

More Precision

scanCONTROL 30x2-430 / -600 // High performance laser scanner



High performance laser scanner scanCONTROL 30x2-430 / -600

Precise profile measurements for industrial measurement tasks

Resolution (x-axis) 1,024 points

Profile frequency 10,000 Hz

Large measuring range up to 760 mm

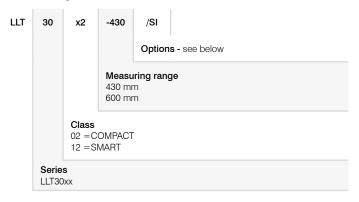
Wide portfolio of measuring ranges

Laser profile scanners from Micro-Epsilon are among the highest performing profile sensors with respect to accuracy and measuring rate. In addition, all common measuring ranges from 10 up to 600 mm are available in the current portfolio. The different measuring ranges enable on the one hand the precise detection of the finest details, and on the other hand, the measurement of large objects at a large offset distance. Today, a laser profile scanner with a large measuring range is able to cover as much as several sensors of older generations together used to.

Fast and precise 2D/3D profile measurements

The new LLT30x2 laser profile scanners provide calibrated profile data with up to 7.9 million points per second. Thanks to their high accuracy, high profile frequency and versatility, these powerful scanners are suitable for demanding measurement tasks. They measure and evaluate, e.g., angles, steps, gaps, distances and circles with high precision. These sensors also offer predefined operating modes that enable optimal results for various applications.

Article designation



Laser options

/SI	Hardware switch-off of the laser line	
/3R	Increased laser power (class 3R) e.g., for dark surfaces	

Cable outlet options

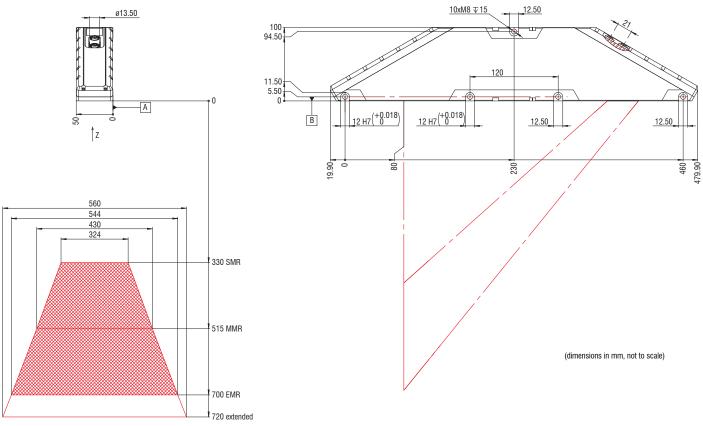
	/PT	Cable directly out of the sensor ("Pigtail") Available lengths: 0.3 / 0.6 / 1.00 m	
--	-----	---	--

		Model		LLT 30x2-430	LLT 30x2-600	
Measuring range End of measuring range 700 mm 1010 mm Head add measuring range Stat of measuring range 370 mm 480 mm Measuring range Stat of measuring range 330 mm 480 mm Head add measuring range Stat of measuring range 330 mm 1000 mm Har invasity 's' 15 µm 22 µm Measuring range Stat of measuring range 324 mm 600 mm Measuring range Stat of measuring range 324 mm 600 mm Measuring range Stat of measuring range 324 mm 600 mm Measuring range Stat of measuring range 324 mm 600 mm Recolution Stat of measuring range 324 mm 780 mm Recolution Stat of measuring range 324 mm 780 mm Recolution Stat of measuring range 324 mm 780 mm Recolution Stat of measuring range 324 mm 780 mm Recolution Stat of measuring range 324 mm 326 mm Recolution Digial range 22 µm 326 mm			Start of measuring range	330 mm	530 mm	
Note End of measuring range 700 mm 100 mm beended measuring range End of measuring range 300 mm 440 mm beended measuring range End of measuring range 300 mm 440 mm Line linearity 1*8 End of measuring range 300 mm 400 mm Measuring range End of measuring range 324 mm 300 mm Measuring range Stat of measuring range 324 mm 400 mm Measuring range Stat of measuring range 324 mm 400 mm Beadulin End of measuring range 324 mm 400 mm Beadulin End of measuring range 324 mm 400 mm Beadulin End of measuring range 324 mm 400 mm Beadulin End of measuring range 324 mm 400 mm Beadulin End of measuring range 324 mm 400 mm Beadulin End of measuring range 324 mm 400 masuring range Beadulin End of measuring range 324 mm 400 mm Beadulin Digital inputs Stat of measuring range		Measuring range	Mid of measuring range	515 mm	770 mm	
Image Image Shaft Media Example Shaft Shaft Shaft Example End of measuring range Shaft Shaft Interinent/10 End of measuring range Shaft Shaft Measuring range Shaft of measuring range Shaft of measuring range Shaft of measuring range Measuring range Shaft of measuring range Shaft of measuring range Shaft of measuring range Shaft of measuring range Measuring range Shaft of measuring range Shaft of measuring range Shaft of measuring range Shaft of measuring range Resolution Interscence Shaft of measuring range Shaft of measuring range Shaft of measuring range Resolution Ethernet Gipf Vision Interscence Top Shaft Top Shaft Interscence Dipital inputs Good prime Shaft of measuring range Shaft of measuring range Resolution Ethernet Gipf Vision Good prime Top Shaft Top Shaft Interscence Dipital inputs Good prime Shaft Top Shaft Interscence <td< td=""><th></th><td>End of measuring range</td><td>700 mm</td><td>1010 mm</td></td<>			End of measuring range	700 mm	1010 mm	
$ \left \begin{array}{cccccccccccccccccccccccccccccccccccc$	xis			370 mm	480 mm	
Note of the second s	z-8	Extended	_	330 mm	450 mm	
Line linearity '''' == 0.0041 % == 0.0045 % Measuring range Stat of measuring range 324 mm 456 mm Measuring range Mid of measuring range 334 mm 6000 mm End of measuring range Stat of measuring range 324 mm 6000 mm Benchrine Stat of measuring range 324 mm 6000 mm Benchrine Stat of measuring range 560 mm 788 mm Profile frequency Ethernet GigE Vision Output of measuring range 560 mm Profile frequency Ethernet GigE Vision Output of measuring range 560 mm Digital inputs BigBtal inputs Culput of measuring range 560 mm Digital inputs BigBtal inputs Stat of measuring range Culput of measuring range Dutput of measurement values Digital inputs Culput of measuring range Stat of measuring range Culput of measurement values BigBtal of measuring range Stat of measuring range Stat of measuring range Culput of measuring range Light source Stat of measuring range Stat of measuring range Light source		measuring range	End of measuring range	720 mm	1050 mm	
		Line linearity ^{1) 2)}		15 <i>µ</i> m	22 <i>µ</i> m	
Measuring range Mid of measuring range 430 mm 600 mm Extended measuring range 544 mm 762 mm Extended measuring range 560 mm 788 mm Feducion 10.42 points/profile 788 mm Profile frequency up to 10.00 Hz 000000 Hz Forlie frequency up to 10.00 Hz 000000 Hz Profile frequency up to 10.00 Hz 000000 Hz Profile frequency febrenet GigE Vision 000000 Hz 000000 Hz Profile frequency Ethernet GigE Vision 000000 Hz 000000 Hz Profile frequency Ethernet GigE Vision 000000 Hz 000000 Hz R6422 (half-duples)* FR6422 (half-duples)* Frequency Trigger Cotput of measurement values Service Cotting Service Cotting Light source Exervice Cotting Service Cotting				±0.0041 %	±0.0045 %	
Interface End of measuring range 544 mm 762 mm Extended measuring range 324 mm 408 mm Resolution End of measuring range 560 mm 788 mm Resolution 0.000 Meta 788 mm 788 mm Profile frequency 0.010 Meta 0.010 Meta 788 mm Interfaces Digital inputs Besolution Besolution Besolution Interfaces Digital inputs Bit 22 (nalt-cuplex) Bit 22 (nalt-cuplex) <th></th> <td></td> <td>Start of measuring range</td> <td>324 mm</td> <td>456 mm</td>			Start of measuring range	324 mm	456 mm	
Extended measuring range 560 mm 788 mm Resolution 1.024 points/profile Profile frequency up to 10.000 Hz Interfaces Digital inputs Output of measurement values Sensor control Profile data transmission Interfaces Digital inputs Mode switching Genero control RS422 (hall-duplex) al Cutput of measurement values Sensor control Trigger RS422 (hall-duplex) al Cutput of measurement values Sensor control Trigger Output of measurement values Cutput of measurement values Sensor control Trigger Control and indicator elements Cutput of measurement values Laser switch-ott Standard: laser class 2M, semiconductor laser 660 nm Lupt source Standard: laser class 2M, semiconductor laser 660 nm Lupt source Standard: laser class 3R, semiconductor laser 660 nm Laser switch-oft via software, hardware switch-oft with /Sl option Profile Net Seconds-2:0 2 (2 0 500 Hz Shock (DN EN 60529) 16 (4 0 45 °C) Shock (DN EN 60529) 2 (2 0 500 Hz Shock (DN EN 60529) 15 (4 ms Shock (DN EN 60529) 15 (5 0 ms Shock (DN EN 60529)		Measuring range	Mid of measuring range	430 mm	600 mm	
Extended measuring range 560 mm 788 mm Resolution 1.024 points/profile Profile frequency up to 10.000 Hz Interfaces Digital inputs Output of measurement values Sensor control Profile data transmission Interfaces Digital inputs Mode switching Genero control RS422 (hall-duplex) al Cutput of measurement values Sensor control Trigger RS422 (hall-duplex) al Cutput of measurement values Sensor control Trigger Output of measurement values Cutput of measurement values Sensor control Trigger Control and indicator elements Cutput of measurement values Laser switch-ott Standard: laser class 2M, semiconductor laser 660 nm Lupt source Standard: laser class 2M, semiconductor laser 660 nm Lupt source Standard: laser class 3R, semiconductor laser 660 nm Laser switch-oft via software, hardware switch-oft with /Sl option Profile Net Seconds-2:0 2 (2 0 500 Hz Shock (DN EN 60529) 16 (4 0 45 °C) Shock (DN EN 60529) 2 (2 0 500 Hz Shock (DN EN 60529) 15 (4 ms Shock (DN EN 60529) 15 (5 0 ms Shock (DN EN 60529)	xis		End of measuring range	544 mm	762 mm	
End of measuring range 560 mm 788 mm Resolution 1.024 points/profile Profile frequency up to 10.000 Hz Interfaces Digital inputs Output of measurement values Sensor control Trigger Digital inputs Ethernet GigE Vision Digital inputs R5.422 (half-duplex) Digital inputs Trigger R5.422 (half-duplex) Coltput of measurement values Sensor control Trigger Sensor control Trigger Output of measurement values Goltput of measurement values Sensor control Trigger Control and indicator elements School (DUP / Moduus TCP); R5422 (ASCII / Moduus RTU) analog (* pretwetur) ** Sensor control Trigger Light source Laser switch-off Standard: laser class 2(ASCII / Moduus RTU) analog (* pretwetur) ** Light source Laser switch-off Standard: laser class 2(ASCII / Moduus RTU) ** Profile data and error School (LIDP / Moduus Con; laser 660 nm Light source Laser switch-off Via software, hardware switch-off Note that and indicator elements School (LIDP / Moduus Con Iaser 660 nm Light source School (LIDE Note School (LIDE NoteSchool (LIDE	x-a		Start of measuring range	324 mm	408 mm	
Profile frequency up to 10.000 Hz Profile frequency Ethernet GigE Vision Output of measurement values Sensor control Profile data transmission Interfaces Digital inputs Mode switching Encoder (counter) Trigger BS422 (half-duplex) ^{ai} Output of measurement values Sensor control Sensor con Sensor control Sensor control Sensor control Sensor co		Extended measuring range	End of measuring range	560 mm	788 mm	
Ethernet GigE Vision Output of measurement values Sensor control Profile data transmission Interfaces Digital inputs Mode switching Encoder (counter) Trigger RS422 (half-duplex)* Output of measurement values Sensor control Trigger RS422 (half-duplex)* Output of measurement values Sensor control Output of measurement values Control and indicator elements Control and indicator elements Scolor LEDs for laser, data and error Control and indicator elements Scolor LEDs for laser, data and error Light source Scolor LEDs for laser, data and error Light source Scolor LEDs for laser, data and error Reservation Output of measurement values Reservation Scolor LEDs for laser, data and error Control and indicator elements Scolor LEDs for laser, data and error Control and indicator elements Scolor LEDs for laser, data and error Light source Scolor Laser waitchong Light source Scolor Laser waitchong Light source Scolor Laser waitchong Percentin class (DIN EN 60058-2-27) Scolor Light (Intersection Class (DIN EN 60058-2-27) Stock (DIN EN 60058-2-6) Scolor Light (Intersectinger) </td <th></th> <td>Resolution</td> <td></td> <td>1,024 poi</td> <td colspan="2">1,024 points/profile</td>		Resolution		1,024 poi	1,024 points/profile	
Ethernet GigE Vision Sensor control Profile data transmission Interfaces Digital inputs Mode switching Encoder (counter) Trigger RS422 (half-duplex) OUtput of measurement values Sensor control Trigger RS422 (half-duplex) Sensor control Trigger Output of measurement values Sensor control Trigger Control and indicator elements Sensor control Trigger Control and indicator elements 3x color LEDs for laser, data and error Control and indicator elements Standard: laser class 2M, semiconductor laser 660 nm Light source Standard: laser class 3R, semiconductor laser 660 nm Light source Standard: laser class 3R, semiconductor laser 660 nm Light source Option: laser class 3R, semiconductor laser 660 nm Light source Standard: laser class 3R, semiconductor laser 660 nm Laser switch-0 Via software, hardware switch-0f with /Sl option Rotection class (DIN EN 60058-2:07) Stondard: laser flass 100 mW Viatation (DIN EN 60068-2:07) Stondard: laser 15 g / 6 ms Temperature range Storage -20 : 40° °C Operation Storage (Storage (Profile frequency		up to 10,000 Hz		
Ethernet GigE Vision Sensor control Profile data transmission Interfaces Digital inputs Mode switching Encoder (counter) Trigger RS422 (half-duplex) OUtput of measurement values Sensor control Trigger RS422 (half-duplex) Sensor control Trigger Output of measurement values Sensor control Trigger Control and indicator elements Sensor control Trigger Control and indicator elements 3x color LEDs for laser, data and error Control and indicator elements Standard: laser class 2M, semiconductor laser 660 nm Light source Standard: laser class 3R, semiconductor laser 660 nm Light source Standard: laser class 3R, semiconductor laser 660 nm Light source Option: laser class 3R, semiconductor laser 660 nm Light source Standard: laser class 3R, semiconductor laser 660 nm Laser switch-0 Via software, hardware switch-0f with /Sl option Rotection class (DIN EN 60058-2:07) Stondard: laser flass 100 mW Viatation (DIN EN 60068-2:07) Stondard: laser 15 g / 6 ms Temperature range Storage -20 : 40° °C Operation Storage (Storage (
InterfacesDigital inputsMode switching Encoder (counter) Trigger TriggerR5422 (half-duplex)Output of measurement values Sensor control Trigger SynchronizationOutput of measurement valuesSensor control Trigger SynchronizationOutput of measurement valuesSensor control Trigger SynchronizationOutput of measurement valuesSensor control TriggerControl and indicator elementsSensor control SynchronizationControl and indicator elementsSensor Control SynchronizationLight sourceSensor SensorLight sourceSensor SensorLight sourceSensor SensorLight sourceSensor SensorAperture angle of laser lineSensor SensorPorterion class (DIN EN 60582)Sensor SensorProtection class (DIN EN 60582-267)Sensor SensorTemperature range OperationSensor Sensor OperationTemperature range OperationSensor Control Sensor OperationSensor Disply voltageSensor Sensor OperationSupply voltageSensor Sensor Control			Ethernet GigE Vision	n Sensor control		
Interfaces Trigger RS422 (half-duplex) ** Cutput of measurement values Sensor control Trigger Output of measurement values Sensor control Trigger Output of measurement values Ethernet (UDP / Modbus TCP); RS422 (ASCII / Modbus RTU) analog *; switch signal ** Control and indicator elements analog *; switch signal ** Control and indicator elements 3x color LEDs for laser, data and error Light source 26 mW Light source Standard: laser class 2M, semiconductor laser 660 nm Laser switch-off Via software, hardware switch-off with /SI option Aperture angle of laser line 00° Protection class (DIN EN 60068-2-67) 2 g / 20 500 l k Protection class (DIN EN 60068-2-67) 2 g / 20 500 Hz Storadge 20 +70 °C Temperature range Operation Operation 0 +45 °C Weight 2620 g (without cable) Usingly voltage 11 30 VDC, nominal value 24 V, 500 mA, IEEE 802.3at class 2, Power over Ethernet (PoE)				Mode switching ts Encoder (counter)		
RB422 (half-duplex)* Sensor control Trigger Synchronization Output of measurement values Control and indicator elements Control and indicator elements Control and indicator elements Control and indicator elements PROFINET*; EtherNet/IP* Control and indicator elements Control and indicator elements Control and indicator elements Light source Laser switch-of Standard: laser class 2M, semiconductor laser 660 nm Light source Laser switch-of Via software, hardware switch-off with /SI option Aperture angle of laser line Color N Color N Protection class OIN EN 60529 Color Off (Morescent light) Color N Vitration (DIN EN 60568-2-27) Color Signed mission Color Signed mission Shock (DIN EN 60568-2-37) Color Signed mission Color Signed mission Properature range Storage Color Signed mission Color Signed mission Vibration (DIN EN 60568-2-37) Color Signed mission Color Signed mission Color Signed mission Properature range Storage Color Signed mission Color Signed mission Color Signed mission Vibration (DIN EN 60568-2-6) Color Signed mission Color Signed mission Color Signed mission		Interfaces	Digital inputs			
HS422 (hill-duplex) Tingger Tingger Tingger Output of measurement values Chill-duplex) Control and indicator elements 3x color LEDs for laser, data and error Control and indicator elements 3x color LEDs for laser, data and error Light source 26 mW Light source Laser switch-off Laser switch-off via software, hardware switch-off with /Sl option Aperture angle of laser line 60 ° Permissible ambient light (fluorescent light) Viotation (DIN EN 6052-27) 1P67 (when connected) Viotation (DIN EN 6068-2-27) 2 g / 20 500 Hz Shock (DIN EN 6068-2-6) 15 g / 6 ms Wight Operation 0 +45 °C Wight 0 +45 °C Stopy voltage 11 30 VDC, nominal value 24 V, 500 mA, IEEE 802.3 af class 2, Power over Ethernet (PoE)				Output of measurement values		
Output of measurement valuesEthernet (UDP / Modbus TCP); RS422 (ASCII / Modbus RTU) analog 9; switch signal 9 PROFINET 9; EtherCAT 9; EtherNet/(P 9)Control and indicator elementsG 3x color LEDs for laser, data and error ≤ 26 mWLight sourceStandard: laser class 2M, semiconductor laser 660 nmLight sourceStandard: laser class 3M, semiconductor laser 660 nmLaser switch-offvia software, hardware switch-off with /SI optionAperture angle of laser lineGAperture angle of laser lineFProtection class (DIN EN 60529)If P67 (when connected)Vibration (DIN EN 60068-2-67)GShock (DIN EN 60068-2-67)GProperature rangeOperationModba Stord0 +45 °CWeightQuerton Class 2M (without cable)WeightStorageSupply voltage11 30 VDC, nominal value 24 V, 500 mA, IEEE 802.3af class 2, Power over Ethernet (PGE)			RS422 (half-duplex) $^{3)}$			
Output of measurement values analog *; switch signal *) PROFINET*; EtherCAT*; EtherNet/IP*) Control and indicator elements 3x color LEDs for laser, data and error Appropriate 26 mW Light source Standard: laser class 2M, semiconductor laser 660 nm Laser switch-off via software, hardware switch-off with /SI option Aperture angle of laser line 60 ° Permissible ambient light (fluorescent light) Vibration (DIN EN 60068-2:67) 60 ° Shock (DIN EN 60068-2:67) 60 ° Remperature range Storage Operation 0 +70 °C Weight 0 +45 °C Supply voltage 11 30 VDC, nominal value 24 V, 500 mA, IEEE 802.3d class 2, Power over Ethernet (PoE)						
Control and indicator elements 3x color LEDs for laser, data and error Lph source Standard: laser class 2M, semiconductor laser 660 nm Light source Standard: laser class 3M, semiconductor laser 660 nm Light source Color Option: laser class 3M, semiconductor laser 660 nm Laser switch-off via software, hardware switch-off with /SI option Aperture angle of laser line 60° Permissible ambient light (fluorescent light) Yibration (DIN EN 60068-2:27) Color Sign 2 (Jacobin 2) Shock (DIN EN 60068-2:27) Storage Pemperature range Storage Operation Operation Operation 0				analog 4); switch signal 4)		
Light source Laser switch-off Chore source Standard: laser class 2M, semiconductor laser 660 nm Source Source Source Source Light source Standard: laser class 3R, semiconductor laser 660 nm Light source Store source Light source Store source Laser switch-off via software, hardware switch-off with /SI option Aperture angle of laser line 60° Aperture angle of laser line 60° Protection class (DIN EN 60529) Store Source Vibration (DIN EN 60068-2-27) Storage Shock (DIN EN 60068-2-27) Storage Temperature range Storage Operation 0						
Light source Laser Standard: laser class 2M, semiconductor laser 660 nm Light source < 100 mW						
Light source						
Option: laser class 3R, semiconductor laser 660 nmLaser switch-offvia software, hardware switch-off with /SI optionAperture angle of laser line60 °Aperture angle of laser ling(fluorescent light) "Protection class (DIN EN 60529)1067 (when connected)Vibration (DIN EN 60068-2-27)2 g / 20 500 HzShock (DIN EN 60068-2-6)15 g / 6 msTemperature rangeStorageOperation0 +45 °CWeightSupply voltageSupply voltage11 30 VDC, nominal value 24 V, 500 mA, IEEE 802.3af class 2, Power over Ethernet (PoE)		Light source	Laser			
Laser switch-offvia software, hardware switch-off with /SI optionAperture angle of laser line60 °Permissible ambient light(fluorescent light) *Protection class (DIN EN 60529)0Vibration (DIN EN 60068-2-27)1967 (when connected)Shock (DIN EN 60068-2-67)2 g / 20 500 HzShock (DIN EN 60068-2-67)0Properature rangeStorageOperation0 + 45 °CWeight2620 g (without cable)Supply voltage11 30 VDC, nominal value 24 V, 500 mA, IEEE 802.3af class 2, Power over Ethernet (PoE)						
Aperture angle of laser line60°Permissible ambient light(fluorescent light)Protection class (DIN EN 60529)IP67 (when connected)Vibration (DIN EN 60068-2-27)2 g / 20 500 HzShock (DIN EN 60068-2-6)15 g / 6 msPremperature rangeStorageOperation0 +45 °CWeight2 620 g (without cable)Supply voltage11 30 VDC, nominal value 24 V, 500 mA, IEEE 802.3a class 2, Power over Ethernet (PoE)			Laser switch-off			
Protection class (DIN EN 60529)IP67 (when connected)Vibration (DIN EN 60068-2-27)2 g / 20 500 HzShock (DIN EN 60068-2-6)15 g / 6 msTemperature rangeStorageOperation0 + 70 °CWeight0 0 + 45 °CSupply voltage11 30 VDC, nominal value 24 V, 500 mA, IEEE 802.3a f class 2, Power over Ethernet (PoE)						
Vibration (DIN EN 60068-2-27)2 g / 20 500 HzShock (DIN EN 60068-2-6)15 g / 6 msTemperature rangeStorageOperation0 +70 °CWeight0 +45 °CSupply voltage11 30 VDC, nominal value 24 V, 500 mA, IEEE 802.3af class 2, Power over Ethernet (PoE)		Permissible ambient light	(fluorescent light) 1)			
Shock (DIN EN 60068-2-6) 15 g / 6 ms Temperature range Storage Operation -20 +70 °C Weight 0 +45 °C Supply voltage 11 30 VDC, nominal value 24 V, 500 mA, IEEE 802.3af class 2, Power over Ethernet (PoE)				IP67 (when connected)		
StorageStorage20 +70 °COperation0 +45 °CWeight0 +45 °CSupply voltage11 30 VDC, nominal value 24 V, 500 mA, IEEE 802.3af class 2, Power over Ethernet (PoE)		Vibration (DIN EN 60068-2-27)		2 g / 20 500 Hz		
Temperature rangeOperation0 +45 °CWeight2620 g (without cable)Supply voltage11 30 VDC, nominal value 24 V, 500 mA, IEEE 802.3af class 2, Power over Ethernet (PoE)		Shock (DIN EN 60068-2-6)		15 g / 6 ms		
Operation0 +45 °CWeight2620 g (without cable)Supply voltage11 30 VDC, nominal value 24 V, 500 mA, IEEE 802.3af class 2, Power over Ethernet (PoE)		Temperature range	Storage	-20 +70 °C		
Supply voltage 11 30 VDC, nominal value 24 V, 500 mA, IEEE 802.3af class 2, Power over Ethernet (PoE)		iomperature range	Operation	0 +45 °C		
IEEE 802.3af class 2, Power over Ethernet (PoE)		Weight		2620 g (without cable)		
Connections sockets, cable outlets on top (/PT)		Supply voltage				
		Connections		sockets, cable of	utlets on top (/PT)	

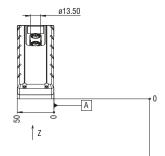
⁹ Based on the measuring range; measuring object: Micro-Epsilon standard object
² According to a one-time averaging over the measuring field (1,024 points)
³ RS422 interface, programmable either as serial interface or as input for triggering/synchronization
⁴ Only with 2D/3D Output Unit
⁵ Only with 2D/3D Gateway

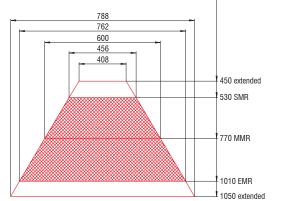
Technical drawings scanCONTROL 30x2-430 / -600

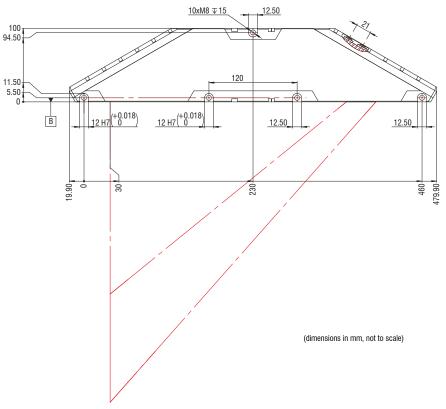
Dimensional drawing scanCONTROL 30x2-430



Dimensional drawing scanCONTROL 30x2-600









MICRO-EPSILON Headquarters Koenigbacher Str. 15 · 94496 Ortenburg / Germany Tel. +49 (0) 8542 / 168-0 · Fax +49 (0) 8542 / 168-90 info@micro-epsilon.com · www.micro-epsilon.com