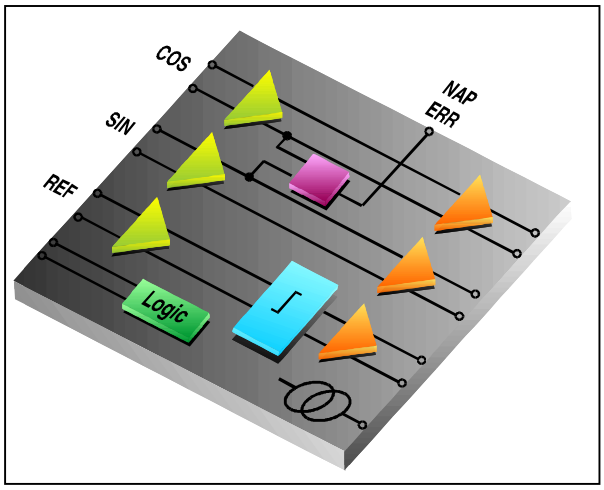
Zentrum Mikroelektronik Dresden

Integrierte Innovation

Sensoramplifier Chip



The sensoramplifier chip is intended for use in incremental position and angular measuring systems. It conditions the signals supplied by optical sensors.

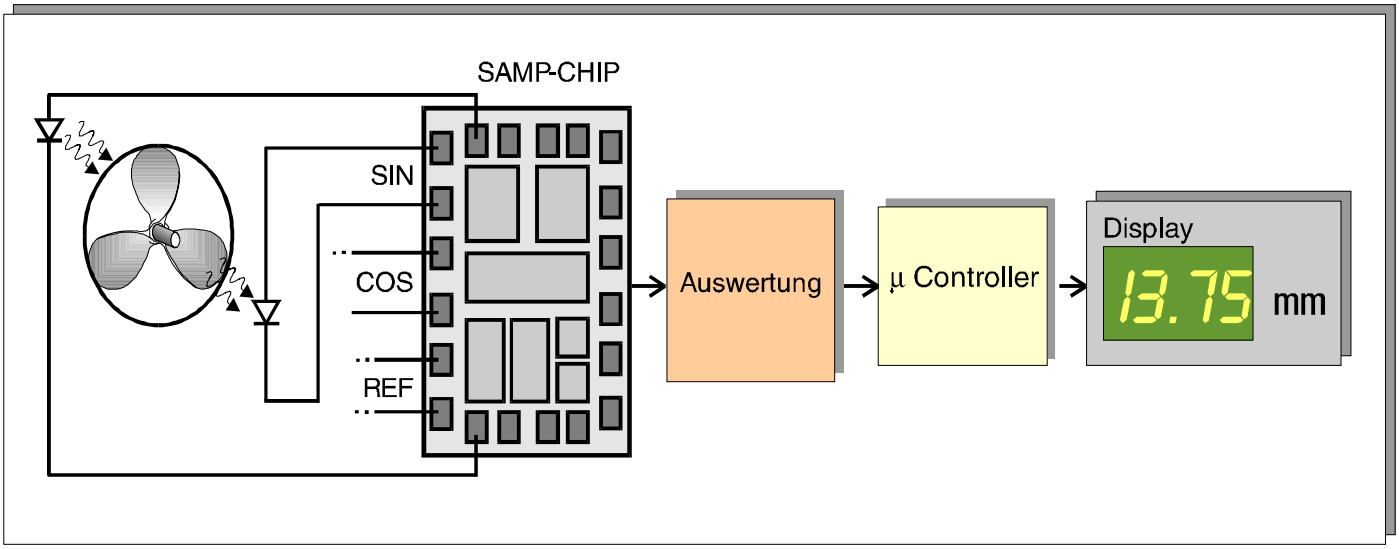
Highlights

- Sensor current inputs
- 3 Output Modes:
  current, voltage, square wave
- Current source for sensor
- Sensor Fault Detection
- Pins for external adjustments
- Supply Voltage 5V
- Technology CMOS C4A 1,2µm

Function

The circuit provides a controlled current for the transmitter diodes of an optical measuring head. The differential signala supplied by the receiver diodes of the sinusoidal, cosinusoidal and reference channels ergoes a current-voltage conversion and are subsequently amplified. The symmetrical outputs can be switched into the modes of current, voltage, square-wave signal output.

In the "Square-wave" mode, zero voltage comparators are switched on, and square-wave signals are generated. The reference channel permanently provides square-wave signals.
An error signal indicates values above or below the amplitude limits, and thus, the failure of the measuring head.



Developed under contract. As example only.

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