

## Dual output versions for our contactless absolute encoders

The new electronic "**AX**" (dual analog output) and "**DX**" (dual digital output) versions are redundant systems. They have two independent outputs and supply voltages. Every system can be programmed individually. Nearly every customer needs a special output configuration. For that reason we have only for some configurations samples in stock.

Nearly every application needs different output signals. For that reason we create for every output signal combination a 4 digit special number ( /xxxx ). The customer must define the 2 output signals. A typical order description looks like this:

**R25 AX 24V /xxxx** or  
**R25 AX 5V PWM /xxxx**

For every 4 digit special number (**xxxx**) we (or the customer) create a configuration sheet, where all needed specifications are fixed.

### **AX** versions:

- voltage output **0-5V** (supply can be 5V or 8-30V), **0-10V** (supply 15-30V)
- output **PWM**, supply can be 5V or 8-30V
- "HS" version is only possible for the 5V supply versions

### **DX** versions:

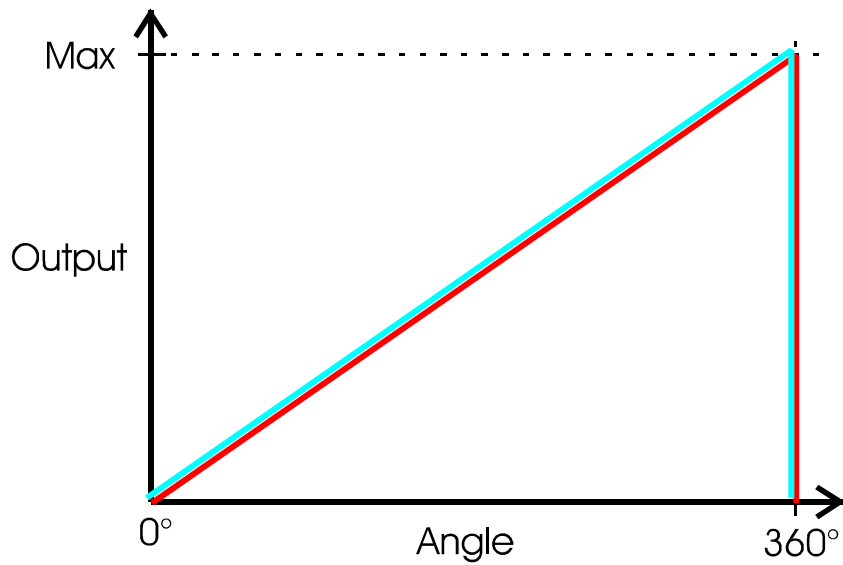
- output **SPI**, supply is 5V
- the SPI versions have a resolution of 14bit for every channel
- "HS" version is possible

The independent output signals can be programmed individually. You can have "dual" output, "cross" output, and other custom outputs.

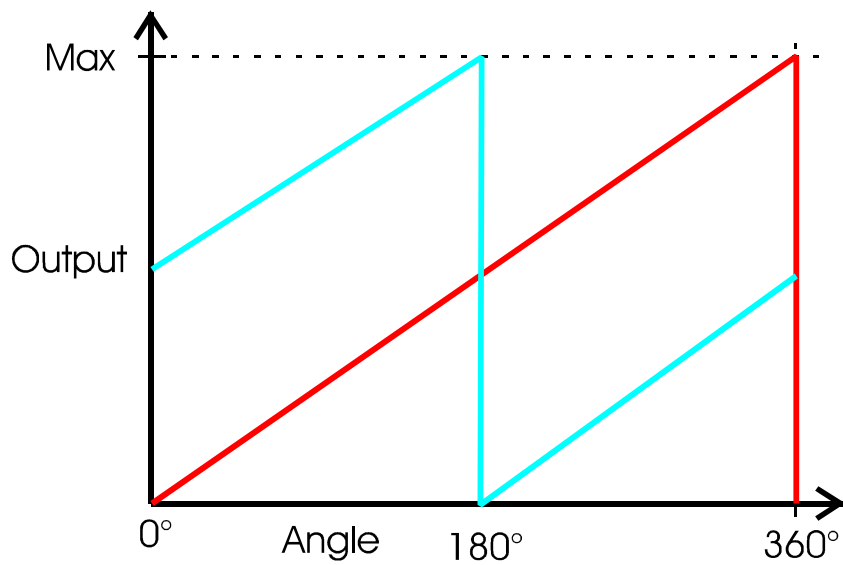
- R25 (samples available)
- RO22, RH22 (on request)
- RO28, R28 (on request)

**AX Versions:**

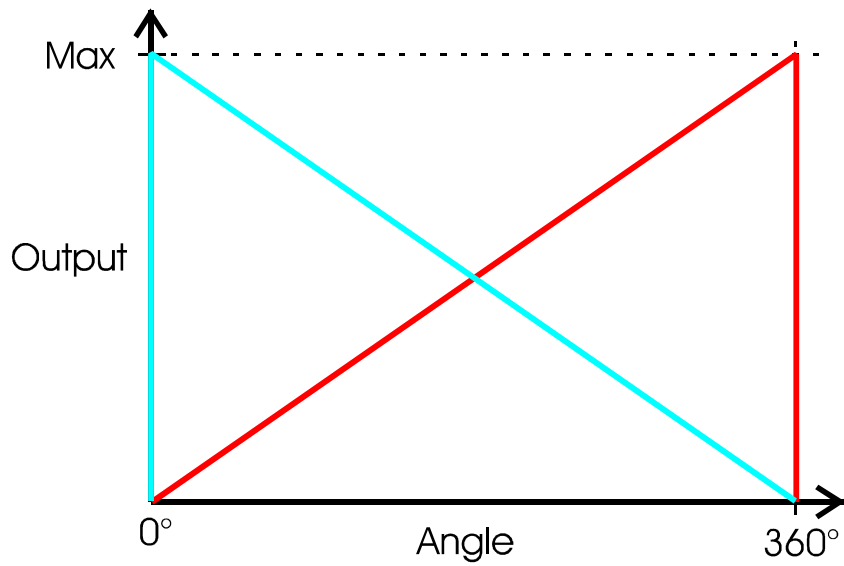
**Examples for different analog output signals**



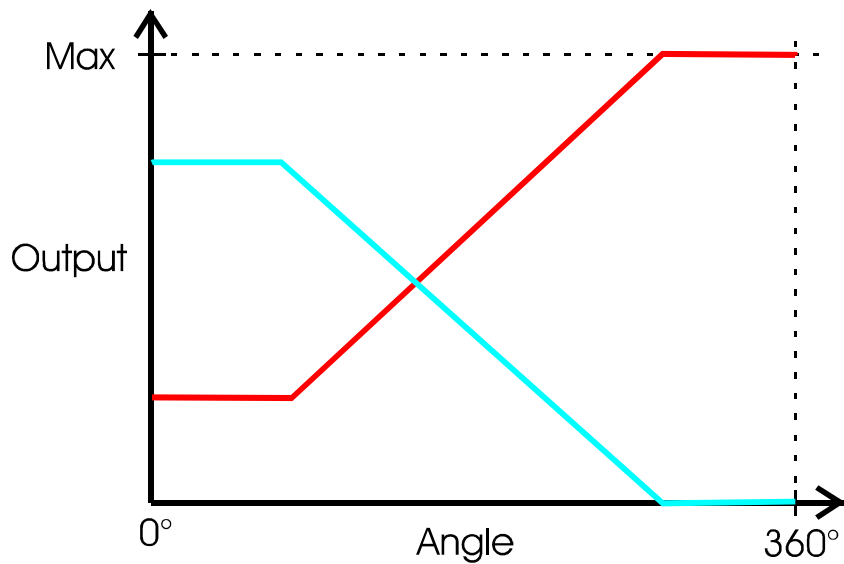
Standard dual output signal, 360°, clockwise (CW)



parallel output signals with 180° phase shift



cross output signal,  $360^\circ$



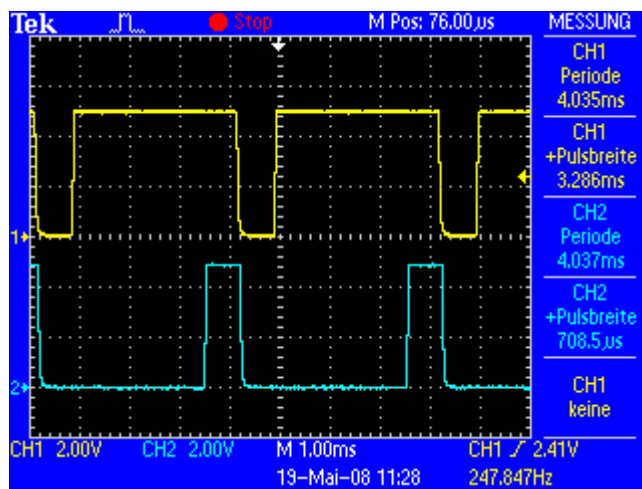
custom cross output

For defining the exact output signal please refer to the configuration sheet.

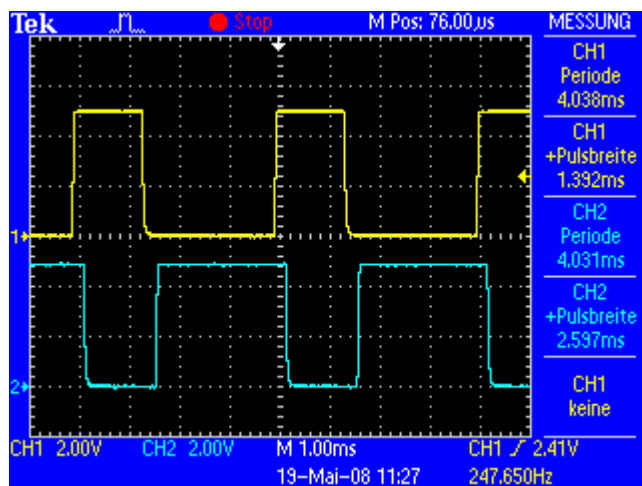
The development always continues. Please refer to our staff for modifications, options and special versions.

## Example for PWM output signals

0° Position: (gelb: Kanal1, blau: Kanal2)



18° Position: (gelb: Kanal1, blau: Kanal2)



dual PWM cross output

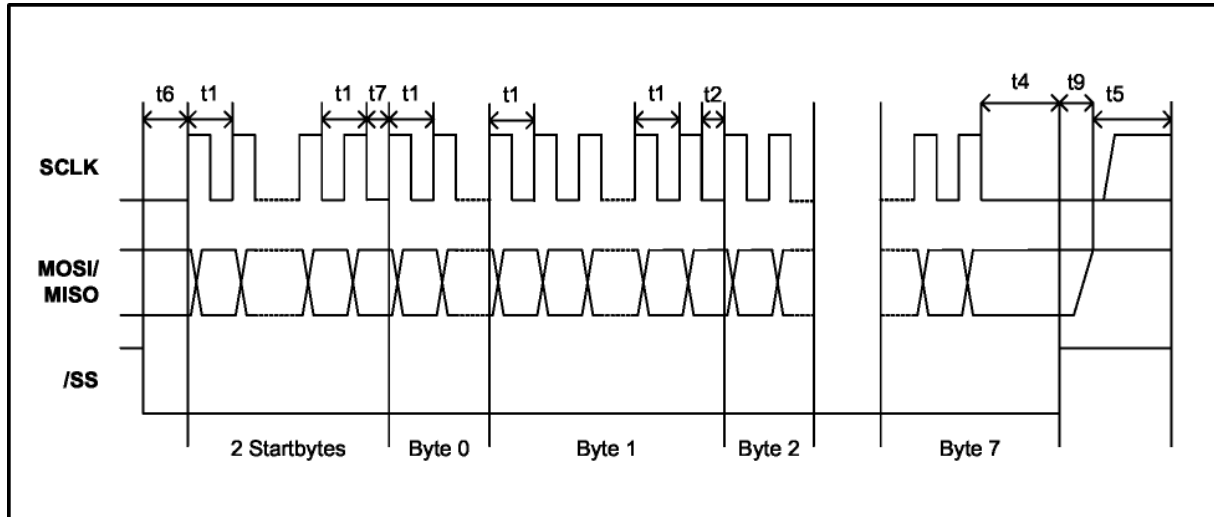
For defining the exact output signal please refer to the configuration sheet.

The development always continues. Please refer to our staff for modifications, options and special versions.

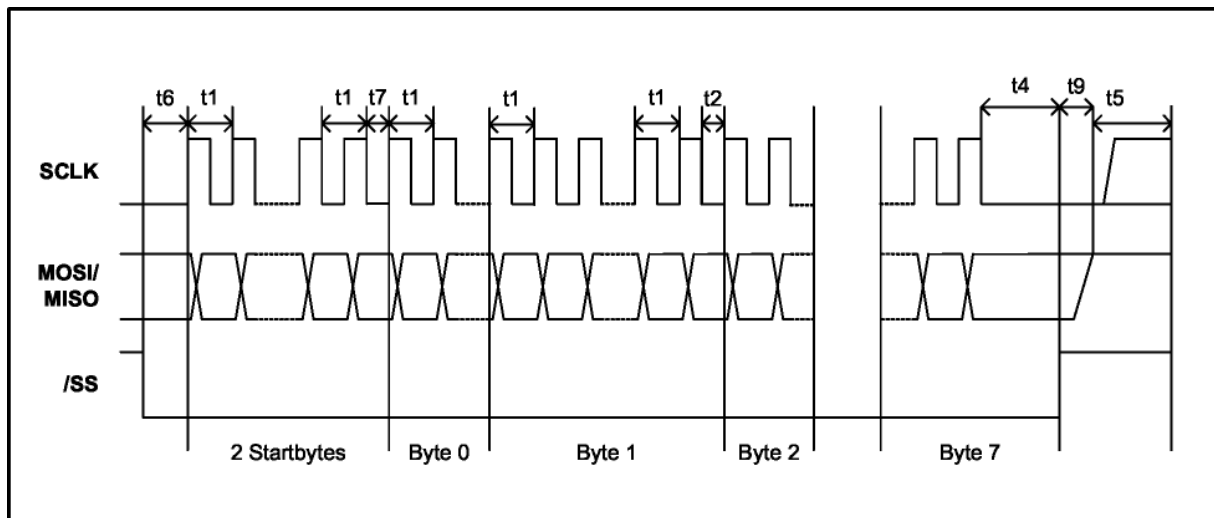
## DX Versions:

### Example for the dual SPI output

#### signal 1



#### signal 2



the sensor has 2 independent serial outputs. You get a 14bit data word over the full 360°. Direction is clockwise for both signals

On request we can program the sensor signals CW/CCW, CCW/CCW, CCW/CW  
Please refer to the configuration sheet

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