

# Certificate of Compliance

**Certificate:** 1668976

**Master Contract:** 188909

**Project:** 2353624

**Date Issued:** October 14, 2010

**Issued to:** Knick Elektronische Messgeräte GmbH & Co. KG  
Beuckestrasse 22  
D-14163 Berlin  
GERMANY  
**Attention:** Mr. J. Cammin

*The products listed below are eligible to bear the CSA Mark shown*



*Eric Giusti*  
**Issued by:** Eric Giusti

## **PRODUCTS**

**CLASS 2258 03 - PROCESS CONTROL EQUIPMENT - Intrinsicly Safe and Non-Incendive Systems - For Hazardous Locations**

NI, Class I, Division 2, Groups A, B, C and D, with IS circuits extending into Division 1; Enclosure 4X;  
or

AIS, Class I, Zone 1, Ex me ib [ia] IIC T4; Enclosure 4X;

or

NI, Class I, Zone 2, Ex nA [ia] IIC; Enclosure 4X;

Ambient temperature -20 °C ... +50 °C

The Protos Measuring System consists of the following units:

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**Power Supply Type BASE 3400 X\*/\*\*\***

Model code:	Description:
BASE 3400 XS/VPW	VariPower 100–230 Vac power supply, enclosure made of polished stainless steel
BASE 3400 XS/24V	24 V ac/dc power supply, polished stainless steel enclosure
BASE 3400 XC/VPW	VariPower 100–230 Vac power supply, enclosure made of polyester coated steel
BASE 3400 XC/24V	24 V ac/dc power supply, enclosure made of polyester coated steel

**Door Type FRONT 3400 X\*-01\***

Model code:	Description:
FRONT 3400 XS-015	Door, made of polished stainless steel
FRONT 3400 XC-015	Door, made of coated steel

**Module Type PH 3400 X-03\***

Model code:	Description:
PH 3400 X-032	pH measurement with glass electrodes or ISFET sensors
PH 3400 X-033	pH measurement with Pfaudler differential probes
PH 3400 X-035	pH measurement with pH glass electrodes or pH-ISFET sensors
PH 3400 X-036	pH measurement with Pfaudler differential probes

**Module Type CO2 3400 X-130**

Model code:	Description:
CO2 3400 X-130	Carbon dioxide measurement

**Module Type COND 3400 X-04\***

Model code:	Description:
COND 3400 X-041	conductivity measurement with 2 and 4 electrodes / sensors

**Module Type OXY 3400 X-06\***

Model code:	Description:
OXY 3400 X-062	oxygen measurement in liquids, standard application
OXY 3400 X-063	oxygen measurement in liquids, trace measurements
OXY 3400 X-065	oxygen measurement in liquids, standard application
OXY 3400 X-066	oxygen measurement in liquids, trace measurements
OXY 3400 X-067	oxygen measurement in liquids, trace measurements

**Module Type PHU 3400 X-110**

Model code:	Description:
PHU 3400 X-110	pH measurement with glass electrodes, supply and control of retractable probe control unit Type Unical 9000-X***

**Module Type CONDI 3400 X-05\***

Model code:	Description:
CONDI 3400 X-051	inductive conductivity measurement with 2 and 4 electrodes sensors

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**Module Type OUT 3400 X-07\***

Model code: Description:  
OUT 3400 X-071 output module, provides analog and switch outputs

**Module Type PID 3400 X-12\***

Model code: Description:  
PID 3400 X-121 PID controller

**Module Type COM 3400 X-08\***

Model code: Description:  
COMPA 3400 X-081 Interface for Profibus-PA (MPB-IS)  
COMFF 3400 X-085 Interface for Foundation Fieldbus (FF-H1)

**Module Type FIU 3400 X-14\***

Model code: Description:  
FIU 3400X-140-2 Tripple Intrinsically Safe RS 485 circuits

**Module Type MS 3400 X-16\***

Model code: Description:  
MS 3400 X-16\* Memosens Module

**APPLICABLE REQUIREMENTS**

- |                                  |   |
|----------------------------------|---|
| CSA-C22.2 No. 0-M91(R2001)       | - General Requirements Canadian Electrical Code, Part II                              |
| CAN/CSA-C22.2 No. 157-92 (R2002) | - Intrinsically Safe and Non-incendive Equipment for use in Hazardous Locations.      |
| CSA-C22.2 No. 213-M 1987 (R2004) | - Non-incendive Equipment for use in Class I, Division 2 hazardous locations.         |
| CAN/CSA-E60079-0-02              | - Electrical apparatus for explosive gas atmospheres; Part 0: General requirements.   |
| CAN/CSA-E60079-7-03              | - Electrical apparatus for explosive gas atmospheres; Part 7: Increased safety "e".   |
| CAN/CSA-E60079-11-02             | - Electrical apparatus for explosive gas atmospheres; Part 15: Intrinsic safety "i".. |
| CAN/CSA-E60079-15-02             | - Electrical apparatus for explosive gas atmospheres; Part 11: Type of protection "n" |
| CAN/CSA-E79-18-95 (R2004)        | - Electrical apparatus for explosive gas atmospheres; Part 18: Encapsulation "m".     |
| CSA C22.2 No. 142-M1987 (R1993)  | - Process Control Equipment.  |

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## **MARKINGS**

The marking of the equipment includes:

- Model code
- NI, Class I, Division 2, Groups A, B, C and D, with IS circuits extending into Division 1; Enclosure 4X;  
or
- AIS, Class I, Zone 1, Ex me ib [ia] IIC T4; Enclosure 4X;  
or
- NI, Class I, Zone 2, Ex nA [ia] IIC; Enclosure 4X;
- Ambient temperature  $-20\text{ }^{\circ}\text{C} \dots +50\text{ }^{\circ}\text{C}$
- Control drawing number
- Serial number
- Manufacturers name
- CSA logo

## *Supplement to Certificate of Compliance*

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*The products listed, including the latest revision described below,  
are eligible to be marked in accordance with the referenced Certificate.*

### Product Certification History

<b>Project</b>	<b>Date</b>	<b>Description</b>
1668976	April 29, 2005	CSA Original certification for Protos modular measuring system for liquid analysis, type 3400 X * / ***
1761298	February 16, 2006	Addition of Module Type PH 3400 X-035, Type PH 3400 X-036, Type CO2 3400 X-130, Type OXY 3400X-065 and Type OXY 3400X-066 to the Protos modular measuring system for liquid analysis Type 3400 X
1897677	April 23, 2007	Addition of Module Type OXY 3400X-067 and Type FIU 3400X-14* to the Protos modular measuring system for liquid analysis Type 3400 X
2280864	May 4, 2010	Addition of Module Type FIU 3400X-140-2 to the Protos modular measuring system for liquid analysis Type 3400 X
2353624	October 14, 2010	Addition of Module Type MS 3400X-16* to the Protos modular measuring system for liquid analysis Type 3400 X