Technical Data

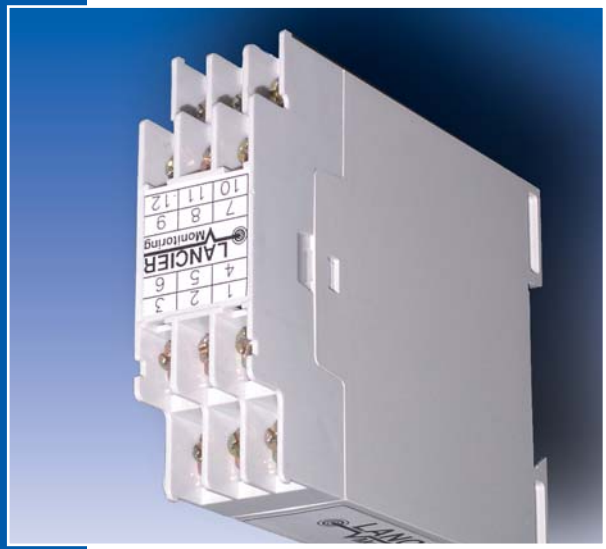
Measuring range	see ordering data
Resolution	0.1 % full scale
Max. error	± 1 % full scale
Transverse impulse stability at Tx-bus	1500 V DC at 10/700 µs
Time windows (addresses)	1
Operating cycle / address	2 s
Transmission time	1.5 s
Deviation from transmission time	≤ 100 ms
Reset time	≤ 200 ms
Supply voltage	20 .. 120 V DC (by Tx-bus)
Quiescent current typ.	50 µA
Rated DC current typ.	6 mA
Modulation current typ.	3.6 mA_{pp}
Operating temperature	-10 .. +60 °C
Storage temperature	-40 .. +90 °C
Dimensions Housing -S	97 x 22 x 75 mm (L x W x H)

Ordering Data

Voltage and voltage sensor XTxA-S	**Order-no. 050601.0XX**
Current, measuring range 0.....10 mA DC	**XX = 10**
Current, measuring range 0.....20 mA DC	**XX = 13**
Current, measuring range 4.....20 mA DC	**XX = 14**
Current, measuring range 0...100 mA DC	**XX = 11**
Current, measuring range 0.....1 A DC	**XX = 12**
Voltage, measuring range 0.....1 V DC	**XX = 20**
Voltage, measuring range 0.....10 V DC	**XX = 21**
Voltage, measuring range 0...100 V DC	**XX = 22**

Further measuring ranges on request

BA 056665.020/10.09



XTxA

Addressable Current- and Voltage Sensor Housing type -S

Operating Instruction

LANCIER Monitoring

General Information

These operating instructions should make it easier for you to become acquainted with the product. They contain important information to ensure safe, appropriate and cost-effective use of the equipment.
The operating instructions endorse the directives of national regulations for the prevention of accidents and the protection of the environment.

These operating instructions shall be read and adopted by anyone assigned to work with/on the equipment, e. g. during operation to include setting-up, maintenance trouble-shooting.

In addition to the operating instructions and the mandatory regulations for the prevention of accidents, applicable in the operator's country and at the place of use, the recognized technical regulations for safe and professional operation shall also be observed.

Designated Use

The XTxA current- and voltage sensor is designed to monitor electrical DC voltage and current.
Any non-compliant use excludes the manufacturer from liability for any damages. The operator carries the risk!

Safety Instructions

Important!!
Read and observe safety instructions prior to initial operation!

- Keep the operating instructions ready to hand!

EC Declaration of Conformity

We declare under our sole responsibility, that the product

Make: LANCIER Monitoring
Type: XTxA

to which this declaration refers, meets the relevant health and safety requirements of the following EC directives:

2006/95/EG Low voltage directive
2004/108/EG Electromagnetic compatibility

For proper implementation of the health and safety requirements named in the EC directives the following standard(s) and/or technical specification(s) have been consulted:

EN 60950 Safety of information technology equipment
EN 61000-6-1 and 2 Interference resistance (fault-free operation)
EN 61000-6-3 and 4 Emitted interference

Münster, 02.10.2009

Research and Development

Managing Director

BA 056665.020/Rev. 00a

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LANCIER Monitoring

Accident prevention!
All circuit lines must be dead before mounting or dismounting of the sensor or the opening of the sensor housing!

- The sensor should only be operated in technically-sound condition, for its designated use, with safety and risk awareness in mind, taking into account the operating instructions. In particular, operational faults, which can compromise safety, should be rectified immediately!
- Do not make any modifications to the sensor!
- Mounting, maintenance and repair work should only be performed by trained personnel!
- Only use original LANCIER Monitoring replacement parts!

Function

The XTxA is an addressable sensor for direct current and voltage levels e.g. to monitor cathodic corrosion protection or the state of charge of back-up batteries. The galvanic isolation of supply and measurement voltage prevents the measurement from influences by the measuring bus.
The XTxA transduces the measured values into output frequencies of 1000 to 2000 Hz. The sensor is integrated into the monitoring system by the LANCIER Tx-bus.

The LANCIER Tx-bus

A maximum of 127 addressable sensors can be connected to one Tx-bus pair.
The measured values of all sensors connected to the LANCIER monitoring system are transmitted in time intervals. Therefore all sensors must be coded before installation.

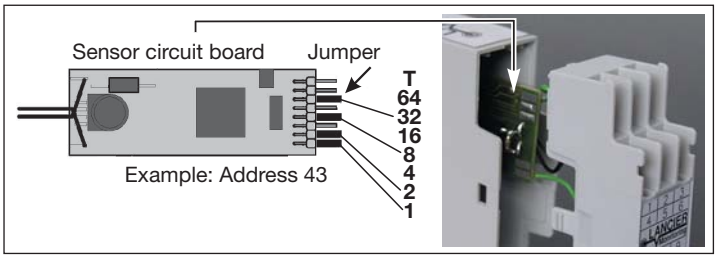
Coding

Accident prevention!
All circuit lines must be dead before mounting or dismounting of the sensor or the opening of the sensor housing!

- Open the housing.
- Lift side clamping straps with a screw driver.

Important!
Obey handling instructions.
Electrostatic discharge (ESD) damage.

- Take sensor circuit board out carefully.
- Place the jumpers with needle-nose pliers according to the required address and the coding table next page.
- Place the jumpers only on one pin if contact should stay open.



- The test bridge (T) must stay open.
- Mark the adjusted code onto the sensor label with a water-proof pen.
- Close housing:
  Put sensor circuit board into housing. Place cables into cable bushing and close housing. Take care that clamping straps snap in properly.

Important!
Do not clamp the wires while closing the housing!

Coding table

Code	64	32	16	8	4	2	1
1							▬
2						▬	
3						▬	▬
4					▬		
5					▬		▬
6					▬	▬	
7					▬	▬	▬
8				▬			
9				▬			▬
10				▬		▬	
11				▬		▬	▬
12				▬	▬		
13				▬	▬		▬
14				▬	▬	▬	
15				▬	▬	▬	▬
16			▬				
17			▬				▬
18			▬			▬	
19			▬			▬	▬
20			▬		▬		
21			▬		▬		▬
22			▬		▬	▬	
23			▬		▬	▬	▬
24			▬	▬			
25			▬	▬			▬
26			▬	▬		▬	
27			▬	▬		▬	▬
28			▬	▬	▬		
29			▬	▬	▬		▬
30			▬	▬	▬	▬	
31			▬	▬	▬	▬	▬
32		▬					

Code	64	32	16	8	4	2	1
33			▬				▬
34			▬			▬	
35			▬			▬	▬
36			▬		▬		
37			▬		▬		▬
38			▬		▬	▬	
39			▬		▬	▬	▬
40			▬	▬			
41			▬	▬			▬
42			▬	▬		▬	
43			▬	▬		▬	▬
44			▬	▬	▬		
45			▬	▬	▬		▬
46			▬	▬	▬	▬	
47			▬	▬	▬	▬	▬
48			▬	▬			
49			▬	▬			▬
50			▬	▬		▬	
51			▬	▬		▬	▬
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53			▬	▬	▬		▬
54			▬	▬	▬	▬	
55			▬	▬	▬	▬	▬
56			▬	▬	▬		
57			▬	▬	▬		▬
58			▬	▬	▬	▬	
59			▬	▬	▬	▬	▬
60			▬	▬	▬	▬	
61			▬	▬	▬	▬	▬
62			▬	▬	▬	▬	
63			▬	▬	▬	▬	▬
64	▬						

Code	64	32	16	8	4	2	1
65	▬						▬
66	▬					▬	
67	▬					▬	▬
68	▬				▬		
69	▬				▬		▬
70	▬				▬	▬	
71	▬				▬	▬	▬
72	▬			▬			
73	▬			▬			▬
74	▬			▬		▬	
75	▬			▬		▬	▬
76	▬			▬	▬		
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79	▬			▬	▬	▬	▬
80	▬		▬				
81	▬		▬				▬
82	▬		▬			▬	
83	▬		▬			▬	▬
84	▬		▬		▬		
85	▬		▬		▬		▬
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88	▬		▬	▬			
89	▬		▬	▬			▬
90	▬		▬	▬		▬	
91	▬		▬	▬		▬	▬
92	▬		▬	▬	▬		
93	▬		▬	▬	▬		▬
94	▬		▬	▬	▬	▬	
95	▬		▬	▬	▬	▬	▬
96	▬	▬					

Code	64	32	16	8	4	2	1
97	▬	▬					▬
98	▬	▬				▬	
99	▬	▬				▬	▬
100	▬	▬			▬		
101	▬	▬			▬		▬
102	▬	▬			▬	▬	
103	▬	▬			▬	▬	▬
104	▬	▬		▬			
105	▬	▬		▬			▬
106	▬	▬		▬		▬	
107	▬	▬		▬		▬	▬
108	▬	▬		▬	▬		
109	▬	▬		▬	▬		▬
110	▬	▬		▬	▬	▬	
111	▬	▬		▬	▬	▬	▬
112	▬	▬	▬				
113	▬	▬	▬				▬
114	▬	▬	▬			▬	
115	▬	▬	▬			▬	▬
116	▬	▬	▬		▬		
117	▬	▬	▬		▬		▬
118	▬	▬	▬		▬	▬	
119	▬	▬	▬		▬	▬	▬
120	▬	▬	▬	▬			
121	▬	▬	▬	▬			▬
122	▬	▬	▬	▬		▬	
123	▬	▬	▬	▬		▬	▬
124	▬	▬	▬	▬	▬		
125	▬	▬	▬	▬	▬		▬
126	▬	▬	▬	▬	▬	▬	
127	▬	▬	▬	▬	▬	▬	▬

▬ Coding bridge closed ▭ Coding bridge open

Function Test

Each sensor has to be checked with the LANCIER Testbox (Order-no. 050833.100) for accurate function and coding. The necessary steps are described in the manual of the Testbox.

Mounting

- Check sensor for correct address code (visually / Testbox).
- Fix sensor to a fixing bar.
- Identify supervision pair and check it with the Testbox.
- Connect sensor:
  Measuring line
  Voltage / current input **+** = terminal 10
  – = terminal 11
  Tx-bus
  Supervision pair **a** = terminal 1 or 2
  b = terminal 4 or 5
- Check sensor function on pair with Testbox.

Important!
Check all sensors before use, in order to avoid later malfunction!