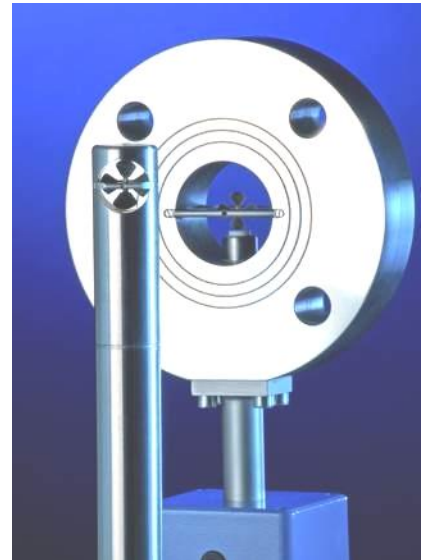




**Parameterizable transducer UFA in IP65 aluminium housing  
for use with vane wheel flow sensors FA and FA Di  
for measuring flow rate and flow velocity**



UFA in AS102 housing



UFA with probe ZS and measuring tube FA Di

**Properties**

- for measuring flow velocity and flow rate
- flexible use via PC interface for modification of calibration and parameter data
- potential-free quantity pulse, limit value output or '±direction' output
- easy to read, optional LCD with instantaneous value, quantity counter und error code
- permanent self-diagnosis
- conversion from actual to standard flow velocity or flow rate
- robust IP65 aluminium housing
- highly reliable even in extreme industrial application conditions
- compatible for all Höntzsch probes FA and measuring tubes FA Di with and without ±direction sensing

**Model designation (example)**

UFA	4-20 mA	230 VAC	AS102
(1)	(2)	(3)	(4)

**Basic types**

Type	Article No.
<b>'4-20 mA'</b>	
UFA / 4-20 mA / 230 VAC / AS102	A016/051
UFA / 4-20 mA / 24 VDC / AS102	A016/052
UFA / 4-20 mA / 12 VDC / AS102	A016/053
<b>'0-10 V'</b>	
UFA / 0-10 V / 230 VAC / AS102	A016/054
UFA / 0-10 V / 24 VDC / AS102	A016/055
UFA / 0-10 V / 12 VDC / AS102	A016/056



### (1) Transducer type

UFA	
input flow v/FA or v/FAR	for Höntzsch vane wheel flow sensors FA and FAR without and with $\pm$ directional sensing, as probe (ZS, TS ..., ZSR, TSR ...) and as measuring tube (FA Di, FAR Di ...)

### (2) Outputs

analog output v, flow velocity/flow rate	for FA / FAR*: <b>4 ... 20 mA</b> = 0 ... x m/s (or m <sup>3</sup> /h), for FAR: <b>4 ... 12 ... 20 mA</b> = -x ... 0 ... +x m/s (or m <sup>3</sup> /h), parameterizable terminal values x / burden max. 400 Ohm, <b>alternatively:</b>
* for FAR sensors when parameterizing the relay (see under): $\pm$ direction of flow	for FA / FAR*: <b>0 ... 10 V</b> = 0 ... x m/s (or m <sup>3</sup> /h), for FAR: <b>0 ... 5 ... 10 V</b> = -x ... 0 ... +x m/s (or m <sup>3</sup> /h), parameterizable terminal values x / impedance 1 kOhm

output either limit value or quantity pulse or $\pm$ direction of flow (with selection ' $\pm$ direction of flow' for FAR sensors: analog output (see above) proportional of sum, unsigned)	<b>relay</b> (potential-free normally open contact), max. 300 mA / max. 27 V DC <b>limit value</b> (alternative 1, parameterizable): flow velocity < limit value: relay rest position, flow velocity > limit value: relay working position <b>quantity pulse</b> (alternative 2, parameterizable): max. pulse repetition frequency 1 Hz per unit of volume, parameterizable, e.g. 1 pulse per 1, 10 or 100 (norm)-m <sup>3</sup> , pulse duration 0.5 s (with FAR sensors: parameterizable for '+' or '-' direction of flow <b><math>\pm</math>direction of flow</b> (alternative 3, parameterizable): +direction: relay rest position, -direction: relay working position
PC interface RS232	or modifying calibration data and parameter, connection via RJ22 connector (in the housing) output signals electrically isolated from the mains supply
self-diagnosis according to NAMUR NE43	errors: - with output 4-20 mA : < 3.6 mA, - with output 0-10 V : < -0.2 V, - LED shines yellow power supply OK : LED shines green with input signal 'flow' > 0 m/s: LED flashes green

### (3) Power supply

mains supply	230 V AC (215 ... 255 V AC), 50 ... 60 Hz, output < 10 VA 24 V DC (20 ... 27 V DC), output < 5 W 12 V DC (10 ... 17 V DC), output < 5 W
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### (4) Housing

aluminium housing AS102	dimensions L/B/H: 150/100/80 mm bush for shielded cables with outside diameter 5 ... 10 mm, contacting of Cu overall shielding by the metallic screwed cable glands
connection	'Push In' terminals; no tools necessary to connect conductor; conductors can be separated by applying pressure with a pen or screwdriver; suitable for conductors with cross sections from 0.14 ... 1.5 mm <sup>2</sup>
protection	IP65, IEC 529 and EN 60 529
EMC	EN 61 000-6-2 / IEC77
working temperature range	without display : -25 ... +50 °C with display : -20 ... +50 °C



**Parameter**

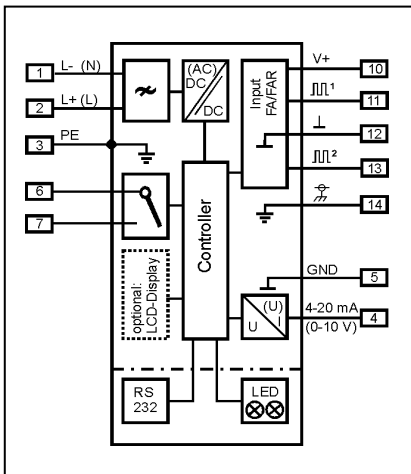
setting parameter as per parameter set no. 00100

analog output, time constant, profile factor, tube inside diameter, linearization of characteristics (sensor type / medium or pairs of variates), limit value or quantity pulse or  $\pm$ direction of flow, quality rating quantity pulse, switching actual/standard flow with setting parameters 'actual pressure' and 'actual temperature'

setting parameter with PC software UCOM and PC connecting cable (see Accessories) alterable

**Accessories (optional)**

	<b>Description</b>	<b>Art.-No.</b>
LCD in top cover	1st row: 'instantaneous value': flow rate or flow velocity 2nd row: 'quantity counter' or 'error code'; 2 x 16 digit, height 5.5 mm working temperature range -20 ... +50 °C	A010/016
PC software UCOM	for configuring transducers UFA and UVA via RS232 interface, PC connecting cable RJ22 / Sub-D-9-pin additional requirement	A010/052
PC connecting cable RJ22 / Sub-D-9-pin	for configuring transducers UFA and UVA in LDG16 or AS102 housings via RS232 interface with software UCOM; transducer connection: RJ22, PC connection: Sub-D, 9-pin	A010/051
interface converter USB / RS232	for connecting PC with USB interface and Höntzsch programming adapter with RS232 interface; PC connection: USB plug type A programming adapter connection: Sub-D 9-pin	A010/100



wiring diagram UFA in aluminium housing AS102



PC with configuration software UCOM



PC connecting cable with CD-ROM UCOM

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Subject to alteration