/// Product Datasheet

Hall effect speed sensors

The Hall effect sensors measure the speed of any wheel down to zero speed. The train's direction is detected using the 2-channel model which delivers phase-displaced signals. The sensors include the magnets which makes it unnecessary to magnetize the phonic wheel.

Sensor		
Model	1-channel	2-channel
Number of channels	1	2 (separated galvanically)
Frequency range	0 to 3.5 kHz	
Supply voltage | Supply Current | Reverse polarity protection	U_S=15±5% V | I_S<20mA | Yes	
Output voltage | Output current | Short-circuit-proof	Rectangular signal: V_{OH}=U_S-1.5V, V_{OL}=1V | I_O<8mA | Yes	
Recommended phonic wheel	Metallic, 80 teeth, module 2, diameter 162mm, thickness 16mm	
Air gap	0.5 to 1.5 mm	
MTBF	4 000 000 hours	2 500 000 hours
Cable		
Length	Upon request - From 1m to 5m	
Shielded cables	1 cable 3x0.82mm² EN50306-4	2 cables 3x0.5mm² EN50306-4
Cable protection	Upon request: EPDM tube or PMA sheath	
Cable termination	Plug connector on request: Souriau UTO, VGE1 or FER1 series	
Environment		
Operating temperature | Storage temperature	-40°C to +110°C | -40°C to + 85°C	
Protection class	EN60529 - IP66	
Vibration and shock	EN61373 – Category 3	
Electronics	EN50155, EN50121-3-2	
Fire and Smoke	EN45545 – HL2	
Safety	Meets TOM (Wabtec's Driving Data Recorder) safety requirements	

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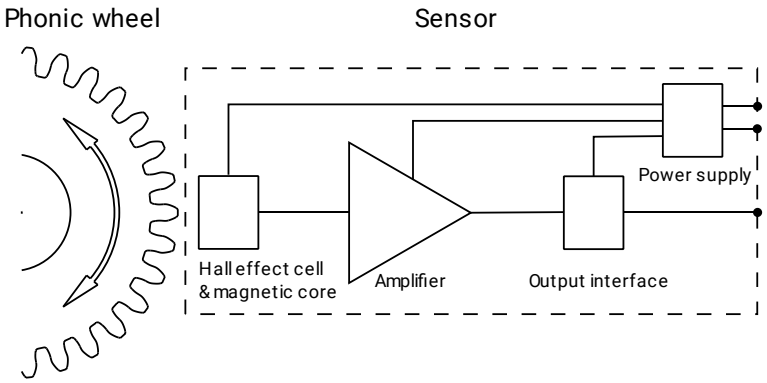
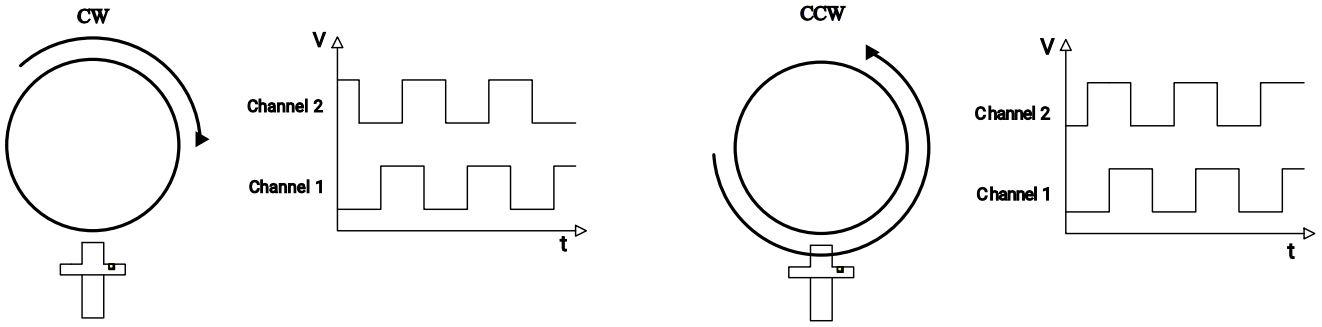
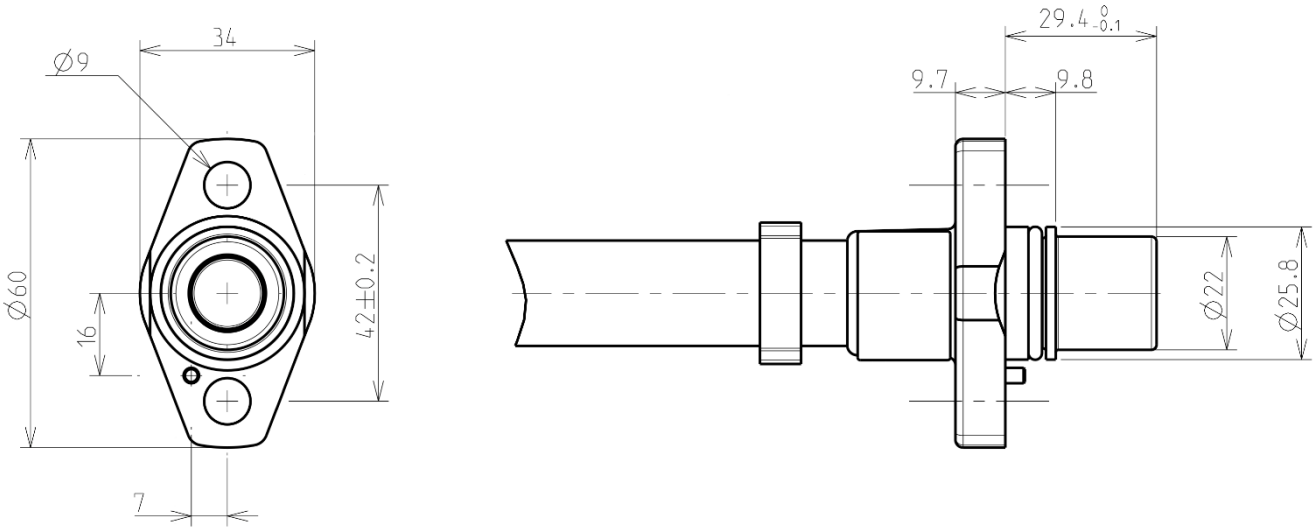
Block diagram (1-channel model)



Output signals (2-channels model)



Dimensions (all models)



Unit: mm

Note: All pictures appearing in this document are not contractual.