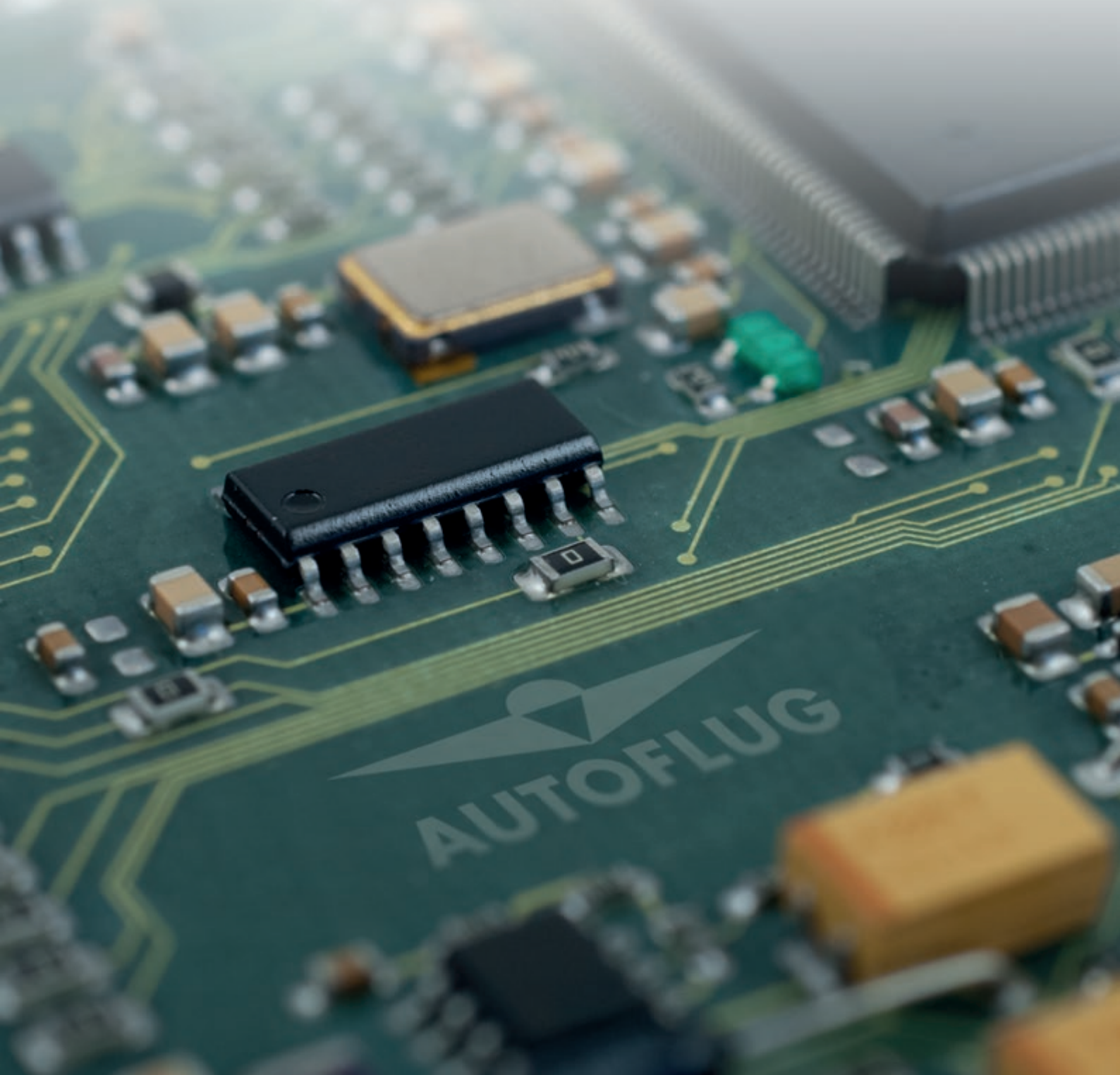




## MEASUREMENT & CONTROL

Many years of expertise in measurement and control technology



THINKING SAFETY

# MEASUREMENT & CONTROL –

## AUTOFLUG FUEL GAUGING SYSTEM OVERVIEW

<b>AUTOFLUG fuelSENS</b>	<b>STRAIGHTGAUGE</b>		<p><i>Mechanical Interface:</i> flange mounted</p> <p><i>Measurement Principle:</i> capacitance, optical</p> <p><i>Function:</i> fuel height measurement, fuel type compensation, high and low point level sensing</p> <p><i>Advantage:</i> multifunctional sensor package, independent high and low point level sensing, fuel height measurement with various signal options (e.g. PWM, Frequency, Current, Voltage, CAN)</p>
	<b>FLEXGAUGE</b>		<p><i>Mechanical Interface:</i> flange mounted (requires guiding tube)</p> <p><i>Measurement Principle:</i> capacitance</p> <p><i>Function:</i> fuel height measurement</p> <p><i>Advantage:</i> precise gauging capabilities in challenging and complex fuel tank geometries</p>
	<b>CLAMPGAUGE</b>		<p><i>Mechanical Interface:</i> clamp-clamp mounted</p> <p><i>Measurement Principle:</i> capacitance</p> <p><i>Function:</i> fuel height measurement</p> <p><i>Advantage:</i> light weight, easy to install, internal fuel tank mounting</p>
<b>CALCULIZE</b>	<b>SIGNAL CONDITIONING UNITS</b>		<p><i>Mechanical Interface:</i> airframe mounted</p> <p><i>Function:</i> fuel quantity calculation with fuel characteristics and flight attitude compensation</p> <p><i>Advantage:</i> communication with existing avionic systems via CAN bus, ARINC 429, MIL-STD-1553B and others like TTP, RS 232, discrete I/O pump and valve control, independent level sensing built-in test (BIT)</p>
	<b>DISPLAY UNIT</b>		<p><i>Mechanical Interface:</i> depending on function / cockpit</p> <p><i>Function:</i> display of fuel quantity and level caution communication with Signal Conditioning Unit(s)</p> <p><i>Advantage:</i> dimmable, NVG compatible displays</p>
<b>OUTREACH</b>	<b>ADDITIONAL TANK SYSTEM</b>		<p><i>Mechanical Interface:</i> depending on mounting provisions in helicopter</p> <p><i>Function:</i> increase of helicopter flight endurance and operating range</p> <p><i>Advantage:</i> crashworthy, different shapes and sizes available, fast installation and removal</p>



## RECOGNIZED SYSTEM EXPERTISE IN FUEL MEASUREMENT TECHNOLOGY AND CONTROL

AUTOFLUG has comprehensive know-how in the field of measurement and control technology. On this basis, we develop and produce a large number of components and sensors, which are combined into complex fuel management systems for aircraft, helicopters, and unmanned aerial vehicles, as well as for armored vehicles.

The AUTOFLUG design and development capabilities cover all phases from planning and design to the integration of the systems into diverse platforms. Adaptations from existing designs according to customer requirements including qualification are possible in short order.

## AUTOFLUG fueISENS – FUEL MEASUREMENT FOR AEROSPACE AND LAND VEHICLE APPLICATIONS

AUTOFLUG's fueISENS product line includes fuel gauge transmitters, fuel level sensors, fuel high and low point level sensors, compensators and water detectors. All of our products satisfy the required safety, environmental, reliability and accuracy requirements in accordance with their field of application. For helicopters, our sensors are specifically designed to reduce the risk of fuel tank bladder leakage in a crash scenario.

In the field of fuel sensors for military aircraft, there are currently three sensor types available. Depending on the type of mount-

ing within the tank, we distinguish between AUTOFLUG FLEXGAUGE, STRAIGHTGAUGE and CLAMPGAUGE.

The latest sensor family AUTOFLUG CERTIFLY is currently being developed, the sensors are mainly for use in civil aviation. Two sensor versions are planned, CERTIFLY BASE and CERTIFLY CONFIG.



## AUTOFLUG CALCULIZE AND AUTOFLUG VISUALIZE – DATA HANDLING FOR COMPLEX FUEL SYSTEMS

AUTOFLUG CALCULIZE comprises signal conditioning units (SCU) that are designed and manufactured in various configurations for Fuel Quantity Measurement Systems (FQMS) and Fuel Management Systems (FMS). The main functions are fuel quantity measurement, independent fuel level measurement and fuel management.

AUTOFLUG VISUALIZE comprises Cockpit Display Units with dimmable, NVG compatible displays.



## AUTOFLUG OUTREACH – YOUR PLUS IN AIR ENDURANCE AND OPERATING RANGE

The product family AUTOFLUG OUTREACH offers crashworthy auxiliary fuel tank systems for helicopters to increase their air endurance and operating range. The tank systems from the AUTOFLUG fuelPLUS are available in various shapes and sizes with a capacity of about 115 liters up to 3,000 liters of fuel.

The crashworthy design of the Auxiliary Fuel Tanks protects the occupants in a survivable crash and prevents a post-crash fire. A distinction is made between OUTREACH AERO and BASE, which includes the additional tank solutions for land vehicles.







## PIONEER & INNOVATOR IN RESCUE AND SAFETY TECHNOLOGY

**THINKING SAFETY** – This is the motto that AUTOFLUG follows. A family company in its third generation, which has been a leading supplier of products and services to the aviation industry since its early days, with the rescue and safety of people being the main focus. As a globally recognized supplier and service partner for the international aviation industry and defense technology, the company and its roughly 250 employees develop, manufacture and service a variety of textile, mechanical and electronic components and systems.

AUTOFLUG, with its headquarters in Rellingen, Schleswig-Holstein, Germany, has decades of experience and expertise in the rescue and safety industry, as well as the textile, mechanics, precision engineering, electronics, software and measurement and control technology sectors.

### **AUTOFLUG GMBH**

INDUSTRIESTR. 10  
25462 RELINGEN  
GERMANY  
PHONE: +49 4101 307-0  
FAX: +49 4101 307-110  
SALES@AUTOFLUG.DE  
WWW.AUTOFLUG.DE

### **PRODUCTS AND SERVICES**



AUTOFLUG airFLEX  
AUTOFLUG airFAST  
AUTOFLUG airSEAT



AUTOFLUG landFLEX  
AUTOFLUG landSEAT



AUTOFLUG safeFLIGHT  
AUTOFLUG safeCHUTE  
AUTOFLUG safeSUPPLIES



AUTOFLUG fullSERVICE  
AUTOFLUG engineeringSERVICE

03-2020

**THINKING SAFETY**