Certificate of Compliance

Certificate: 1668976 **Master Contract:** 188909

Project: 70192788 **Date Issued:** December 03, 2018

Issued to: **Knick Elektronische Messgeraete GmbH & Co. KG**
Beuckestrasse 22
14163 Berlin
GERMANY

Attention: **Peter Ackers**

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

Issued by: Jens Ensminger

PRODUCTS

CLASS - C225803 - PROCESS CONTROL EQUIPMENT - Intrinsically 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:

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

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.
CAN/CSA-C22.2 No. 94-M91	- Special Purpose Enclosures

MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown without an indicator for Canada only (indicating that products have been manufactured to the requirements of Canadian Standards).The products listed are eligible to bear the CSA Mark shown without an indicator for Canada only (indicating that products have been manufactured to the requirements of Canadian Standards).

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;
- Control drawing number
- Serial number
- Manufacturers name
- Certificate number CSA 05.1668976
- CSA logo

The following shall appear on the cover of the power supply terminals:
Warning: “Do not open when energized”
Avertissement: “Ne pas ouvrir sous tension”

Supplement to Certificate of Compliance

Certificate: 1668976 **Master Contract:** 188909

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

Product Certification History

Project	Date	Description
70192788	2018-12-03	Update of report 1668976 to revise/delete drawings and include minor changes to components.
2353624	2010-10-14	Addition of Module Type MS 3400X-16* to the Protos modular measuring system for liquid analysis Type 3400 X
2280864	2010-05-04	Addition of Module Type FIU 3400X-140-2 to the Protos modular measuring system for liquid analysis Type 3400 X
1897677	2007-04-23	Addition of Module Type OXY 3400X-067 and Type FIU 3400X-14* to the Protos modular measuring system for liquid analysis Type 3400 X
1761298	2006-02-16	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
1668976	2005-04-29	CSA Original certification for Protos modular measuring system for liquid amalysis, type 3400 X * / ***