

Messtechnik GmbH & Co. KG

IMS measuring probes

CD43, CD70 computer displays

SD1 sensor display



ISi sensor bus

IER



ieri

IMS measuring probe

IMS probe - a new generation of inductive measuring probes with integrated signal processing and digital interface.

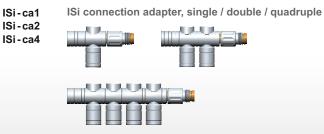
The new IMS measuring probes are based on the reliable clearance-free ball bearings and the robust inductive measuring principle. But the sensible and sensitive analogue measuring signals are no longer transferred out of the case of the measuring probe via cables and then measured externally by electronics, instead they are processed and digitised directly inside the IMS measuring probes. An innovative measuring principle and highly integrated electronics make this milestone of new generation IMS measuring probes possible.

Comparison of ind. probes —	<u> </u>		Туре	Article
Technical data :	old	new	IMS-1S	IMS measuring probe, 1 mr
Mechanical characteristics	Standard	IMS	IMS-5S	measuring range, spring pi
Compact tube case, stainless steel 8h6	\checkmark	\checkmark	IMS-10S	
High protection class for rough environments	\checkmark	\checkmark		
Clearance-free ball bearing for precise mea.	\checkmark	\checkmark	IMS-5P	IMS measuring probe, 5 mm
Gauge spindle Ø 4, gauge slide M2.5	\checkmark	✓	IMS-10P	range, pneumatically push
Actuation by spring, compressed air, vacuum	\checkmark	✓		
Cable pluggable at measuring probe for simple mounting / exchange on fixtures	(rarely)	✓		EBR
Simple extension of cables without influence on measuring values		✓	IMS-5J IMS-10J	IMS measuring probe, 5 mn range, pneumatically jet pu
Bus cables for drastic reduction of connection cables and wiring		✓		IER
Characteristics of integrated electronics	11		IMS-5V	IMS measuring probe, 5mn
Optimal stable sensor signals without influence by cable / external interferences		✓	IMS-10V	range, vacuum lifting
Individual error correction of each probe		 ✓ 		
Adjustment tolerance of sensitivity [%]	0.30.6	< 0.05		
Max. linearity error (+/- 2 mm)	< 24 µm	< 1 µm	ISi-cca	ISi connection cable, axial
Temperature drift [ppm / °C]	100	20		
No errors by external measuring electronics		✓		
Integrated temperature measurement provides temperature of measuring probe / fixture		✓	ISi-ccap	ISi connection cable, axial,
Interface				
Simple wiring with ISi connection adapters and pluggable ISi extension cables to a bus with up to 60 probes / sensors (ISi bus)		~	ISi-ccr	ISi connection cable, radia
Identification of IMS measuring probes : Type, serial number,, next date of inspection can be requested directly from the probe		~	ISi - ccrp	ISi connection cable, radia
	II			

Technical data : IMS measuring probes

Metrological characteristic	s			
Measuring range	1 mm / 5 mm / 10 mm			
Resolution	0.1 μm			
Accuracy	5 mm : < 1 μm / 10 mm : < +/- 1 μm			
Measuring rate	1500 measuring values / sec $(0.1 \ \mu m)$			
Measuring force	0.7 N / (optional 0.4 2.0 N)			
Electrical characteristics				
Supply voltage	2.7 3.6 V			
Power consumption	2.8 µA / measurement per second			
Characteristics of integrated temperature sensor				
Measuring range	-20 °C 80 °C			
Resolution	0.25 °C			
Accuracy	+/- 1.5 °C			
Environmental conditions				
Operation / Storage temp.	+32 +122 °F / -4 +158 °F			

.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	7.1.1.010
IMS-1S IMS-5S IMS-10S	IMS measuring probe, 1 mm / 5 mm / 10 mm measuring range, spring pushed / vacuum lifting
IMS-5P IMS-10P	IMS measuring probe, 5mm / 10 mm measuring range, pneumatically pushed
IMS-5J IMS-10J	IMS measuring probe, 5 mm / 10 mm measuring range, pneumatically jet pushed
IMS-5V IMS-10V	IMS measuring probe, 5 mm / 10 mm measuring range, vacuum lifting
ISi-cca	ISi connection cable, axial
ISi-ccap	ISi connection cable, axial, pneumatic
ISi-ccr	ISi connection cable, radial
ISi-ccrp	ISi connection cable, radial, pneumatic



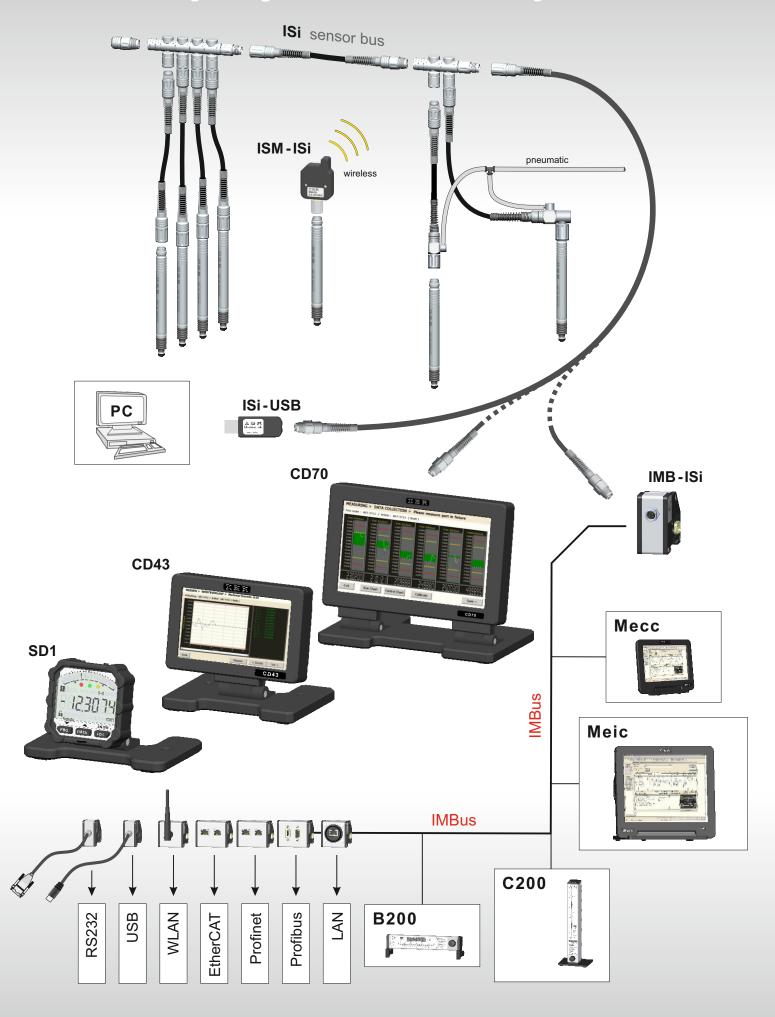
ISi connection adapter for USB ISi-USB



ISM-ISi ISi radio module for ISM band



Capability of connection for IMS probes



SD1 universal sensor display

The sensor display unit SD1 was especially developed for industrial use. The robust case with shock protection as well as a high protection class allow usage in rough manufacturing environment. The display is rotatable, a numeric display shows the measuring values with high resolution and an analogue display with coloured LEDs presents clearly the tolerance status of the component.

The sensor display SD1 features a large scope of operation and can be configured freely for the particular application as required by a windows software. Thereby functions can be removed or activated and settings can be preset.

Image : Front panel

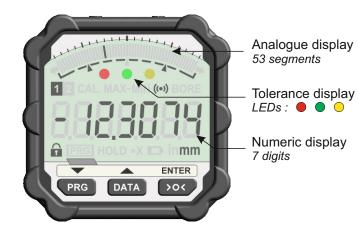
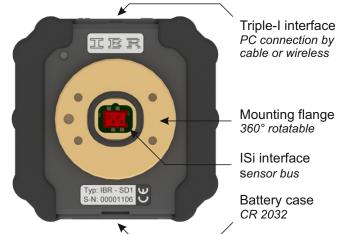


Image : Back panel



Technical data :

	Mechanical characteristics		
Case	Plastic, rubber shock protection		
Front plane	Acryl glass (scratch-proof coated)		
Dimensions / Weight	(WxHxD) 60 x 59.5 x 21.7 mm / 95 g		
	Electrical characteristics		
Power supply	Battery (CR2032)		
Battery lifetime	approx. 8000 h (SD1 incl. probe)		
Measuring rate	adjustable, 2 20 values / sec		
	LCD display		
Display type	Liquid crystal display, reflective		
Numeric display	7 digits (10.5 mm)		
Analogue display	53 segments		
LEDs			
Tolerance display	3 LEDs: 1x red, 1x green, 1x yellow		
	Connections		
ISi interface	Bus connection for sensors, hand / foot switch, tolerance adapter,		
ISi interface Triple-I interface			
	hand / foot switch, tolerance adapter, Connection for IBR radio modules or cable with USB / RS232 interface		
Triple-I interface	hand / foot switch, tolerance adapter, Connection for IBR radio modules or cable with USB / RS232 interface		
Triple-I interface	hand / foot switch, tolerance adapter, Connection for IBR radio modules or cable with USB / RS232 interface Measuring systems h, precision, are defined by the		
Triple-I interface Measuring range, resolution connected measuring probe	hand / foot switch, tolerance adapter, Connection for IBR radio modules or cable with USB / RS232 interface Measuring systems h, precision, are defined by the		
Triple-I interface Measuring range, resolution connected measuring probe	hand / foot switch, tolerance adapter, Connection for IBR radio modules or cable with USB / RS232 interface Measuring systems h, precision, are defined by the e or sensor. e IMS-5S → Range 5mm, Resolution 0.1μm		
Triple-I interface Measuring range, resolution connected measuring probe	hand / foot switch, tolerance adapter, Connection for IBR radio modules or cable with USB / RS232 interface Measuring systems h, precision, are defined by the e or sensor. MRS-5S → Range 5mm, Resolution 0.1µm		
Triple-I interface Measuring range, resolution connected measuring probe Example : Measuring probe	hand / foot switch, tolerance adapter, Connection for IBR radio modules or cable with USB / RS232 interface Measuring systems h, precision, are defined by the e or sensor. MS-5S → Range 5mm, Resolution 0.1μm Environmental conditions		

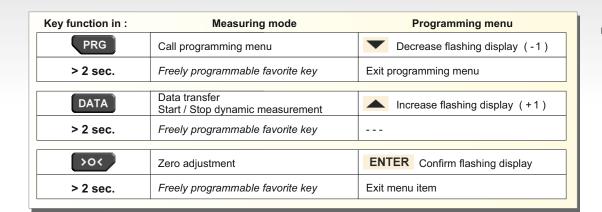
Software functions :

	Basic functions
Unit / Measuring direction	mm, inch / positive, negative
Resolution	0.001 / 0.0001 mm
	Measuring inputs
Number / Factors	2 / ±0.001±59.999 per measuring input
Combination	AA, AB, A+B
	Measuring mode
Static measurement	Yes / optional Hold mode
Dynamic measurement	Min, Max, TIR, Mean, Bore
	Calibration
Zero adjustment / Preset	with one master
Calibration	with two masters (gain & offset)
Forced calibration	by temperature change or elapsed time
	Tolerance limits / Grading
Tolerance type	Absolute tolerance limits or nominal size with relative tolerances
Number of grades	2 30
	Handling and communication
Favorite buttons	freely definable for each button
Hand / foot switch	send measuring value, calibrate,
Tolerance adapter	output tolerance status / grade
Triple-I interface	measuring value output, programming
Password protection	for programming / for calibration
	Configuration of analogue display
Display mode	Bargraph / Single segment
Bargraph origin	Left / Center / Right
	Special features
Windows software for o	configuration of sensor display SD1

SD1 short operating instruction :



- Key function in programming menu
 - Key function in measuring mode





lasic functions	Programmable :	Factory settings in SD1				
Selection of Unit	V	mm		-	ОК	Unit
Selection of Resolution	V	0.0001			Cancel	rESoL.
Selection of measuring direction	V V	positive				dir.
				_	Help	air.
Calibration	Programmable :	Factory settings in SD1	- 1000.000			
Zeroadjustment / Preset	V	20.0000	Preset			PrESEt
2-Master calibration		-0.0500	Min-Master			2-CAL.
		0.0500	Max-Master			
Temperature forced calibration	V	3.0 °C		-		dtCAL.
Timer forced calibration	V	Off		-		tFCAL.
leasuring inputs	Programmable :	Factory settings in SD1				
		▼ +A ▼	T			
Measuring input A						FActor / Prob
Measuring input B		□ +B <u>·</u>				
1easuring modes	Programmable :	Factory settings in SD1				
Static Mean (Max + Min)/2		Static		-		SEt. OP.
✓ Min ✓ TIR (Max-Min) ✓ Max ✓ Bore (2 point bore mea.)						SEL OP.
Grading mode	Programmable :	Factory settings in SD1				
	Programmable :					
Number of grades		Off				GrAdinG
Display value on numeric display		Measuring value		-		
olerance limits	Programmable :	Factory settings in SD1				
		20.0000	Nominal size			SEt. Pnt.
 Nominal size with relative tolerance limits (e.g. 20 mm +0.02 / -0.01) 		0.0500	UT (+ Tolerance)			
O Absolute tolerance limits (e.g. 20.02 mm / 19.99 mm)		-0.0500	LT (- Tolerance)			SEt. toL.
olerance LEDs	Programmable :	Factory settings in SD1				
			l current a lat			
Display colour	₩	Red	Exceeding UT			toL. LED
		Red	Undercutting LT			IOL. LED
Display output time		2 seconds				
Analogue display	Programmable :	Factory settings in SD1				
Mode of analogue display		Bargraph		-		CoL. diS.
Origin of analogue display	V	Center				COL. 013.
Display control	Programmable :	Factory settings in SD1				hoLd
Freeze display on static measurement (hold)		Off		-		noLu
avorite buttons in measuring mode (button pressed for 2 sec)	Programmable :	Factory settings in SD1				
isplay switchover : Calibration :		'PRG' button				but. PRG.
✓ Dyn. mode (Min, Max,) ✓ 2-Master calibration ✓ Delate according to the second instance (and		Delete zeroadjustment / cal.		-		
 ✓ Mea. value / grade ✓ Delete zeroadjustment / cal. ✓ Mea. value / nom. size variation 		'DATA' button				but. dAtA
Mea. value / temperature Device control :	V	Autom. data output on changing o	fmea. value (on / off)	-		Sur anta
✓ Mea. value / battery voltage ✓ Switch gauge off ✓ Unit ✓ Autom data output on changing		'>0<' button				
✓ Unit ✓ Autom. data output on changing of mea. value (on / off)	V	Switch gauge off		•		but. CAL.
• • •						
Si hand / foot switch	Programmable :	Factory settings in SD1				FootS.
Assign function		No function		-		F0013.
Passcodes	Programmable :	Factory settings in SD1				
Passcode for programming menu (4 digits)		Off	1			P.C. ProG.
Passcode for calibration (4 digits)	V	□ Off				P.C. CAL.
pecial parameters	Programmable :	Factory settings in SD1				
Auto-Power-Off time		10 minutes		-		Auto.oFF
Measuring rate		10 values / second		-		
Button tone	V	On		-		SA.rAtE
Output time of error messages on numeric display	V	1600 msec				BEEP

Menu view on SD1 LCD display



High precision dial gauge SD1 - IB5 / SD1 - IB10

The SD1-IB5 / SD1-IB10 is a high precision dial gauge with a free of clearance ball bearing and a linearized, inductive absolute measuring system. The dial gauge was specially designed for industrial use in rough manufacturing environment.

туре	Article
SD1-IB5 / IB10	High precision dial gauge, spring pushed
SD1-IB5P / IB10P	High precision dial gauge, pneumatically pushed
SD1-IB5J / IB10J	High precision dial gauge, pneumatically pushed
SD1-IB5V / IB10V	High precision dial gauge with vacuum lifting

Technical data: SD1-IB5/SD1-IB10

Articla

Type

Mechanical characteristics	
Case	Plastic, rubber shock protection
Front plane	Acryl glass (scratch-proof coated)
Dimensions / Weight	(WxHxD) 58 x 111 x 35.5 mm / 192 g
Electrical characteristics	
Power supply	Battery (CR2032)
Battery lifetime	approx. 8000 h
Metrological characteristic	s
Measuring range	5 mm / 10 mm
Resolution	0.1 μm
Accuracy	5 mm : < 1 µm / 10 mm : < +/- 1 µm
Measuring rate	adjustable, 2 20 values / sec
Measuring force	0.7 N (optional 0.4 2.0 N)
Environmental conditions	
Operation / Storage temp.	+41 +113 °F / -4 +158 °F
Protection class	IP65 (CEI / IEC 529)
EMC according to EN50081	- 2 and EN50082 - 2



Modular dial gauge SD1 with probe holder PH5

The SD1 with the probe holder PH5 is a modular dial gauge designed to work with IMS-5S measuring probes.

Туре	Article			

PH5

SD1 probe holder PH5 for IMS-5S measuring probe

Technical data : SD1+PH5

Mechanical characteristics				
Case	Plastic, rubber shock protection			
Front plane	Acryl glass (scratch-proof coated)			
Dimensions / Weight	(WxHxD) 58 x 111 x 35.9 mm / 165 g			
Electrical characteristics				
Power supply	Battery (CR2032)			
Battery lifetime	approx. 8000 h			
Measuring rate	adjustable, 2 20 values / sec			
Measuring system				
Measuring range, resolution, accuracy, are defined by the				
connected measuring probe or sensor.				
Example : Measuring probe IMS-5S → Range 5mm, Resolution 0.1µm				
Environmental conditions				
Operation / Storage temp.	+41 +113 °F / -4 +158 °F			
Protection class	IP65 (CEI / IEC 529)			
EMC according to EN50081 - 2 and EN50082 - 2				



Connection adapter for Compact display SD1

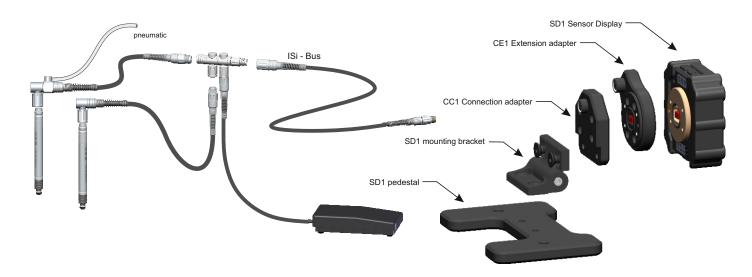
The SD1 with the connection adapter CC1 is a very efficient, powerful display with ISi-Bus interface. Due to the ISi bus, several sensors, foot and hand switches and tolerance adapters can be connected.

Technical data : SD1+CC1

Mechanical characteristics	
Case	Plastic, rubber shock protection
Front plane	Acryl glass (scratch-proof coated)
Dimensions / Weight	(WxHxD) 58 x 58 x 32.8 mm / 149 g
Electrical characteristics	
Power supply	Battery (CR2032)
Battery lifetime	approx. 6000 h (incl. 2 probes)
Measuring rate	adjustable, 2 20 values / sec
Connections	
ISi interface	Bus connection for sensors, hand / foot switch, tolerance adapter,
Triple-I interface	Connection for IBR radio modules or cable with USB / RS232 interface
Environmental conditions	
Operation / Storage temp.	+41 +113 °F / -4 +158 °F
Protection class	IP65 (CEI / IEC 529)
EMC according to EN50081	- 2 and EN50082 - 2

Туре	Article
CC1-Connection adapter	Connection adapter for ISi - Bus
CE1-Extension adapter	Extension adapter for ISi-Bus
SD1 - mounting bracket	Slewable mounting bracket
SD1-pedestal	Pedestal for compact display





Accessories for SD1 dial gauges and displays

Туре	Article	
3i-USB	Triple - I connection cable for USB interface	
3i - 232	Triple - I connection cable for RS232 interface	
3i - digi	Triple - I connection cable for Digimatic interface	
ISM-3i	Triple - I radio module for ISM band	

CD43 computer display for industrial use

The computer display CD43 is a small and powerful display unit for measuring applications, which cannot be simply solved by using dial gauges.

The robust aluminium case as well as a high protection class allow usage in rough manufacturing environment. The new sensor interface ISi bus allows connection of up to 60 measuring probes, sensors, hand- and foot switches.

For fast and simple solving of measuring applications as well as for trend display of the production process, the CD43 is delivered with the user-friendly software ComGage Level 1.

Features

- Compact and robust construction with solid, sealed metal case (incl. connector caps for IP64), passive cooling and 4.3" TFT-Display (480 x 272) with touch screen, adjustable angle of tilt.

- ISi sensor bus for connecting 1...60 IMS probes, sensors, hand / foot switches, tolerance adapters.

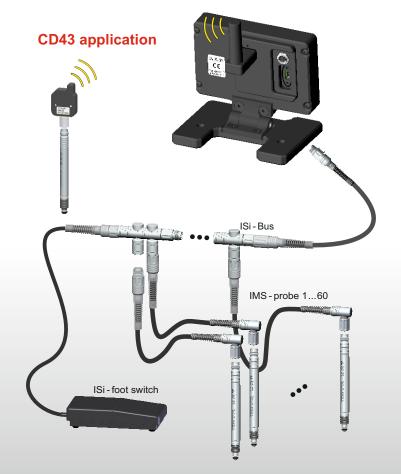
- USB host (mouse, keyboard, USB stick) and USB client (data exchange with PC).





Technical data :

Mechanical characteristics						
Case with foot	Aluminium powder-coated					
Dimensions / Weight	(WxHxD) 118 x 95 x 72.5 mm / 420 g					
Protection class	Front side IP65, CEI / IEC 529					
	Rear side IP64 with connector caps					
Electrical characteristics						
External power supply	100 240 VAC, 6 Watt					
Max. power consumption	1.8 Watt (without sensors)					
Computer characteristi						
Display	4.3" TFT, resolution 480 x 272					
	(adjustable angle of tilt)					
Touch Screen	4-wire analogue resistive					
CPU	Vybrid VF61, 500 MHz					
Memory	256 MB RAM, 512 MB Flash					
Operating system	Windows CE 7					
Measuring software	ComGage Level 1					
Connections						
Standard PC connections	1 x USB client, 1x USB host					
ISi interface	60 sensors / clients					
	Environmental conditions					
Operation / Storage temp.	+41 +113 °F / -4 +158 °F					



CD70 computer display for industrial use

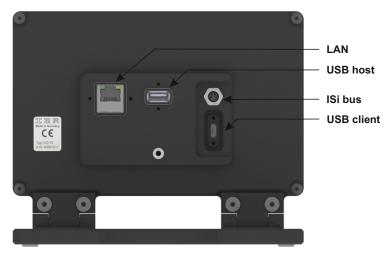
The computer display CD70 is a compact and powerful display unit for measuring applications, which cannot be simply solved by classic gauges like e.g. column gauges and digital gauges. The robust aluminium case as well as a high protection class allow usage in rough manufacturing environment. The new sensor interface ISi bus allows connection of up to 60 measuring probes, sensors, hand- and foot switches. For fast and simple solving of measuring applications as well as for trend display of the production process, the CD70 is delivered with the user-friendly software ComGage Level 1. An upgrade to ComGage Level 2 is possible.

Features

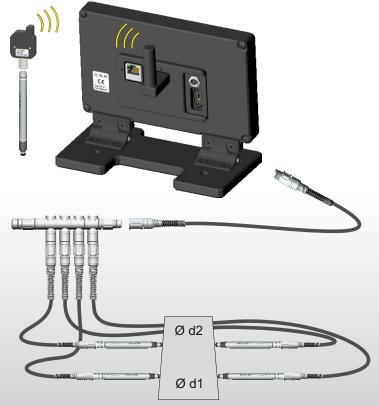
- Compact and robust construction with solid, sealed metal case (incl. connector caps for IP64), passive cooling and 7.0" TFT-Display (800 x 480) with touch screen, adjustable angle of tilt.

- ISi sensor bus for connecting 1...60 IMS probes, sensors, hand / foot switches, tolerance adapters.
- USB host (mouse, keyboard, USB stick), USB client (data exchange with PC) and LAN connection.





CD70 application



Technical data :

	Mechanical characteristics					
Case with foot	Aluminium powder-coated					
Dimensions / Weight	(WxHxD) 184 x 135 x 87.5 mm / 1.0kg					
Protection class	Front side IP65, CEI / IEC 529					
	Rear side IP64 with connector caps					
Electrical characteris						
External power supply	100 240 VAC, 6 Watt					
Max. power consumption	2.4 Watt (without sensors)					
	Computer characteristics					
Display	7.0" TFT, resolution 800 x 480					
	(adjustable angle of tilt)					
Touch Screen	4-wire analogue resistive					
CPU	Vybrid VF61, 500 MHz					
Memory	256 MB RAM, 512 MB Flash					
Operating system	Windows CE 7					
Measuring software	ComGage Level 1 / ComGage Level 2					
	Connections					
Standard PC connections	1 x USB client, 1x USB host, 1x LAN					
ISi interface	60 sensors / clients					
	Environmental conditions					
Operation / Storage temp.	+41 +113 °F / -4 +158 °F					

ComGage Level 1 / Level 2

The software ComGage Level 1 / Level 2 are universal programmes for fast solving of measuring applications. The software is easy to handle and is optimized especially for the computer displays CD43 and CD70 with touch operation.

Features	ComGage Level 1	ComGage Level 2
Number of characteristics / Number of measuring inputs	8 / 60	20 / 60
Measurement of characteristics in freely definable groups with additional input of operator instructions	\checkmark	✓
Input of formula for probe mixing (Support of all arithmetical and trigonometrical functions)	\checkmark	✓
Static measuring mode with live display, as well as dynamic measuring modes : Min, Max, TIR, Mean,	✓	✓
Input of measuring value by touch / keyboard	\checkmark	✓
Export functions for collected measuring values	xls, csv	xls, csv, QDAS
Reference information data input together with measuring values (Operator, Machine,)		✓
Trend display for collected measuring values (= run chart)	\checkmark	✓
Statistical analysis by control charts, histograms, Cp/Cpk		✓
Control tasks by digital inputs / outputs as well as measuring value output via RS232 / radio modules	simple	advanced
Compatible to ComGage Professional	✓	✓

Image : Programming of characteristics

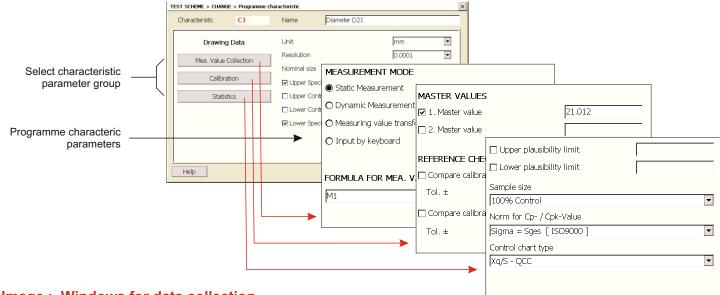


Image : Windows for data collection (Test sequence)

MEASURING > DATA COLLECTION > Please measure part in fixture Test order : ART-9713 / Article : ART-9713 (Crank Shaft) MEASURING > DATA COLLECTION > Please enter weight of part er: ART-9713 / Article: ART-9713 (Crank Shaft) 21.0030 20,9960 Exit Run Chart Control Chart MEASURING > Confirm measuring data of part **Description of 1st window** Test order : ART-9713 / Article : ART-9713 (Crank Shaft) In the test sequence 6 characteristics of the neter D23 23.0000 0.0300 / -0.0300 23.0030 component are initially measured together in a Diameter D21 Repeat input 21.0000 0.0300 / -0.0300 The operator receives the corresponding instructions 3 Diameter D21 21.0000 0.0300 / -0.0300 21 0030 Exit Run Chart Control Chart via window headline. 4 Diameter D25 25.0000 0.0300 / -0.0300 25 0030 5 Diameter D25 25.0000 0.0300 / -0.0300 24,9930

6 Length

Exit

0.0300 / -0.0300

5.0000 / -5.0000

50.0100

1205.1000

Reject Confirm

50.0000

g 1200.0

Run Chart Control Chart < Back

Description of 2nd window In the second step of the test sequence the operator must weigh the component and enter the measuring value by touch.

Description of 3rd window

measuring fixture.

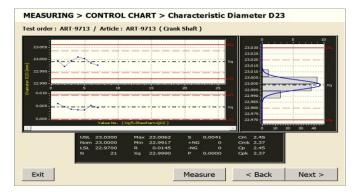
In the last step of the test sequence the operator can see a complete summary of all characteristics of the measured component and can now decide, whether the measuring values shall be stored inside the database.

ComGage Level 1 / Level 2

Online - SPC windows



Run chart in ComGage Level 1 and Level 2



Control chart in ComGage Level 2

Administration, analysis and export of measured values by ComGage Professional

ComGage Professional allows creating test orders for test schemes created with ComGage Level 1 / 2. The test orders allow storage of measured data separately for production orders, production lots, ... and can be filled with measured data using ComGage Level 1 / 2.

The measured values collected with ComGage Level 1 / 2 can be exported or analysed using ComGage Professional afterwards.

Access to flash memory of CD43 / CD70 computer displays via USB

On connection of a CD43 / CD70 via USB client connector (Micro-USB) to a Windows PC, the flash memory of the CD43 / CD70 computer display can be directly accessed via FTP.

Datei Bearbeiten Ansicht Extras	2				
Organisieren 🔻) 	• 🔳	
CD70	^	Name Comgage_11.exe		Typ Anwendung	
Application Data My Documents Program Files Undows FilesDisk ComGage_11 System	н	DisObj.cfg DisObj.cfg ibr_0000.dll ibr_1029.dll ibr_1030.dll ibr_1036.dll ibr_1036.dll ibr_1036.dll ibr_1040.dll		CFG-Datei Anwendung Anwendung Anwendung Anwendung Anwendung Anwendung	
 Network 	-	•			

Programming of test schemes using ComGage Professional on PC

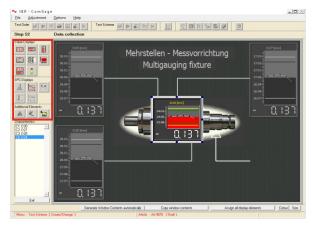
The ComGage Professional menu for programming test schemes allows to specify, that the new test scheme shall be executable with ComGage Level 1.

TES	T SCHEME (C	reate / Change	e)									
Article Number		Art-9876						ок				OK
rtide	Name	Shaft									_	Cancel
Hardware Connections		Setup		Documenta	tion Ix / Q	x/Rx	Setu	p	Test scher		_ =	
pecial	settings	Setup		Reference	Information	n	Setu	p	ComGag	e Level 1	- L	Help
CH	ARACTERISTICS		-	in a data	_		- Inci		formation) 🖻 🗙
No.	Name	Nominal	USL	wing data	LCL	Statistics	Unit	Mea. I		Mode	1. Master	2. Master
C1	D30	30	0.03	0.0225	-0.0225	-0.03	mm	M1	nputs	Static M	30.001	2. Master
C2	030	30	0.03	0.0225	-0.0225	-0.03		M2		Static M	30.001	
C3	D28	28	0.03	0.0225	-0.0225	-0.03	mm	M3		Static M	27,999	
C4	D24	24	0.03	0.0225	-0.0225	-0.03	mm	M4		Static M	24.002	
										f] [t]) Belx
	ST STEPS:		Se	equence	_	ital Outpu	_	dditional		Preview of disp		
No.		Test Step Function Save the characteristics				cteristics		he charac	cten		-	
S1	Data colecton	Porced calibration Data collection C1.C2.C3.C4				_	C1,C2,0	.3,04		D 30	Render-Reserved.	D27
\$3	SPC-Window				2,03,04							
											. . .	<u> </u>
										D 28	<u> </u>	

In contrast to the programming with ComGage Level 1 / 2, the programming menu of ComGage Professional allows programming of test steps with freely designable display windows and individual control of digital inputs / outputs.

For guiding the operator through the measuring sequence freely designable display windows can be created for ComGage Level 1 / 2. These display windows can contain pictures, lines and texts.

Step 1 : Add a display element



Step 2 : Place a display element



Software support

SD1_Win

SD1_Win Windows programme for configuration of SD1 sensor displays.

IMB_Test

IMB_Test is a universal program for initialisation, calibration and test of all ISi sensors.

IBR DDK.DLL

Universal Device Driver Kit for linking all IBR measuring and interface instruments in Win 2000 ... Win 11 and CE programs. (Examples for VC++, VB, LabView, Delphi, ... available)

IBR_VCP

COM - Port simulation program for software packages without USB, LAN and WLAN support. Simulation of older multiplexers (e.g. MUX50, MUX10, ...) for software packages without ISi-Bus, IMBus & ISM support.

IBREXDLL

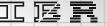
Excel-Workbook for reading in, visualising and analysing measurement data in MS-Excel.

ComGage

Software for metrology and statistical process control in manufacturing facilities.

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