

STRIP THICKNESS | STRIP WIDTH

CONTACT GAUGES VBK

APPLICATION

- ▶ Strip material and flat wire made of metal
- ▶ Optional: profiled wire

FUNCTION

- ▶ Two transducers contact the upper and lower side of the strip, the difference between the individual measurements is the absolute strip thickness
- ▶ Optional a second pair of transducers is used for the measurement of the strip width

ADVANTAGES

- ▶ Combined measurement of thickness and width possible
- ▶ Accuracy up to one micrometer per millimeter of strip thickness respectively up to two micrometer per millimeter of strip width
- ▶ Correct results even with oiled strip

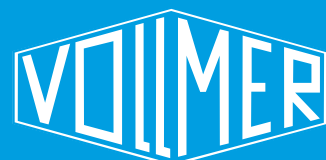


TYPE SERIES		VBK 512			
PROCESS PARAMETERS		THICKNESS MEASUREMENT		WIDTH MEASUREMENT for wire thickness 0.1 – 9 mm	
Material to be measured	metal strip and flat wire				
Max. strip speed	600 m/min				
MEASUREMENT PARAMETERS					
C-frame depth	35 mm				
Measurement depth (from the strip edge)	25 mm				
Positioning	manual				
Pass line variation	max. +/- 1 mm				
Measurement sensor	analog	digital	analog	digital	
Measurement range	0 - 3.2 mm	0 - 9 mm	0 - 3 mm	0 - 32 mm	
Measurement resolution	0.0001 mm	0.00005 mm	0.0001 mm	0.0005 mm	
Measurement accuracy <small>T_i > 100 ms, measurement insert material: diamond, with twist-free guiding through the gauge, strip / wire temp. ≤ 60 °C</small>	+/- 0.1 % of nominal value but not better than +/- 0.001 mm		+/- 0.1 % of nominal value but not better than +/- 0.002 mm		
Max. strip temperature	160 °C (250 °C with reduced accuracy)	150 °C	160 °C (250 °C with reduced accuracy)	150 °C	
Measurement amplifier type	VMF 1000 / 2000	VTS	VMF 1000 / 2000	VTS	
Sampling interval	1,6 ms	1,0 ms	1,6 ms	1,0 ms	
Averaging time T _i	1.6 - 409.6 ms	1.0 - 2,000.0 ms	1.6 - 409.6 ms	1.0 - 2,000.0 ms	
DIMENSIONS					
Width (installation space) in strip pass direction	180 mm				
Width outside line	200 mm				
Height below pass line	200 mm				
CONNECTION DATA / CONSUMPTIONS / ENVIRONMENT					
Interfaces	PROFIBUS DP or hardware (digital and analog in- and outputs)				
Supply voltage	110 - 230 V AC, 50 - 60 Hz				
Installed load	1 kW				
Max. cable length between sensor and measurement amplifier	30 m	100 m	30 m	100 m	
Protection class	IP64				
Environment	Temperature: 5 - 50 °C, Relative humidity: 0 - 95 %				
Compressed air quality acc. to DIN ISO 8573-1	Solids: quality class 5 = max. 40 µm, particle density < 10 mg/m ³ Water content: quality class 5 = 9.4 g/m ³ at 10 °C, Oil content: quality class 4 = oil content < 5 mg/m ³				
Compressed air supply	Pressure: min. 4 bar, Consumption: max. 2 m ³ /h				
OPTIONS					
Special strip guiding	for disadvantageous proportion of strip thickness to strip width				
Adjustable cardanic suspension	for stiff or thick material				
Cylindrical guiding rolls	for strip width > 20 mm				
Profiled guiding rolls	for profiled wire				



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