Certificate of Compliance

Certificate: 2411253 **Master Contract:** 252588

Project: 70221319 **Date Issued:** 2019-09-26

Issued to: Balluff Incorporated
8125 Holton Dr.
Florence, KY 41042
USA

Attention: Mike Hyde

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only

C US

Issued by: Marius Manastireanu
Marius Manastireanu

PRODUCTS

CLASS - 225802 - PROCESS CONTROL EQUIPMENT-For Hazardous Locations - Certified to CA Standards
CLASS - 225882 - PROCESS CONTROL EQUIPMENT-For Hazardous Locations - Certified to US Standards

Class I, Division 1, Groups ABCD; Class II, Division 1, Groups EFG; Class III; Enclosure Type 4X/6P
Class I, Zone 1, AEx d IIC T* Ga/Gb
Ex d IIC T* Gb
IP68

BTL5 series Linear Position Transducers, rated 10-30Vdc at 3W max. MWP of 60MPa
Ambient Temperature Range: -50°C to +65°C (**T6**) or -50°C to +80°C (**T5**)

BTL7 series Linear Position Transducers, rated 10-30Vdc at 5W max. MWP of 60MPa
Ambient Temperature Range: -50°C to +70°C (**T6**) or -50°C to +80°C (**T5**)

BTLx-**aci**-M**m**-J-DEXC-*-TA12-**no**
BTLx-**bcd**-M**m**-J-DEXC- *-TA12
BTLx-Q**cefg**-M**m**-J-DEXC- *-TA12
BTLx-S**ch**-M**m**-J-DEXC- *-TA12
BTLx-T**cj**0-M**m**-J-DEXC- *-TA12
BTLx-H**ckl**-M**m**-J-DEXC- *-TA12
BTL7-Vcqr-Mm-J-DEXC-*-TA12

x = 5 or 7
Q = Quadrature output
S = SSI output
T = Profibus DP output
H = CANopen output
V = EtherCAT output
a = Digital pulse output: I, K, L, M, N, P or R.
b = Analog output: A, B, C, E or G.
c = Supply voltage: 1 or 5.
d = Analog output signal characteristic: 0, 1 or 7.
e = Quadrature output signal frequency: 0, 1, 2 or 6.
f = Quadrature output resolution: 0, 1, 2, 3, 5, 6, 7 or 8.
g = Quadrature output mode/update rate: 0, 1, 2 or 4.
h = SSI output signal type, resolution and mode: Any alpha/numeric code (up to 3 digits) not effecting the Explosionproof protection method)
i = BTL7 P/M Interface without DPI/IP interface: 10. BTL7 P/M Interface with DPI/IP interface: 11. Blank for BTL5.
j = Profibus output software configuration: 1, 2 or 3.
k = CANbus output software configuration: 1, 2 or 3.
l = CANbus output baud rate: 0, 1, 2, 3, 4, 5, 6, 7 or 8.
m = Stroke length in millimeters (Maximums: BTL5 = 5080 & BTL7 = 7620)
n = Interrogation method (if a = "R", otherwise blank): E or I.
o = Recirculation count (if a = "R", otherwise blank): 1 to 16.
q = Number of magnets or address setting (Any alpha/numeric code not effecting the Explosionproof protection method)
r = Protocol type (Any alpha/numeric code not effecting the Explosionproof protection method)
***** = S or M = Special electrical or internal mechanical modifications not affecting scheduled drawings or the Explosion-proof/Flame-proof Protection methods and not exceeding 3W for the BTL5 and 5W for the BTL7. (may also be left blank)

Note: The IP68 rating includes a submersion rating of 167ft (51m) for 48 hours.

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APPLICABLE REQUIREMENTS

Canadian Requirements	
CAN/CSA Standard C22.2 No. 0-10	General Requirements - Canadian Electrical Code, Part II
CSA C22.2 No. 25-M1966	Enclosures for Use in Class II, Groups E, F, and G Hazardous Locations
CSA C22.2 No. 30-M1986	Explosion-Proof Enclosures for Use in Class I Hazardous Locations - Industrial Products
CSA C22.2 No. 94.1-07	Enclosures for Electrical Equipment, Non-Environmental Considerations
CSA C22.2 No. 94.2-07	Enclosures for Electrical Equipment, Environmental Considerations
CSA C22.2 No. 142-M1987	Process Control Equipment - Industrial Products
CAN/CSA-C22.2 No. 60079-0:07	Electrical apparatus for explosive gas atmospheres – Part 0: General requirements
CAN/CSA-C22.2 No. 60079-1:07	Electrical apparatus for explosive gas atmospheres – Part 1: Flameproof enclosures "d"
CAN/CSA-C22.2 No. 60529:05	Degrees of protection provided by enclosures (IP Code)
US Requirements	
FM 3600-1998	Electric Equipment for use in Hazardous (Classified) Locations General Requirements
FM 3615-2006	Explosionproof Electrical Equipment - General Requirements
FM 3810-2005	Electrical Equipment for Measurement, Control and Laboratory Use
ANSI/ISA-60079-0 (12.00.01)-2009	Explosive atmospheres – Part 0: Equipment – General Requirements
ANSI/ISA-60079-1 (12.22.01)-2009	Explosive Atmospheres - Part 1: Equipment Protection by Flameproof Enclosures “d”
ANSI/UL 50, 12th Ed.	Enclosures for Electrical Equipment, Non-Environmental Considerations
ANSI/UL 50E, 1st Ed.	Enclosures for Electrical Equipment, Environmental Considerations
ANSI/IEC 60529-2004	Degrees of protection provided by enclosures (IP Code)
The following standard(s) were used in whole or in part as a guideline.	
ANSI/NEMA 250-2008	Enclosures for Electrical Equipment (1000 Volts Maximum)

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 with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Nameplate adhesive label material approval information:

The following markings are provided on a 0.018" (0.45mm) thick Stainless Steel nameplate. Nameplate is affixed to the cover of the enclosure by two M3 by 5mm screws and recessed on the cover to prevent edges from being bent.

- Manufacturer's name: "Balluff Inc.", or CSA Master Contract Number "252588", adjacent to the CSA Mark in lieu of manufacturer's name.
- Model number: As specified in the PRODUCTS section, above.
- Electrical ratings: As specified in the PRODUCTS section, above.
- Manufacturing date in MMYY format, or serial number, traceable to month and year of manufacture.
- Marking on the unit that indicates the manufacturing location if the equipment is manufactured at more than one factory location
- Enclosure ratings: As specified in the PRODUCTS section above.
- The CSA Mark with or without "C" and "US" indicators, as shown on the Certificate of Conformity.
- Hazardous Location designation: As specified in the PRODUCTS section above (may be abbreviated). □ Temperature code: As specified in the PRODUCTS section above. (optional if T5 or T6) □ Ambient temperature rating: As specified in the PRODUCTS section above.
- Rated maximum working pressure, as specified in the PRODUCTS section above.
- Equipment with Zone markings shall have next to or near the CSA mark, the certificate reference in the following form: the last two figures of the year of the certificate followed by the serial number (certificate number of this report) of the certificate in that year followed by an "X".
- The following words or EQUIVALENT:
    - "Explosion Hazard. Do not connect or disconnect this equipment unless power has been removed or the area is known to be nonhazardous" and "Risque d'explosion. Ne pas brancher ou débrancher l'appareil, sauf si l'alimentation a été coupée ou de la région est connue pour être non dangereux"
    - "WARNING - OPEN CIRCUIT BEFORE REMOVING COVER and ATTENTION - OUVRIR LE CIRCUIT AVANT D'ENLEVER LE COUVERCLE, or WARNING - KEEP COVER TIGHT WHILE CIRCUITS ARE ALIVE and ATTENTION - GARDER LE COUVERCLE BIEN FERMÉ TANT QUE LES CIRCUITS SONT SOUS TENSION"
    - "SEAL ALL CONDUITS WITHIN 18 INCHES" and "SCELLEZ TOUTES LES CONDUITES À 18 POUCES" and
    - Use 90°C rated conductors

An installation manual or data sheet shall be supplied with each unit, containing the following minimum marking information:

- Manufacturers name and address
- Complete Electrical ratings: As specified in the PRODUCTS section, above.
- Specification for ambient temperature rating: As specified in the PRODUCTS section, above.
- Specification for appropriate wiring to the connector, including definition of pin functions, and specification for wire gauge. Including the note “Use 90°C rated conductors”.
- Mounting and installation instructions, including dimensions.

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

Project	Date	Description
70221319	2019-09-26	Update to report 2411253 to include minor revisions and typographical changes to existing drawings.
70099158	2016-11-23	Update to report 2411253 to include minor revisions and typographical changes to existing drawings. Delisting of Factory Location, Balluff GmbH Neuhausen Germany, ID#459068
70025514	2015-10-09	Update to report 2411253 to include lower ambient temperature of -50C, alternate housing cover materials Nitronics 60 and SS316L, new model BTL7, alternate o-ring material, and update markings to include French translations.
2641874	2013-10-23	Update to report 2411253 with lower ambient ranges: -40°C to +65°C for temperature code T6, respectively -40°C to +80°C for temperature code T5.
2411253	2011-06-16	Original Certification - BTL5 Series Linear Position Transducer For Use in Hazardous Locations