Certificate of Compliance

Certificate: 1807522 **Master Contract:** 190113

Project: 70008892 **Date Issued:** March 24, 2015

Issued to: **ABB Automation Products GmbH**

Borsigstrasse 2
Alzenau, 63755
Germany
Attention: Gabriele Blendin

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

Hossein Saleh

Issued by: Hossein Saleh

PRODUCTS

CLASS 2258 02 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations

Class I, Div 1, Groups A, B, C and D; Class II, Div. 1, Groups E, F and G; Class III, Div. 1; Type 4X:

Models TTF300-R3xxHx and TTF300-R7xxHx Series Temperature Transmitters; input rated 11-30 Vdc, 4-20 mA; Tamb: -50 Deg. C to + 85 Deg. C; Temp. Code T4 at Max Ambient 85 Deg C; T-Code T5 at Max Ambient 71 Deg C; Temp. Code T6 at Max Ambient 56 Deg C.

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

Class I, Div 2, Groups A, B, C and D; Class II, Div. 2, Groups E, F and G; Class III, Div. 2; Type 4X:

Models TTF300-R2xxHx and TTF300-R7xxHx Series Temperature Transmitters; input rated 11-30 Vdc, 4-20 mA; mounted in Div. 2 location and providing nonincendive circuits for Class I, Div. 2, to thermocouples, RTD's and passive-resistive switch devices, when installed per installation Dwg. 214827; Tamb: -50 Deg. C to + 85 Deg. C; Temp. Code T4 at Max Ambient 85 Deg C; T-Code T5 at Max Ambient 71 Deg C; Temp. Code T6 at Max Ambient 56 Deg C.

Class I, Div 2, Groups A, B, C and D; Type 4X:

Models TTF300-R2xxHx and TTF300-R7xxHx Series Temperature Transmitters; input rated 11-30 Vdc, 4-20 mA; non-incendive (terminals "+" and "-") with Entity input parameters of: Vmax/Ui = 30V, Imax/Ii = 130mA, Pmax/Pi = 0.8 W, Ci = 0.57 nF, Li = 0.5 mH; having output terminals (terminals 1-2-3-4-5-6) with entity output parameters of: Voc/Uo = 6.5V, Isc/Io = 25 mA, Po = 38 mW, Ca/Co = 1.55 µF, La/Lo = 5.0 mH; and having output terminals (terminals JP1) with entity output parameters of: Voc/Uo = 6.2 V, Isc/Io = 65.2 mA, Po = 101 mW, Ca/Co = 1.4 µF, La/Lo = 5.0 mH; when installed per installation Dwg. 214895; Tamb: -50 Deg. C to +

85 Deg. C; T-Code T4 at Max Ambient 85 Deg C; T-Code T5 at Max Ambient 71 Deg C; T-Code T6 at Max Ambient 56 Deg C.

Class I, Div 2, Groups A, B, C and D:

Model TTH300-R2H Series Temperature Transmitters; input rated 11-30 Vdc, 4-20 mA; mounted in Div. 2 location and providing nonincendive circuits for Class I, Div. 2, to thermocouples, RTD's and passive-resistive switch devices, when installed per installation Dwg. 214824; Tamb: -50 Deg. C to + 85 Deg. C; Temp. Code T4 at Max Ambient 85 Deg C; T-Code T5 at Max Ambient 71 Deg C; Temp. Code T6 at Max Ambient 56 Deg C.

Model TTH200-R2H Series Temperature Transmitters; input rated 11-30 Vdc, 4-20 mA; mounted in Div. 2 location and providing nonincendive circuits for Class I, Div. 2, to thermocouples, RTD's and passive-resistive switch devices, when installed per installation Dwg. TTH200-R2H(1); Tamb: -50 Deg. C to + 85 Deg. C; Temp. Code T4 at Max Ambient 85 Deg C; T-Code T5 at Max Ambient 71 Deg C; Temp. Code T6 at Max Ambient 56 Deg C.

Model TTH300-R2H Series Temperature Transmitters; input rated 11-30 Vdc, 4-20 mA; non-incendive (terminals "+" and "-") with Entity input parameters of: Vmax/Ui = 30V, Imax/Ii = 130mA, Pmax/Pi = 0.8 W, Ci = 0.57 nF, Li = 0.5 mH; having output terminals (terminals 1-2-3-4-5-6) with entity output parameters of: Voc/Uo = 6.5V, Isc/Io = 25 mA, Po = 38 mW, Ca/Co = 1.55 µF, La/Lo = 5.0 mH; and having output terminals (terminals JP1) with entity output parameters of: Voc/Uo = 6.2 V, Isc/Io = 65.2 mA, Po = 101 mW, Ca/Co = 1.4 µF, La/Lo = 5.0 mH; when installed per installation Dwg. 214896; Tamb: -50 Deg. C to + 85 Deg. C; T-Code T4 at Max Ambient 85 Deg C; T-Code T5 at Max Ambient 71 Deg C; T-Code T6 at Max Ambient 56 Deg C.

Model TTH200-R2H Series Temperature Transmitters; input rated 11-30 Vdc, 4-20 mA; non-incendive (terminals "+" and "-") with Entity input parameters of: Vmax/Ui = 30V, Imax/Ii = 130mA, Pmax/Pi = 0.8 W, Ci = 0.57 nF, Li =160µH; having output terminals (terminals 1-2-3-4-5-6) with entity output parameters of: Voc/Uo = 6.5V, Isc/Io =17.8 mA, Po = 29 mW, Ca/Co = 1.55 µF, La/Lo = 5.0 mH; and having output terminals (terminals JP1) with entity output parameters of: Voc/Uo = 6.2 V, Isc/Io = 65.2 mA, Po = 101 mW, Ca/Co = 1.4 µF, La/Lo = 5.0 mH; when installed per installation Dwg. TTH200-R2H(2); Tamb: -50 Deg. C to + 85 Deg. C; T-Code T4 at Max Ambient 85 Deg C; T-Code T5 at Max Ambient 71 Deg C; T-Code T6 at Max Ambient 56 Deg C.

Model TTR300-R6H Series Temperature Transmitters; input rated 11-30 Vdc, 4-20 mA; non-incendive (terminals "+" and "-") with Entity input parameters of: Vmax/Ui = 30V, Imax/Ii = 130mA, Pmax/Pi = 0.8 W, Ci = 0.57 nF, Li = 0.5 mH; having output terminals (terminals 1-2-3-4-5-6) with entity output parameters of: Voc/Uo = 6.5V, Isc/Io = 25 mA, Po = 38 mW, Ca/Co = 1.55 µF, La/Lo = 5.0 mH; and having output terminals (terminals JP1) with entity output parameters of: Voc/Uo = 6.2 V, Isc/Io = 65.2 mA, Po = 101 mW, Ca/Co = 1.3 µF, La/Lo = 5.0 mH; when installed per installation Dwg. TTR300-R6H(N.I.); Tamb: -50 Deg. C to + 85 Deg. C; T-Code T4 at Max Ambient 85 Deg C; T-Code T5 at Max Ambient 71 Deg C; T-Code T6 at Max Ambient 56 Deg C.

Model TTR200-R6H Series Temperature Transmitters; input rated 11-30 Vdc, 4-20 mA; non-incendive (terminals "+" and "-") with Entity input parameters of: Vmax/Ui = 30V, Imax/Ii = 130mA, Pmax/Pi = 0.8 W, Ci = 0.57 nF, Li =160µH; having output terminals (terminals 1-2-3-4-5-6) with entity output parameters of: Voc/Uo = 6.5V, Isc/Io = 17.8 mA, Po = 29 mW, Ca/Co = 1.55 µF, La/Lo = 5.0 mH; and having output terminals (terminals JP1) with entity output parameters of: Voc/Uo = 6.2 V, Isc/Io = 65.2 mA, Po = 101 mW, Ca/Co = 1.3 µF, La/Lo = 5.0 mH; when installed per installation Dwg. TTR200-R6H(N.I.); Tamb: -50 Deg. C to + 85 Deg.

C; T-Code T4 at Max Ambient 85 Deg C; T-Code T5 at Max Ambient 71 Deg C; T-Code T6 at Max Ambient 56 Deg C.

Note: Models TT**H**300, TT**H**200, TT**R**300 and TT**R**200 are open type units, Certified as a component for use only in other equipment where the suitability of the combination is to be determined by the authority having jurisdiction.

CLASS 2258 04 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity - For Hazardous Locations

Class I, Div. 1 & 2, Groups A, B, C and D; Class II, Div. 1 & 2, Groups E, F and G; Class III, Div. 1 &2; Type 4X:

Ex ia IIC T4:

Models TTF300-R1xxHx and TTF300-R7xxHx Series Temperature Transmitters; input rated 11-30 Vdc, 4-20 mA; intrinsically safe (terminals "+" and "-") with Entity input parameters of: Vmax/Ui = 30V, Imax/Ii = 130mA, Pmax/Pi = 0.8 W, Ci = 0.57 nF, Li = 0.5 mH; having output terminals (terminals 1-2-3-4-5-6) with entity output parameters of: Voc/Uo = 6.5V, Isc/Io = 25 mA, Po = 38 mW, Ca/Co = 1.55 µF, La/Lo = 5.0 mH; and having output terminals (terminals JP1) with entity output parameters of: Voc/Uo = 6.2 V, Isc/Io = 65.2 mA, Po = 101 mW, Ca/Co = 1.4 µF, La/Lo = 5.0 mH; when installed per installation Dwg. 214825; Tamb: -50 Deg. C to + 85 Deg. C; T-Code T4 at Max Ambient 85 Deg C; T-Code T5 at Max Ambient 71 Deg C; T-Code T6 at Max Ambient 56 Deg C.

Class I, Div. 1 & 2, Groups A, B, C and D:

Ex ia IIC T4:

Model TTH300-R1H Series Temperature Transmitters; input rated 11-30 Vdc, 4-20 mA; intrinsically safe (terminals "+" and "-") with Entity input parameters of: Vmax/Ui = 30V, Imax/Ii = 130mA, Pmax/Pi = 0.8 W, Ci = 0.57 nF, Li = 0.5 mH; having output terminals (terminals 1-2-3-4-5-6) with entity output parameters of: Voc/Uo = 6.5V, Isc/Io = 25 mA, Po = 38 mW, Ca/Co = 1.55 µF, La/Lo = 5.0 mH; and having output terminals (terminals JP1) with entity output parameters of: Voc/Uo = 6.2 V, Isc/Io = 65.2 mA, Po = 101 mW, Ca/Co = 1.4 µF, La/Lo = 5.0 mH; when installed per installation Dwg. 214826; Tamb: -50 Deg. C to + 85 Deg. C; T-Code T4 at Max Ambient 85 Deg C; T-Code T5 at Max Ambient 71 Deg C; T-Code T6 at Max Ambient 56 Deg C.

Model TTH200-R1H Series Temperature Transmitters; input rated 11-30 Vdc, 4-20 mA; intrinsically safe (terminals "+" and "-") with Entity input parameters of: Vmax/Ui = 30V, Imax/Ii = 130mA, Pmax/Pi = 0.8 W, Ci = 0.57 nF, Li = 160 µH; having output terminals (terminals 1-2-3-4-5-6) with entity output parameters of: Voc/Uo = 6.5V, Isc/Io = 17.8 mA, Po = 29 mW, Ca/Co = 1.55 µF, La/Lo = 5.0 mH; and having output terminals (terminals JP1) with entity output parameters of: Voc/Uo = 6.2 V, Isc/Io = 65.2 mA, Po = 101 mW, Ca/Co = 1.4 µF, La/Lo = 5.0 mH; when installed per installation Dwg. TTH200-R1H; Tamb: -50 Deg. C to + 85 Deg. C; T-Code T4 at Max Ambient 85 Deg C; T-Code T5 at Max Ambient 71 Deg C; T-Code T6 at Max Ambient 56 Deg C.

Model TTR300-R6H Series Temperature Transmitters; input rated 11-30 Vdc, 4-20 mA; intrinsically safe (terminals "+" and "-") with Entity input parameters of: Vmax/Ui = 30V, Imax/Ii = 130mA, Pmax/Pi = 0.8 W, Ci = 0.57 nF, Li = 0.5 mH; having output terminals (terminals 1-2-3-4-5-6) with entity output parameters of: Voc/Uo = 6.5V, Isc/Io = 25 mA, Po = 38 mW, Ca/Co = 1.55 µF, La/Lo = 5.0 mH; and having output terminals (terminals JP1) with entity output parameters of: Voc/Uo = 6.2 V, Isc/Io = 65.2 mA, Po = 101 mW, Ca/Co = 1.3

µF, La/Lo = 5.0 mH; when installed per installation Dwg. TTR300-R6H(I.S.); Tamb: -50 Deg. C to + 85 Deg. C; T-Code T4 at Max Ambient 85 Deg C; T-Code T5 at Max Ambient 71 Deg C; T-Code T6 at Max Ambient 56 Deg C.

Model TTR200-R6H Series Temperature Transmitters; input rated 11-30 Vdc, 4-20 mA; intrinsically safe (terminals "+" and "-") with Entity input parameters of: Vmax/Ui = 30V, Imax/Ii = 130mA, Pmax/Pi = 0.8 W, Ci = 0.57 nF, Li = 160 µH; having output terminals (terminals 1-2-3-4-5-6) with entity output parameters of: Voc/Uo = 6.5V, Isc/Io = 17.8 mA, Po = 29 mW, Ca/Co = 1.55 µF, La/Lo = 5.0 mH; and having output terminals (terminals JP1) with entity output parameters of: Voc/Uo = 6.2 V, Isc/Io = 65.2 mA, Po = 101 mW, Ca/Co = 1.3 µF, La/Lo = 5.0 mH; when installed per installation Dwg. TTR200-R6H(I.S.); Tamb: -50 Deg. C to + 85 Deg. C; T-Code T4 at Max Ambient 85 Deg C; T-Code T5 at Max Ambient 71 Deg C; T-Code T6 at Max Ambient 56 Deg C.

Note: Model TT**H**300, TT**H**200, TT**R**300 and TT**R**200 are open type units, Certified as a component for use only in other equipment where the suitability of the combination is to be determined by the authority having jurisdiction.

NOMENCLATURE

Model TT**H**200-RaHb

a = Protection; 1 (Intrinsically Safe), 2 (Non-Incendive)

b = Configuration; BF, EM, SE, Z9

Model TT**H**300-RaHb

a = Protection; 1 (Intrinsically Safe), 2 (Non-Incendive)

b = Configuration; BF, BG, CS, EM, SE, Z9

Model TT**F**300-RabcHd

a = Protection; 1 (Intrinsically Safe), 2 (Non-Incendive), 3 (Explosion-Proof), 7 (combines 1 + 2 + 3)

b = Housing/Display A, B, C, D

c = Cable Entry 1*, 2, 3, 4*

d = Configuration; BF, BG, CS, EM, K2, SE, T1, Z9

Model TT**R**200-R6Ha

a = Configuration; BF,EM,SE,Z9

Model TT**R**300-R6Ha

a = Configuration; BF,BG,CS,EM,SE,Z9

Certificate:	1807522	**Master Contract:**	190113
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Note: * Not allowed for the Div. 1 or Div. 2 installations under CLASS 2258 02

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 0-M91	- General Requirements – Canadian Electrical Code, Part II
C22.2 No. 25-1966	- Enclosures for Use in Class II, Groups E, F and G Hazardous Locations
C22.2 No. 30-M1986	- Explosion-Proof Enclosures for Use in Class I Hazardous Locations
CAN/CSA-C22.2 No. 94-M91	- Special Purpose Enclosures
C22.2 No. 142-M1987	- Process Control Equipment
CAN/CSA-C22.2 No. 157-92	- Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations
C22.2 No. 213-M1987	- Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations
CAN/CSA-C22.2 No. 60079-0:11	- Electrical apparatus for explosive gas atmospheres - Part 0: General Requirements
CAN/CSA-C22.2 No. 60079-11:11	- Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic Safety "i"