IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx BAS 14.0125X	issue No.:2
Status:	**Current**	
Date of Issue:	**2016-11-16**	Page 1 of 4

Certificate history:
Issue No. 2 (2016-11-16)
Issue No. 1 (2014-12-11)
Issue No. 0 (2014-11-12)

Applicant: **Eaton Electric Limited**
Great Marlings
Butterfield
Luton
Bedfordshire
LU2 8DL
United Kingdom

Equipment: **MTL4854 HART Multiplexer System**
Optional accessory:

Type of Protection: **Type of Protection 'n'**

Marking: **Ex nA IIC T4 Gc (-40°C ≤ Ta ≤ +70°C)**

Approved for issue on behalf of the IECEx Certification Body: R.S. Sinclair

Position: Technical Manager

Signature:
(for printed version)

pp Allan Ocden

Date: 16 NOVEMBER 2016

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:
SGS Baseefa Limited
Rockhead Business Park
Staden Lane
Buxton, Derbyshire, SK17 9RZ
United Kingdom

IECEx Certificate of Conformity

Certificate No.: IECEx BAS 14.0125X

Date of Issue: **2016-11-16**

Issue No.: **2**

Manufacturer:

Eaton Electric Limited
Great Marlings
Butterfield
Luton
Bedfordshire
LU2 8DL
United Kingdom

Additional Manufacturing location(s):

MTL Instruments PvT Limited
No 3 Old Mahabalipuram Road
Sholinganallur
Chennai 600119
India

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-15 : 2010 Edition: 4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
GB/BAS/ExTR14.0239/00 GB/BAS/ExTR14.0348/00 GB/BAS/ExTR16.0298/00

Quality Assessment Report:

GB/BAS/QAR06.0022/06 GB/BAS/QAR07.0017/06

IECEx Certificate of Conformity

Certificate No.: IECEx BAS 14.0125X

Date of Issue: **2016-11-16**

Issue No.: **2**

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

The MTL4854 HART Multiplexer System is designed to provide an interface between 'Smart' 4/20mA HART Field devices located in a Zone 2 hazardous area and Control / Safety systems located in either the non-hazardous area or Zone 2 hazardous area via a RS485 communication link.

The system comprises either a MTL4854 32 Channel Multi-Modem HART Multiplexer Module mounted on a HTP-SC32-xxx Backplane providing monitoring for up to 32 'Smart' 4/20mA HART Field devices, or two MTL4854 32 Channel Multi-Modem HART Multiplexer Modules mounted on a HMP-HM64 Backplane providing monitoring for up to 64 'Smart' 4/20mA HART Field devices.

The MTL4854 32 Channel Multi-Modem HART Multiplexer Module provides the multiplexing of up to 32 individual field devices, making them addressable and identifiable. The MTL4854 in addition to the multiplexer circuitry contains the RS485 circuitry permitting communication with the Control / Safety System via the backplanes and also provide transient protection for the system.

External connections to the MTL4854 32 Channel Multi-Modem HART Multiplexer Module are made via either the HMP-HM64 or HTP-SC32-xxx Backplanes. When using the HMP-HM64 Backplane, external connections to the 'Smart' 4/20mA HART Field devices are made via separately certified HART Terminal Units such as the HCU16-xxx HART Connection Units which connect to the backplanes via plug and sockets connections. On the HTP-SC32-xxx Backplane the external connections to the 'Smart' 4/20mA HART Field devices are integral to the backplane.

See Certificate Annex for further details of the System Configurations and Electrical Parameters.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1) The equipment must be installed in an area of not more than pollution degree 2 in accordance with IEC 60664-1, and in an enclosure that provides a minimum degree of protection of at least IP54 and complies with the relevant requirements of IEC 60079-0 and IEC 60079-15.

2) External connections to the equipment and internal connections between the modules forming the equipment must not be inserted or removed unless either the area in which the equipment is installed is known to be non-hazardous, or the circuits connected have been de-energised.

IECEx Certificate of Conformity

Certificate No.: IECEx BAS 14.0125X

Date of Issue: **2016-11-16**

Issue No.: **2**

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Variation 2.1

To permit the manufacturer's name to be changed on the certificate and equipment marking. No other changes are made to the equipment design.

ExTR: **GB/BAS/ExTR16.0298/00**	File Reference: **16/0371**

MTL4854 HART Multiplexer System

The MTL4854 HART Multiplexer System can be one of two different configurations dependent on the backplanes used.

The configurations are as follows: -

Configuration 1:

A MTL4854 32 Channel Multi-Modem HART Multiplexer Module mounted on a HTP-SC32-xxx Backplane providing monitoring for up to 32 'Smart' 4/20mA HART Field devices. The System Power Supply, RS485 and Field & System connectors for the 32 'Smart' 4/20mA HART Field devices are made via screw terminals on the backplane.

The HTP-SC32-xxx Backplane is available with either none, series or parallel connected termination resistors fitted to the 'Smart' 4/20mA HART Field devices connections. The configuration is defined by the code at the end of the model number. The following variants of backplane can be used in the system configuration: -

HTP-SC32	Multiplexer Backplane with no Termination Resistors fitted
HTP-SC32-S150	Multiplexer Backplane with 150Ω series Termination Resistors fitted
HTP-SC32-S200	Multiplexer Backplane with 200Ω series Termination Resistors fitted
HTP-SC32-S240	Multiplexer Backplane with 240Ω series Termination Resistors fitted
HTP-SC32-P250	Multiplexer Backplane with 250Ω parallel Termination Resistors fitted

Configuration 2:

Two MTL4854 32 Channel Multi-Modem HART Multiplexer Modules mounted on a HMP-HM64 Backplane providing monitoring for up to 64 'Smart' 4/20mA HART Field devices. The System Power Supply and RS485 external connections are made via terminals on the HMP-HM64 Backplane. The external connections to the 'Smart' 4/20mA HART Field devices are made via separately certified HART Connection Units, such as the HCU16-xxx HART Connection Units which plug into the HMM64 & HMS64 Backplanes via secured plug and socket connectors P1, P2, P3 & P4.

The various configurations of the equipment have the following input parameters: -

Input Parameters:
Power Connector Terminals: PWR1, PWR2 & 0V

Maximum Working Voltage = 35V d.c.

RS485 Terminals A, B & C

RS485 Communications between the backplane and the Control / Safety System made using RS485 communication protocol.

HART Connection Unit Connectors P1, P2, P3 & P4 (HMP-HM64 Backplane only)

Plug and Socket Connectors P1, P2, P3 & P4 designed for connection to a suitably certified HART Connection Unit (e.g. HCU16-xxx HART Connection Unit) which provide external connection facilities for the individual field devices connected to the system.

Field Device Connection Terminals SYSTEM & FIELD Terminals 1A & 1B to 32A & 32B (HTP-SC32-xxx Backplane only)

These terminals provide connection for up to thirty two individual 4/20mA HART Field devices.