Control Unit
RAC 531 A



RAC 531 A

- **Level monitoring of the accumulating oil/light liquid layer**
- **Relay output, change-over contact**
- **Acoustic and visual alarm**
- **Easy installation**
- **Good value**

APPLICATION

- Level monitoring of hydrocarbon liquids in oil-water separators.

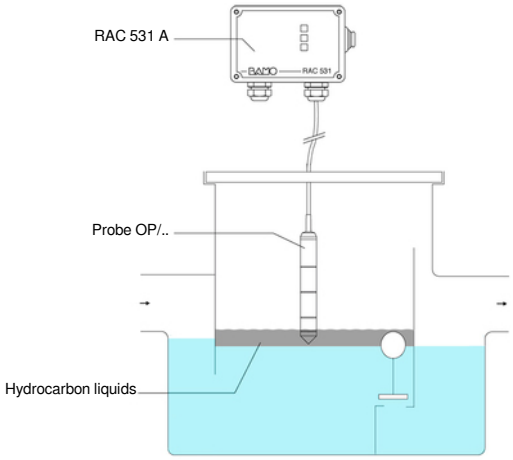
DESCRIPTION

The RAC 531 A monitoring system is used for oil/light liquid separators. It is used to monitor the level of the accumulating oil/light liquid layer.

An oil probe of type NivOil OP (BVS 07 ATEX E 091 X) is connected to the RAC 531 A control unit. The probe detects the layer of oil/light liquid floating on the water.

The device signals the respective alarm new/old and OK status with three LEDs and has built-in cable break and short-circuit monitoring.
RAC 531 A has a built-in horn. Thebuzzer can be disabled by the user.

CE mark: The device fulfils the legal requirements of the applicable EU-guidelines



TECHNICAL FEATURES

Sensor power supply RAC 531 A

Operating voltage	230V AC 50...60Hz
Safety-related	
maximum voltage	Um = 250V AC
Power consumption	2W / 2.5VA
Wall-mounted housing	120x80x55mm
Protection class	IP65
Ambient temperature	-20 ... +60 °C
EU type examination certificate	BVS 12 ATEX E 019
ATEX signal circuit limits	The maximum permissible values (U_0, I_0, P_0 and C_0, L_0) of the intrinsically safe measuring circuits were taken from the type examination certificate/type plate for each channel and in conjunction with the NivOil probes.
Ex protection class	Ⓔx II (1)G [Ex ia Ga] IIB/IIA (associated electrical equipment)
Probe input	1 input, only for oil probe NivOil OP (BVS 07 ATEX E 091 X)
Monitoring	The probe is monitored for cable breaks and short circuits
Display and signals	Green LED -> Device in operation, no alarm Yellow LED -> alarm not acknowledged Red LED -> ongoing alarm still active
Operating	1 button for alarm acknowledgement and test
Relay output	1 relay output, 230V AC, 3A, potential-free changeover contact

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TECHNICAL DATA (continuation)

Intrinsically safe circuit

Version		RAC 531 A
Terminals		Terminal (+), terminal (-)
Voltage Uo		17.22V
Current Io		152mA
Power Po		651mW
Max. external capacity Co	IIB	2.06µF
	IIA	8.5µF
Max. external inductance Lo	IIB	6.23mH
	IIA	12.5mH
Max. inductance/resistance ratio Lo/Ro	IIB	218.7µH/Ω
	IIA	437.4µH/Ω
Characteristic curve		linear

Oil Probe (NivOil OP)

For connection to the RAC 531 A control unit!

Sensor material	PE-EL with stainless steel sensor
Cable	Standard with 10m oil/petrol-resistant cable 2x1mm² Maximum permissible cable length: 300m $[C]_{Leitung} \leq 200nF/km$ und $[L]_{Leitung} \leq 1mH/km$
Dimensions	approx. Ø32x250mm incl. cable support sleeve with 5cm marks for height adjustment
Protection	IP68
Measuring principle	Capacitive, high frequency
Ambient temperature	-20 ... +60 °C
EU type examination certificate	BVS 07 ATEX E 091 X
Ex maximum values	
Maximum input voltage Ui	17.9V DC
Maximum input current Ii	157mA
Maximum input power Pi	695mW
Maximum internal capacity Ci	60nF (no mixed parameters)
Maximum internal inductance Li	0.3mH (no mixed parameters)
Ex marking	⟨Ex⟩ II 1G Ex ia IIB T4 Ga (intrinsically safe electrical equipment)
Interconnection	Sensor supply unit (RAC 531) with oil probe (NivOil OP)



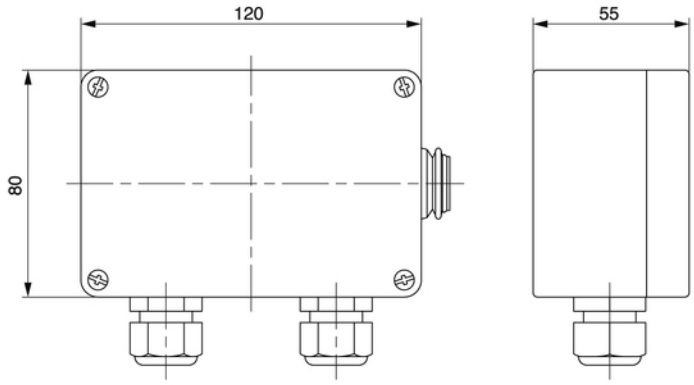
CODE NUMBERS AND REFERENCES

Code	Reference	Description
531 950	RAC 531 A	Control unit 230V AC, wall-mounted housing IP65, 120x80x55mm
531 101	OP/5	Oil probe with 5m cable
531 102	OP/10	Oil probe with 10m cable

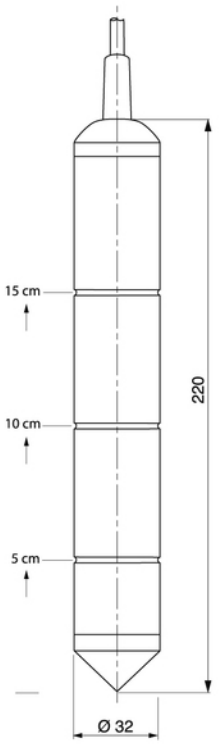
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DIMENSIONS



RAC 531



OP/5 – OP/10

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