2700 / 2750 / 2710



Compact design with integrated controller

scanCONTROL 2700/2710 combines technology and performance in a single device, providing the dual benefits of an integrated controller and compact dimensions.

Multiple scanner applications

For many applications, it is necessary to measure or acquire data simultaneously using multiple sensors. With its combination of compact design, simple wiring and attractive price, scanCONTROL 2700 / 2710 is ideally suited to performing multi scanner applications.

Alternating laser toggle

When using multiple sensors for a measuring task, it is sometimes necessary to work with overlapping laser lines. To rule out optical interference, the scanCONTROL 2700 and 2750 have a special synchronisation feature. This "180° phase shift" mode provides an alternating laser ON/OFF. The laser beam of one sensor is switched off for a fraction of a second while the other sensor performs measurements. This is done automatically and has no effect on the overall measurement frequency.

Extended measuring ranges for large targets

Extended measuring ranges are available for larger objects. Using software, the user can switch over from the standard range to the extended range. To document the measuring ranges, each sensor is equipped with a calibration protocol.

Protective cover plate for harsh environments

A protective cover plate is available for harsh industrial environments. This plate can be equipped with a purge air system. The cover plate is attached to the sensor and has a protective window, through which the beam passes through.

- z-axis measuring range up to 300mm
- x-axis measuring range up to 148mm
- Profile frequency up to 2,000Hz
- Measuring rate up to 1,280,000 points per second
- z-axis reference resolution $<4\mu$ m
- Resolution x-axis up to 640 points

scanCONTROL 2700

The scanCONTROL 2700 sensors are the most economic sensors for static and dynamic applications. The sensor provides a profile frequency of 100Hz and up to 64,000 measuring points per second.

scanCONTROL 2750

The scanCONTROL 2750 sensors offer everything you need for advanced high speed 3D applications. Up to 1,280,000 points per second with a profile frequency of up to 2,000Hz are possible using these sensors.

scanCONTROL 2710

The SMART series scanCONTROL 2710 offers a Plug & Play solution with integrated controller for simple measurement tasks. The sensor design is identical to the 2700 and 2750 series.

COMPACT and HIGHSPEED: Calibrated profile data

The scanCONTROL 2700 and 2750 models are used for the transfer of calibrated profile data for external profile analysis, for example in a PC. The sensor can be configured via a FireWire or Ethernet interface. The profile information is also transferred via this same interface. Details of the software interface can be found in the "Integrating scanCONTROL in application software" chapter.

The programmable RS422 port can be used as a trigger or encoder input.

COMPACT	HIGH-SPEED				
scanCONTROL 2700-25	scanCONTROL 2750-25				
scanCONTROL 2700-50	scanCONTROL 2750-50				
scanCONTROL 2700-100	scanCONTROL 2750-100				
<u>Scope of delivery:</u> Sensor, power supply cable 4.5m, RS422 connector, Demo-CD, SDK, sensor protocol					

Power supply Power supply Profile transfer scanCONTROL 2700: 64,000 measuring points per second scanCONTROL 2750: 1,280,000 measuring points per second the scanControl 2750: 1,280,000 measuring points per second 1750: 1,280,000 measuring poin

SMART: Profile analysis

The SMART series scanCONTROL 2710 offers a Plug & Play solution within the integrated controller for simple measurement tasks such as step, angle, seam and groove inspection.

The sensor is programmed via a PC using the scanCONTROL Configuration Tools. This setup is stored inside the integrated controller. The sensor can run in the standalone mode without a PC. In addition to the measurement output via RS422, switch outputs and analogue measuring values are available via the external output unit. The RS422 can be programmed as a serial interface (measurement value output) or as a trigger input.

	SMART	
	scanCONTROL 2710-25	
	scanCONTROL 2710-50	
	scanCONTROL 2710-100	
Scope of deliver Sensor, power sensor protoc	<u>/ery:</u> r supply cable 4.5m, RS422 connector, ol, software Configuration Tools	





20°

			COMPACT	HIGHSPEED	SMART		
	Model	scanCONTROL	2700-25 2750-25 2710-25				
		Start of measuring range		90mm			
	Standard measuring range	Midrange	102.5mm				
lt)	End of measuring range			115mm			
heigl	Extended measuring range	Start of measuring range	85mm				
axis (40mm	End of measuring range	125mm				
Z-6	Linearity 1)	±0.2% FSO (3sigma)	±50µm				
	Resolution	0.04% FSO	10µm				
	Reference resolution ^{2) 3)}		4µm				
	Start of measuring range		23mm				
ĉ	Standard measuring range	Midrange	25mm				
width		End of measuring range	27mm				
axis	Estandad an an sina an an	Start of measuring range	22mm				
×	Extended measuring range	End of measuring range	29mm				
	Point distance	Midrange		40µm			
	Resolution x-axis			640 points/profile			
	Profile frequency		100Hz	2,000Hz	100Hz		
	Measurement rate		64,000 points/sec	1,28 mio points/sec	-		
		FireWire					
		Ethernet					
	Interfaces profile data	RS422 4)					
		Trigger 4)					
		Counter (encoder) 4)					
		RS422 4)					
	Signal output SMART	Analogue 5)					
		Switching signal 5)					
	Display (LED)		1x laser, 1x power/error/status				
	Protection class		IP 64 0°C up to 50°C -20°C up to 70°C				
	Operating temperature						
	Storage temperature						
	_		up to 20m				
	Cable length	Ethernet with Switch FireWire with HUB		up to 50m			
	Weight		аррг. 700g				
	Galvanic isolation		Only at RS422, no isolation of 24V-supply, internal circuit and FireWire bus. If isolation necessary, external 24V-DC-DC-converter required				
	Vibration	ibration		2g / 20 500Hz			
	Shock Supply		15g / 6ms				
			8-30 VDC, 500mA				
	Light source		semiconductor laser 658nm				
	Aperture angle laser line		20°				
	Laser power standard optional	10mW (class 2M)					
		optional	20mW (class 3B)				
	Laser off		via software (standard) / via external contact (optional)				
	Permissible ambient light (fluorescent light) 2)			10,000lx			
	 Standard measuring range Measuring object: Micro-Epsilon According to a one-time averagir Programmable as serial interface Only with Output Unit FSO = Full scale output 	standard object (metallic, diffusely reflect og across the measuring field (640 points) or synchronisation input or encoder inpu	ing material)) t				









			COMPACT	HIGHSPEED	SMART	
	Model	scanCONTROL	2700-50	2750-50	2710-50	
		Start of measuring range		175mm		
	Standard measuring range 50mm	Midrange	200mm			
(t		End of measuring range	225mm			
heig	Extended measuring range	Start of measuring range	160mm			
axis (100mm	End of measuring range	260mm			
-Z-	Linearity 1)	±0.2% FSO (3sigma)	±100µm			
	Resolution	0.04% FSO	20µm			
	Reference resolution ^{2) 3)}		10µm			
(د	Standard measuring range	Start of measuring range	44mm			
		Midrange	50mm			
(widt		End of measuring range	56mm			
axis	Extended measuring range	Start of measuring range		41mm		
×	Extended measuring range	End of measuring range	64mm			
	Point distance	Midrange		80µm		
	Resolution x-axis		640 points/profile			
	Profile frequency		100Hz	2,000Hz	100Hz	
	Measurement rate		64,000 points/sec	1,28 mio points/sec	-	
		FireWire		•		
		Ethernet		•		
	Interfaces profile data	RS422 4)		•		
		Trigger 4)				
		Counter (encoder) 4)				
	Signal output SMART	RS422 4)				
		Analogue 5)				
		Switching signal 5)				
	Display (LED)		1x laser, 1x power/error/status			
	Protection class			IP 64	34	
	Operating temperature		0°C up to 50°C			
	Storage temperature		-20°C up to 70°C			
			up to 20m			
	Cable length	Ethernet with Switch FireWire with HUB	up to 50m			
	Weight		appr. 800g			
	Galvanic isolation		Only at RS422, no isolation of 24V-supply, internal circuit and FireWire bus. If isolation necessary, external 24V-DC-DC-converter required			
	Vibration		2g / 20 500Hz			
	Shock		15g / 6ms			
	Supply		8-30 VDC, 500mA			
	Light source		semiconductor laser 658nm			
	Aperture angle laser line		20°			
	aser power	standard	10mW (class 2M)			
		optional		20mW (class 3B)		
	Laser off		via software (standard) / via external contact (optional)			
	Permissible ambient light (fluorescent light) 2)		10,000lx			

¹ Standard measuring range
 ² Measuring object: Micro-Epsilon standard object (metallic, diffusely reflecting material)
 ³ According to a one-time averaging across the measuring field (640 points)
 ⁴ Programmable as serial interface or synchronisation input or encoder input
 ⁵ Only with Output Unit
 FSO = Full scale output



			COMPACT	HIGHSPEED	SMART	
	Model	scanCONTROL	2700-100	2750-100	2710-100	
		Start of measuring range		350mm		
	Standard measuring range	Midrange	400mm			
lt)		End of measuring range	450mm			
heigł	Extended measuring range	Start of measuring range	300mm			
ixis (I	300mm End of measuring range		600mm			
Z-8	Linearity 1)	±0.2% FSO (3sigma)	±200µm			
	Resolution	0.04% FSO	40µm			
	Reference resolution ^{2) 3)}		15µm			
x-axis (width)	Start of measuring range Standard measuring range Midrange		88mm			
			100mm			
		End of measuring range	112mm			
		Start of measuring range	76mm			
	Extended measuring range	End of measuring range		148mm		
	Point distance	Midrange		160µm		
	Resolution x-axis		640 points/profile			
	Profile frequency		100Hz	2,000Hz	100Hz	
	Measurement rate		64,000 points/sec	1,28 mio points/sec	-	
		FireWire				
		Ethernet				
	Interfaces profile data	RS422 4)				
		Trigger 4)				
		Counter (encoder) 4)				
		RS422 4)				
	Signal output SMART	Analogue 5)				
		Switching signal 5)				
	Display (LED)		1x laser, 1x power/error/status			
	Protection class		IP 64 0°C up to 50°C -20°C up to 70°C			
	Operating temperature					
	Storage temperature					
			up to 20m			
	Cable length	Ethernet with Switch FireWire with HUB	up to 50m			
	Weight		appr. 850g			
	Galvanic isolation		Only at RS422, no isolation of 24V-supply, internal circuit and FireWire bus. If isolation necessary, external 24V-DC-DC-converter required			
	Vibration		2g / 20 500Hz			
	Shock Image: Supply Light source Image: Supplementation		15g / 6ms 8-30 VDC, 500mA semiconductor laser 658nm			
	Aperture angle laser line			20°		
	Laser power standard		10mW (class 2M)			
	upilonal		2UTIW (Class 3B)			
	Permissible amhient light (fluorescent light) 2					
				10,0001x		
	 ²⁾ Measuring object: Micro-Epsilon stand ³⁾ According to a one-time averaging across events ⁴⁾ Programmable as serial interface or synthetic synthetic states and the synthetic states and the synthetic states are synthetic states a	ard object (metallic, diffusely reflect oss the measuring field (640 points) nchronisation input or encoder inpu	ing material) t			