SUNSTAR   http://www.sensor-ic.com/ TEL: 0755-83376549 FAX 0755-83376182 E-MAIL: szss20@163.com

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maXYmos BL

Type 5867A...

XY Monitor for Good/Bad Evaluation of Curves

The maXYmos BL monitors and evaluates XY curves of two measurands that have to stand in a certain relation to each other. Such curves arise in applications such as

- Press fitting ball bearings
- Pivoting and adjusting rake of backrests
- Riveting and calking casing parts
- Tactile manipulation of rotary switches, etc.

In the case of press fitting, for example the typical measurement curves are recorded using force and displacement sensors, or torque and rotational angle sensors for swiveling or rotation. The maXYmos BL can be used to record, monitor and display the interrelation of basically any measurands that can be measured with piezoelectric, strain gage and potentiometric sensors.

The quality of an individual manufacturing step, an assembly or the entire product can be determined on the basis of such measurement curves. The earlier in the production chain such monitoring is started, the more certain the finished product will subsequently pass final inspection. It is then also possible to divert and rework the part at an early stage, rather than scrapping it anyway after a whole series of further manufacturing operations.

Description

The functional modern case design, clear menus and practical functions add up to an impressive monitor. The high-contrast color touch screen display allows smooth operation of the maXYmos BL and shows the process information clearly.

This is achieved through a particularly sophisticated menu concept that is context sensitive only showing what is actually needed for the particular function. The maXYmos BL provides functions that allow many standard XY monitoring tasks to be solved. All serial interfaces and digital In/Out are always fitted. All that remains for the user to do is to choose between the piezoelectric and the strain gage version.

- Measurement function Y=f(X), Y=f(t), Y=f(X,t), X=f(t)
- Evaluation objects: Box, Line and Envelope curve
- 4 evaluation objects per curve
- 16 measurement programs for 16 different types of part
- Up to 8 000 pairs of XY-values per curve
- Short evaluation time: up to 10 parts/second
- Ethernet TCP/IP* for measurement data and remote maintenance
- Profibus DP for process values and control
- Dig. IO (24 V) for control and results
- 2 switching signals in real time for X- and Y-threshold
- USB* for notebook (PC program: maXYmos PC)
- Sensor for channel X: potentiometer and ±10 V*
- Sensor for channel Y: piezo or strain gage and ±10 V*
- Front panel, desktop or wall-mounting
- Information pages for NOK cause diagnosis
- Internal SN generator with selectable format
- Freely allocatable warning messages and alarms
- Access protection for different user groups
- 3,5" color touch screen display
- 24 VDC power supply

* from 2012

Visit www.maXYmos.com for more information

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Technical Data

Measuring Channels

Number		2
Max. X/Y sampling rate	S/s	5 000
Resolution on each channel	bit	24
Accuracy class	%	0,3
Cut-off frequency for each channel	Hz	2 000
Low-pass filter for each channel	Hz	stepped 5 ... 1 000

Channel X

Sensor type 1		potentiometer
Track resistance	kΩ	1 ... 5
Supply voltage	V	4 (4,16)
Connection system	3-Leiter	
Wiper current	uA	<0,1
Sensor type 2*		process signal ±10 V

Channel Y

Sensor type 1		piezoelectric
Measuring range	pC	±100 ... ±500 000
At 4 pC/N corresponds to	kN	0 ... ±125
Drift	pC/s	0,05
Low-pass filter	Hz	5, 10, ... ,2 000
Sensor type 2		strain gage
Measuring range	mV/V	0 ... ±6
Supply voltage	V	5
Connection system		6-wire
Bridge resistance	Ω	100 ... 1 000

Start – Stop Cycle

Start – stop	Dig.-In / X-threshold / Y-threshold

Measuring Functions

Measurement curve based on	Y=f(X), Y=f(t), Y=f(X,t), X=f(t)

Curve Memory

Current curve	pairs of XY-values max. 8 000
Historical curves (for NOK diagnosis)	the last 20

Evaluation Objects (EOs)

EO-Typen		BOX/LINE/ ENVELOPE/NO-PASS
Reference points		absolute, block or trigger-Y
Editing		numerical entry, drawing with stylus
Evaluation time	ms	<50 (for 4 EOs)

Data Export

Format	csv
Destination	Server
Medium	Ethernet

Serial Interfaces

Ethernet		1 x TCP/IP* 100 Base-TX
USB*		1 x USB Device 1.1*
BUS		Profibus DP, 12 MBaud EtherNet/IP*

Dig-In/Out

Standard		DIN EN61131
Level of "0" state	V	0 ... 5
Level of "1" state	V	15 ... 30
Number of inputs		11
Input current, max.	mA	8 (at 24 V)
Number of outputs		8
Output current, max.	mA	100 (at 24 V)

Measurement Programs

Number		16
Switching by means of		Menu/Dig.-In/BUS
Switching time	ms	<5

Switching Signals

Number		2 (S1 and S2)
Channel allocation		X or Y (selectable)
Switching point		when X-threshold reached when Y-threshold reached
Output		Dig.-Out or SPS
Modus		continuous or latch
Effect on evaluation		no

Real-time Responses

S1/S2 switching signals	ms	<1
EO-Type "NO-PASS"	ms	<1

Power Supply

Voltage	VDC	24 (18 … 30)
Power consumption	VA	5

Connection terminal screws, 1 piece in scope of delivery

Wago, Ordering no. 734-103/037-000

Housing: Ordering no. 734-603

Environmental

Operating temperature range	°C	0 ... 50
Storage temperature range	°C	0 ... 50
Degree of protection front/Connection side		IP65/IP40

General Data

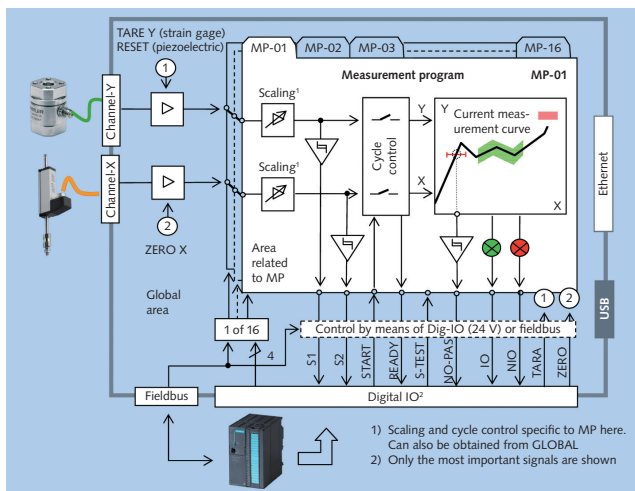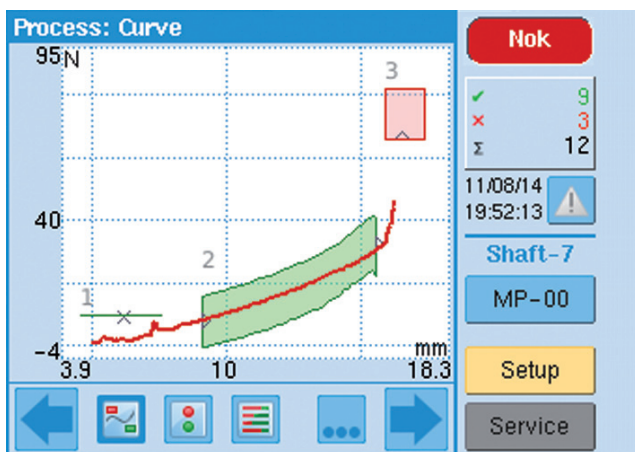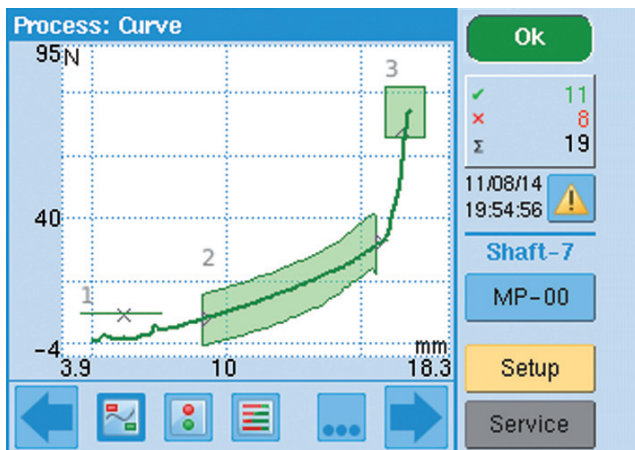|		
Front panel version		
Weight	g	700
Dimensions		see drawing
Desktop/wall version		
Weight	g	840
Dimensions		see drawing

* from 2012

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This information corresponds to the current state of knowledge. Kistler reserves the right to make technical changes. Liability for consequential damage resulting from the use of Kistler products is excluded.
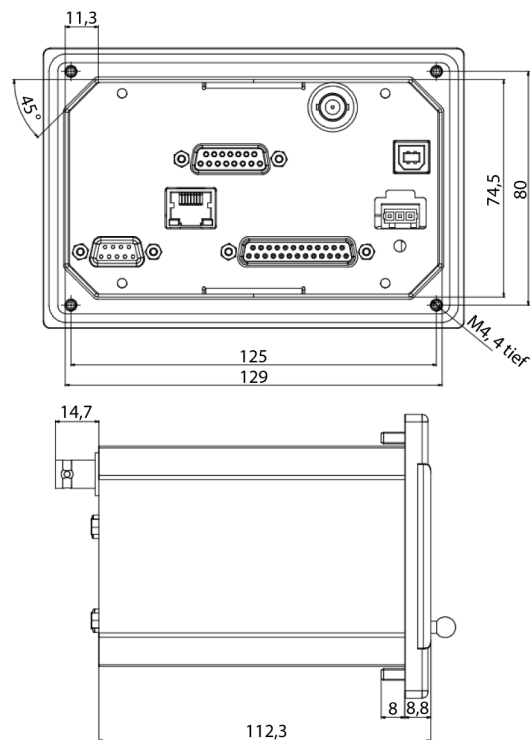
Functional Principle

The measurement curve of a process is recorded, written to the MAC (Memory Actual Curve) and then evaluated. In the process the maXYmos checks whether the curve passes through the evaluation object (EOs), for example envelope curve or box, as prescribed. If it does, an OK (and otherwise an NOK) is generated.
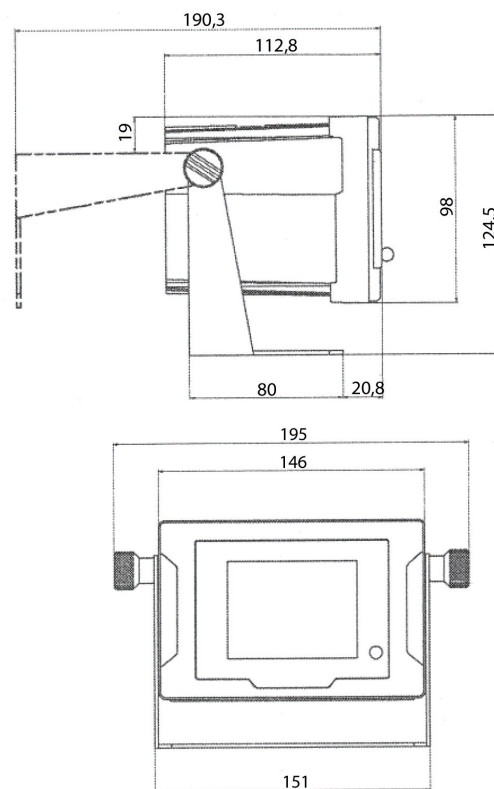

Dimensions

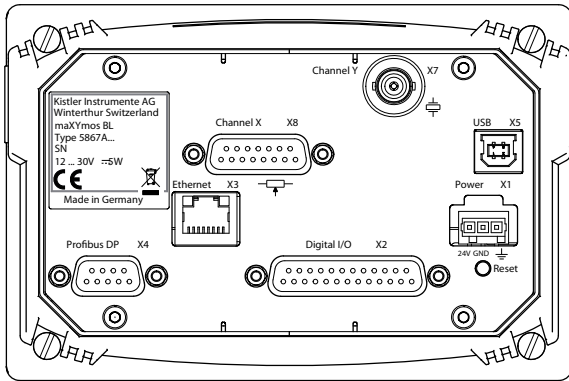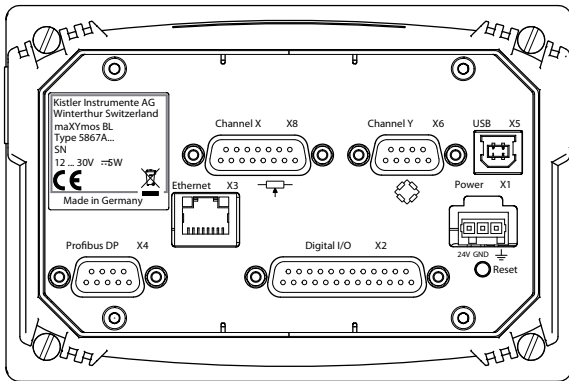Front panel version Type 5867AXX0XX

Desktop/wall version Type 5867AXX1X

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Connections

Back panel piezoelectric version

Back panel strain gage version

Ordering Key for
XY Monitor maXYmos BL Type 5867A ☐ 0 ☐ 0

Channal Y

Piezo	0
Strain gage	1

Channal X

Potentiometer, ±10 V*	0

Housing

Front	0
Desktop/wall	1

BUS

Profibus DP	0

* from 2012

Accessories

	Type
• Desktop/wall case for converting a front panel version into a desktop/ wall version, compl. with mounting kit	5867AZ000

• Set of connectors, strain gage version, compl. for sensors, dig. IO and supply (1 set in included accessories)	5867AZ010
• Connector set, piezoelectric version for sensors dig. IO and supply (1 set in included accessories)	5867AZ011

• Windows® software: maXYmos PC (Basic version) for maXYmos BL for firmware update, backup and setup. Included in accessories of the particular monitor	5867AZ001
• Windows® software: maXYmos PC Plus for maXYmos BL As for Basic version, but with addition of functions for searching and processing archived measurement curves and results, generating Excel® files for statistical – conditioning of measured process values, producing test records for particular parts, etc.	5867AZ002*
• Power supply, 230 VAC/24 VDC, ready to be connected	5867AZ012

* from 2012

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