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maXYmos BL (Basic Level)

Type 5867A...

XY Monitor for Industrial Processes and Product Test Applications

The maXYmos BL provides maximum value in high perfor-mance XY signature monitoring. Two measurands are moni-tored, interrelationship curve analyzed and immediate results reported for Good / Bad component identification. Simple intuitive menu guided setup with pass code level protection. Nonintrusive compact enclosure provides ease of integration with workstations and automated lines.

- Press fit of components such as bearings, pins, caps, plugs…
- Function tests include pivot of head rests, seat recliners, shift systems…
- Assembly monitoring of riveted, stacked or clinched components
- Product validation and device effort testing of linear seat rail and rotary switches… plus more

In the case of press fitting, for example the typical measure-ment curves are recorded using force and displacement sen-sors, 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 scrap-ping 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 con-cept 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.

- Measurement functions Y=f(X), Y=f(t), Y=f(X, t), X=f(t)
- High speed monitoring, up to 10 parts per second
- 16 measurement programs are available for part change over
- 2 switching signals provide real-time monitoring to channels X and Y
- Evaluation objects include Box, Line and Envelope for analy-sis
- Up to 4 evaluation objects per signature curve
- 3.5″ color touch screen provides high resolution with 8000 points per curve
- Sensor channel X interfaces for Potentiometric and + 10 V
- Sensor channel Y interfaces for Piezo, Strain Gage and 10 Volt
- Digital I/O (24 V) for control and evaluation results
- Numerous PLC fieldbus options, including Ethernet/IP, Pro-fiBus DP
- Ethernet TCP/IP connection for data export and remote maintenance
- USB connection for computer laptop (maXYmos PC software)
- Info pages provide means for diagnosis of NOK root cause
- Onboard internal serial generator offers selectable format
- Operates from standard 24 VDC power supply

Visit www.maXYmos.com for more information

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Technical Data

Measuring Channels

Number		2
Max. X/Y sampling rate	S/s	5000
Resolution on each channel	bit	24
Accuracy class	%	0.3
Cut-off frequency for each channel	Hz	2000
Low-pass filter for each channel	Hz	stepped 5 ... 1000

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 ... ±500000
At 4 pC/N corresponds to	kN	0 ... ±125
Drift	pC/s	0.05
Low-pass filter	Hz	5, 10, ... ,2000
Sensor type 2		strain gage
Measuring range	mV/V	0 ... ±6
Supply voltage	V	5
Connection system		6-wire
Bridge resistance	Ω	100 ... 1000

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. 8000
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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Functional Principle

1) Scaling and cycle control specific to MP here. Can also be obtained from GLOBAL
2) Only the most important signals are shown
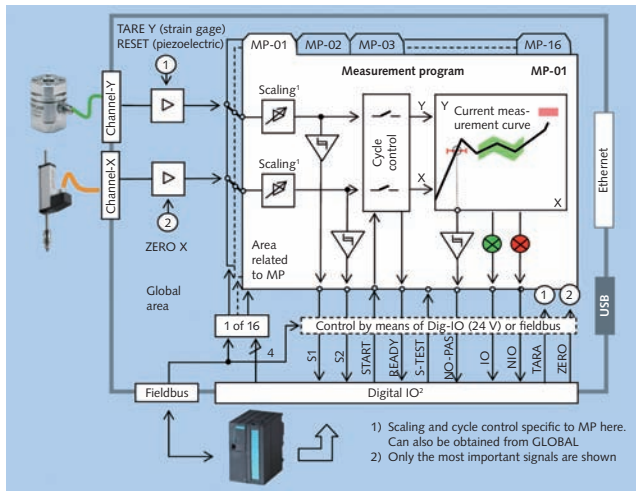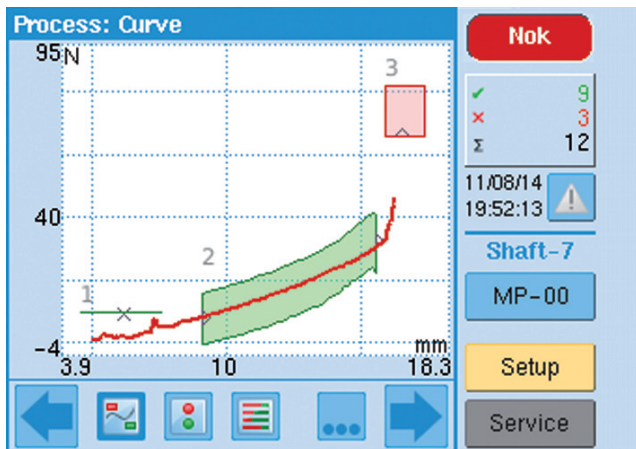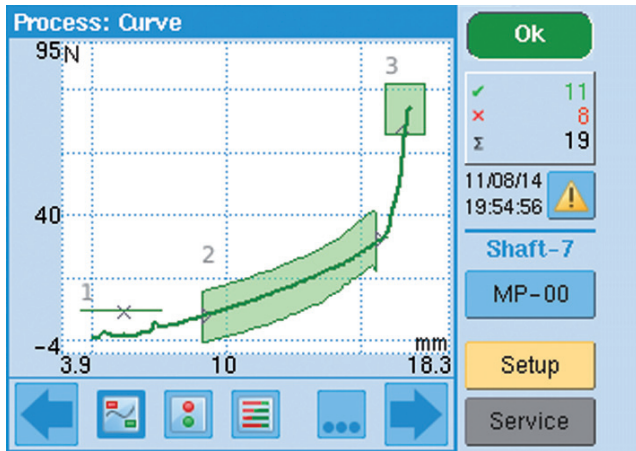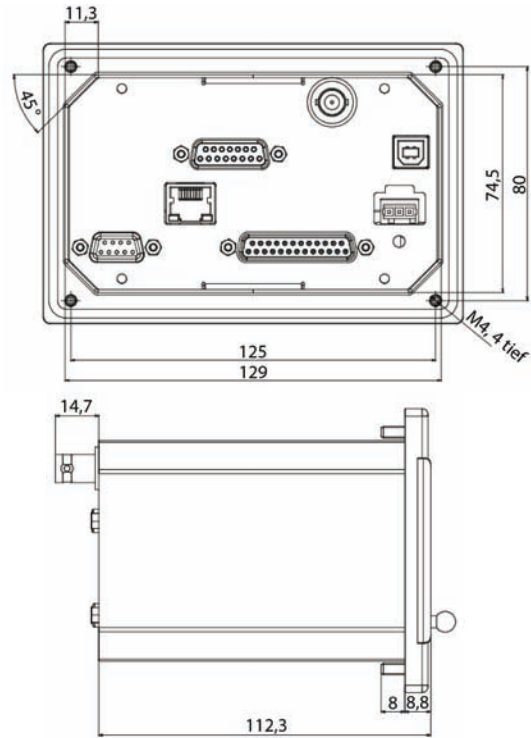
The measurement curve of a process is recorded, written to the MAC (Memory Actual Curve) and then evaluated. In the process the maXYmos checks whether the curve passes through the evaluation object (EOs), for example envelope curve or box, as prescribed. If it does, an OK (and otherwise an NOK) is generated.
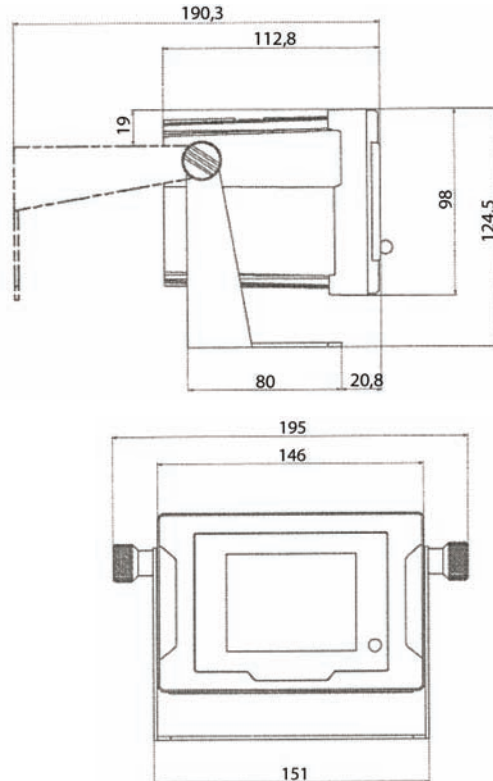

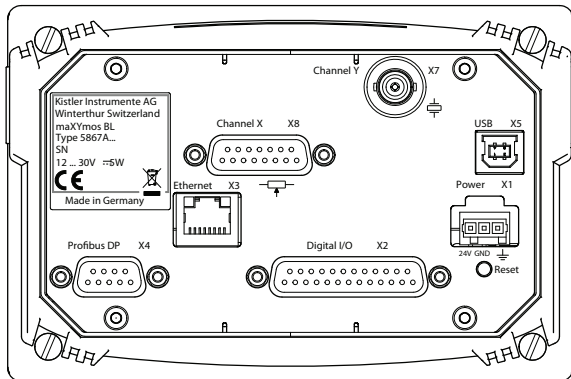## Dimensions

Front panel version Type 5867AXX0XX

Desktop/wall version Type 5867AXX1X
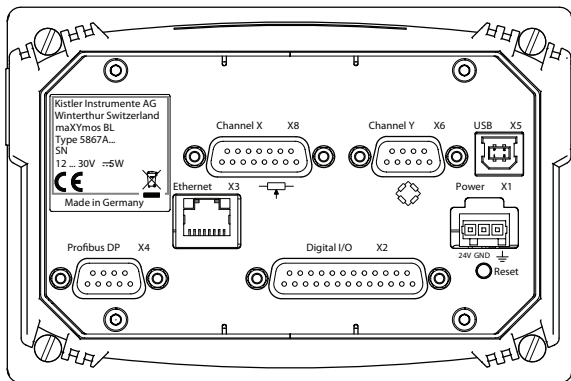
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This information corresponds to the current state of knowledge. Kistler reserves the right to make technical changes. Liability for consequential damage resulting from the use of Kistler products is excluded.

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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
EtherNet/IP	1

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 Includes Basic version, features, plus additional 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

* in 2012

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