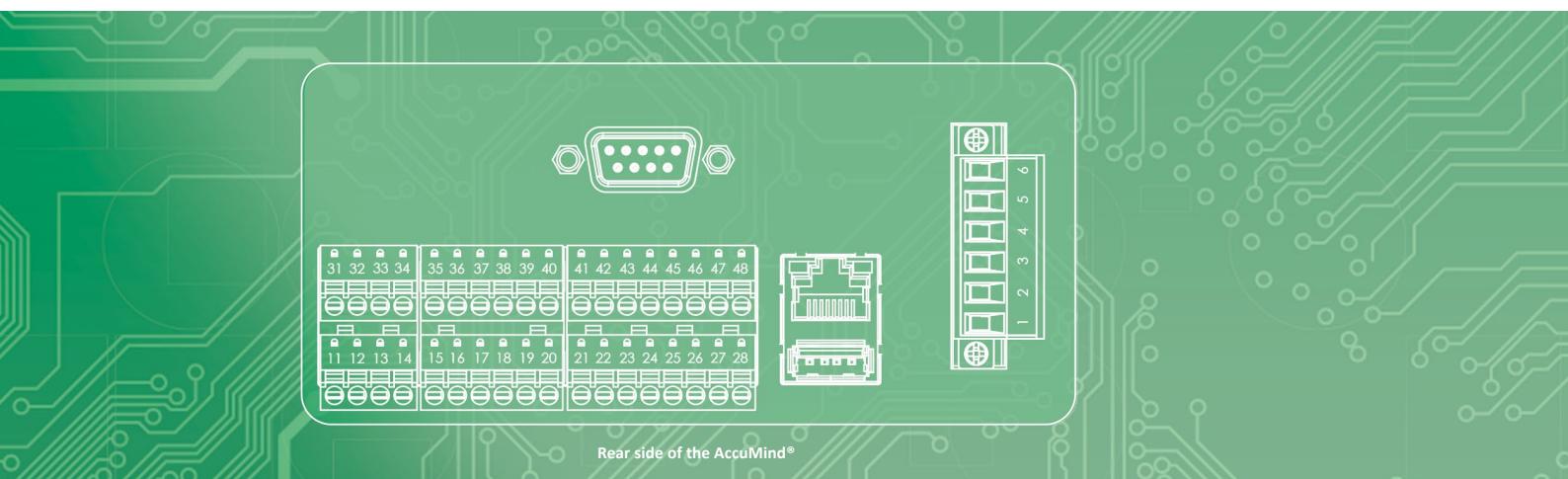




AccuMind®

Universal Flow Computer



■ AccuMind® Flow Computer

When selecting a suitable flow computer, the user is often faced with the problem that the required calculation is not available at all or that a suitable device must be selected from a large number of hardware and software variants with different operating philosophies. Costly and time-consuming errors are pre-programmed.

The AccuMind® offers numerous calculation algorithms in one device with a uniform operating philosophy. Despite the complexity, the setup of the device is very simple. The first step is to select the desired application. Depending on the application, only those values are entered in the parameterization menu that are necessary for the device to function properly. In the last step, the display contents can be freely arranged according to the user's wishes within wide limits.

Do you prefer a "plug-and-play" solution? Then simply order the device with the parameters set.

The list of already established as well as novel features and functions includes:

- ... Calculation of properties of **water and steam** according to IAPWS-97;
- ... **calculation of the properties of gaseous media** (density, viscosity, speed of sound, heat capacity etc.);
- ... calculation methods for **natural gases** and sensors according to **international standards** (AGA-8 (DC/GC), SGERG-88, AGA-NX 19, ISO 20765-1 combined with AGA-3, AGA-5, AGA-7, AGA-10, AGA-11);
- ... support for a wide range of **flow sensors** (differential pressure based primary elements, volume and mass flow meters, turbines, ultrasonic, vortex etc.);
- ... **increased accuracy** for primary elements (orifice plates, venturi, nozzles etc.) by elimination of linearity errors;
- ... operate your flow sensor even at flows outside of calibrated limits and increase accuracy due to **digital communication**;
- ... store and renew **calibration data** for the sensors inside the AccuMind®;
- ... the possibility for the user **to freely adjust the content of the display**;
- ... a **comprehensive interface concept** incl. **Ethernet** interface suitable also for control and maintenance;
- ... a free configurable capacitive **touch screen display** offers a robust and aging-resistant interface for the user.



■ Technical Specification

Calculation Methods

Fluids

Water & Steam	IAPWS-97
Technical Gases	Ideal and real gas computation methods (Redlich-Kwong(-Soave), Peng-Robinson etc.)
Natural Gases	AGA-8 (DC, GC methods); SGERG-88; AGA-NX19; ISO20765-1 (gas properties)
Heat Transfer Fluids	Constantly growing list with usual heat transfer fluids

Sensors

Standard Orifices	ISO 5167-2 with realtime correction of non linearity; AGA-3 ("Orifice Metering of Natural Gas")
Nozzles, Venturi Tubes, Cones	ISO 5167-3/4/5 with realtime correction of non linearity
Averaging Pitot Tubes	Computation acc. to ISO 5167; Simplified procedure
Vortex	proprietary calculation method
Turbine Flow Meters	proprietary calculation method, optional AGA-7
Ultrasonic Flow Meters	proprietary calculation method, optional AGA-10
Mass Flow Meters	proprietary calculation method depending on sensor technology, optional AGA-11

Interfaces

User Interface	4.3" TFT color display, 480 x 272 pixels, 16:9 ratio incl. capacitive touch
Bus Interfaces	Modbus RTU or TCP, optional M-Bus, Profibus or Profinet
FSK-Modem	Compatible with HART-capable field devices; bidirectional use
Analog Inputs	Four current inputs 0/4 ... 20 mA and two RTD-inputs (3 and 4 wires)
Frequency/Pulse	Two inputs, electrically isolated
Analog Outputs	Two outputs 0/4 ... 20 mA, electrically isolated, applied value selectable
Switch Outputs	One mechanical relay (6A; 230 V AC) and two electronical relays (120 mA; 60 V DC or 40 V AC)

Power Supply

AC Power Supply	100 ... 250 V AC $\pm 10\%$; 50 ... 60 Hz $\pm 5\%$
AC Power Supply (optional)	18 ... 30 V DC $\pm 10\%$
Power Consumption	max. 20 VA

Housing

Dimensions	Housing for panel mounting; internal parts: protection class IP20; 135 W x 65 H x 120 D (in mm ³); display: protection class IP54; 144 W x 83 H x 14 D (in mm ³)
------------	--

■ Ordering Codes – AccuMind®

AccuMind _____									
Housing & User Interface									
	PM								
	WM								
Operating Modes									
	HB								
	QL								
	TG								
	NG								
Power Supply									
	AC								
	DC								
Functional Extension									
	NA								
	AZ								
	LS								
	LA								
1st Interface									
	DE								
	MB								
	DA								
2nd Interface									
	00								
	MS								
	DA								
	MN								
	PB								
	PN								
Custom Settings									
	FC								
	CP								
	CC								
	CA								
Tag Number									
	DI	Tag number in display							
	KK	Tag number in display and on enclosed metal plate							

S.K.I. Schlegel & Kremer Industrieautomation GmbH

P.O. Box 41 01 31

D-41241 Mönchengladbach

Hanns-Martin-Schleyer-Str. 22

D-41199 Mönchengladbach

Phone: +49 2166 62317-0

E-mail: info@ski-gmbh.com

Web: www.ski-gmbh.com