin	Connection description
1	1 Supply 19 to 32 V_{DC}
2	Universal signal output 2
3	Supply GND
4	Universal signal output 1

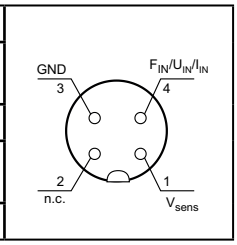


External connection, 3-wire, POD input (sensor side)

The electronics is pin and function compatible to KOBOLD sensors according to the device types list

Connector: M12x1, socket 4-pin

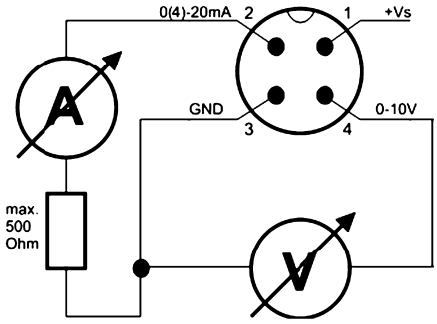
Pin	Connection description
1	Sensor supply = supply voltage +Vs on output side
2	Not connected
3	Sensor GND = Supply GND on output side
4	Pulse / frequency input



Connection example outputs

OUT2: Analog output 4-20 mA

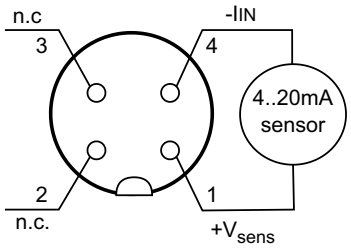
OUT1: Analog output 0-10 V



Outputs configuration

Output 1 (OUT1, PIN 4)	Output 2 (OUT2, PIN 2)
Analogue output 4-20 mA	Analogue output 4-20 mA
Analogue output 0-20 mA	Analogue output 0-20 mA
Analogue output 2-10 V	Analogue output 2-10 V
Analogue output 0-10 V	Analogue output 0-10 V
Switching output NPN/PNP/PP	Switching output NPN/PNP/PP
Pulse output PP	Pulse output PP
Frequency output PP	Frequency output PP
Communication mode KofiCom	
Communication mode IO-Link	
Control input	
Control input dosing function	Dosing output

External connection, 2-wire, POD input (sensor side)



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POD compatibility list with device types (sensors)

Measured Variable	Manufacturer	Sensor type	Electronics code													Ready for use	
			L343	L342	L303	F300	H0	B0	G0	K0	L0	LE	C0	E0	R0	EHV	yes	no
Flow	Kobold	OVZ	x		x	x											x	
Flow	Kobold	DON*					x	x	x	x	x	x					x	
Flow	Kobold	DPM	x		x	x											x	
Flow	Kobold	DPL	x		x	x											x	
Flow	Kobold	DRH	x	x	x	x											x	
Flow	Kobold	DRG	x	x	x	x											x	
Flow	Kobold	DTK	x		x	x											x	
Flow	Kobold	DRS	x	x	x	x											x	
Flow	Kobold	DPE	x	x	x	x											x	
Flow	Kobold	DRB	x	x	x	x											x	
Flow	Kobold	TUV														x	x	
Flow	Kobold	DVZ	x		x	x											x	
Flow	Kobold	MIK	x		x	x											x	
Flow	Kobold	DUK	x		x	x											x	
Flow	Kobold	DOG						x					x	x	x			x
Temperature	Kobold	MMA*																x
acc. to data sheet	Others	-																x

* only with the M12 electrical connection

Ordering Code: POD-5000C3T0

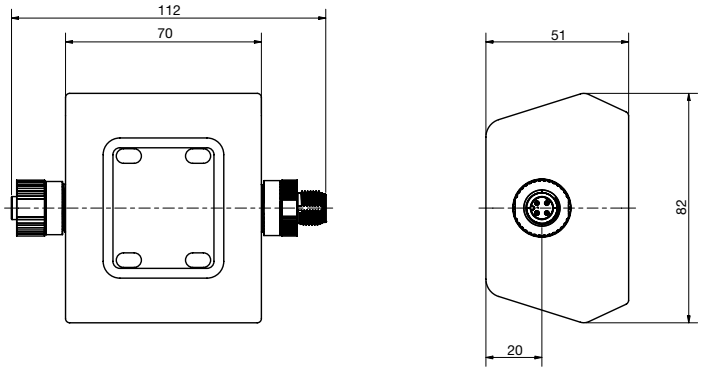
Order Details Accessories

Description	Model	Image
Stainless steel wall mount kit (2 x mounting brackets with fastening screws)	ZUB-POD-WMK	
Sensor cable (1 x M12 plug, 1 x M12 coupling), 4-pin, 5 m PVC cable	ZUB-KAB-22K005	

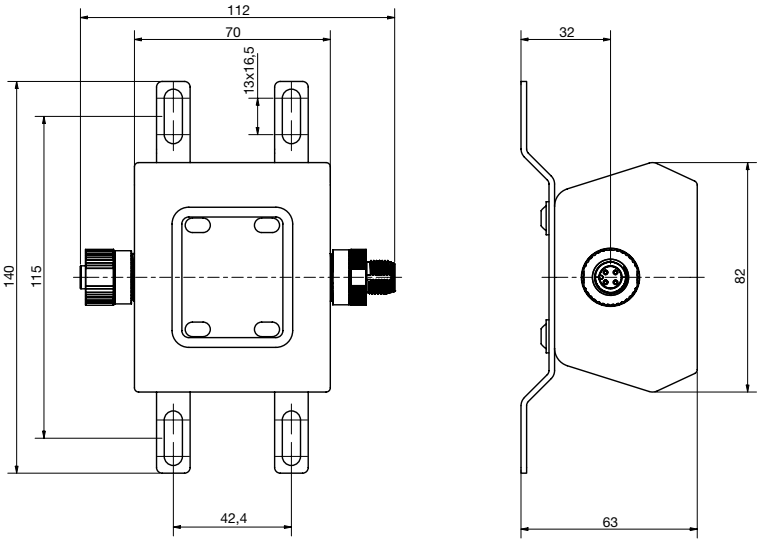
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Dimensions [mm]



POD with optional wall mounting kit (sold separately)



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