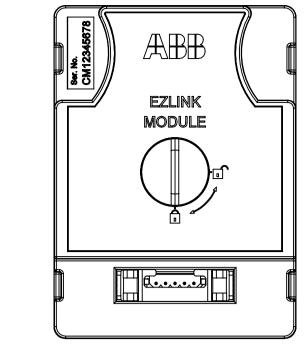
HAZARDOUS AREA

INTRINSICALLY SAFE

X CLASS I, DIV 1 GROUPS A, B, C, D; T4 X CLASS II, DIV 1 GROUPS E, F, G; T4

CLASS I, ZONE 2 Ex ic IIC T4 Gc

(See Input Parameters below)



OUTPUT PARAMETERS - EZLINK Voc (Uo) = 5.21V lsc (lo) = 98.2mA Po = 127.9mW Ca (Co) = 60uF La (Lo) = 43mH

SENSOR MODULE

2 ELECTRODE

CONDUCTIVITY MODULE

12345678

pH/ORP/ISE

OR

Conductivity

Digital/EZLink SENSOR

(As Appropriate)

2 ELECTRODE **CONDUCTIVITY MODULE**

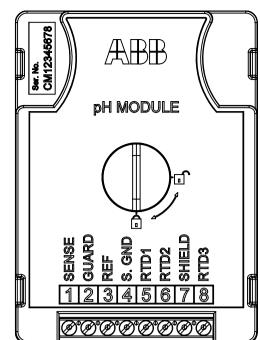
OUTPUT PARAMETERS - 2 ELECTRODE Voc(Uo) = 11.8Vlsc(lo) = 11.8mAPo`= 36mW Ca(Co) = 1.5uF La = 1H

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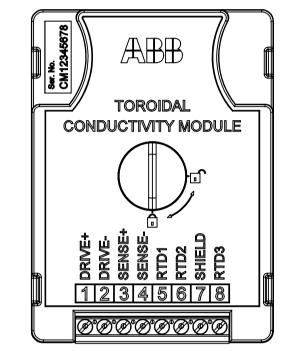
1 2 3 4 5 6 7 8

<u>®®®®®®®®®</u>

SENSOR MODULES

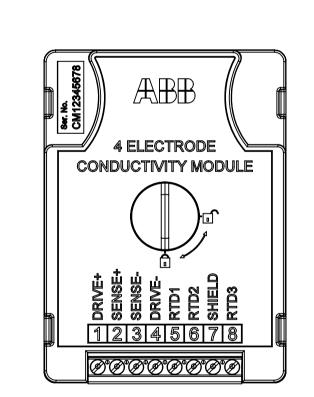


OUTPUT PARAMETERS - pH Voc(Uo) = 11.8V lsc(lo) = 11.8mAPo`= 36mW Ca(Co) = 1.5uF La = 1H



OUTPUT PARAMETERS - TOROIDAL Voc(Uo) = 11.8Vlsc(lo) = 11.8mAPo`= 36mW Ca(Co) = 1.5uF

La = 1H



OUTPUT PARAMETERS - 4 ELECTRODE Voc(Uo) = 11.8VIsc(Io) = 11.8mA Po = 36mW Ca(Co) = 1.5uF La È 1H

> **CERTIFIED PRODUCT** NO MODIFICATION IS PERMITTED WITHOUT REFERENCE TO THE APPROVAL AUTHORITY

THIS DRAWING WAS CREATED ON A COMPUTER AIDED DESIGN (CAD) SYSTEM TO ENSURE THE INTEGRITY OF THE DATA BASE ALL CHANGES/REVISIONS MUST BE MADE ON THE CAD SYSTEM.

SCALE CEH CR2003015 SME J 500 PRO & 500 PRO HT added 08/02/19 M EZLink Module Option Added (Parameters updated) 200421 DIMS. IN mm Connection notes changed to include CEH CEH 13-06-19 21/01/19 L Notes corrected The contents of this document must not be sensor types **TOLERANCES** (C) ABB Ltd 2018 CONFIDENTIAL copied or communicated to a third party Output parameters added for each FF & PA Module options added with CEH 12/11/18 **K** 11/06/19 without the written consent of the company. LINEAR DIMS FISCO parameters sensor module $X = \pm 0.5$ MOD No DRAWN CH'KD D & D M.E.D. DATE **AMENDMENTS AMENDMENTS** MOD No DRAWN CH'KD D & D M.E.D. DATE $X.X = \pm 0.1$ **ABB Ltd** AWT210 cFMus INTRINSIC SAFETY ANGULAR DIMS TITLE DRAWING No. AWT200032

WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR HAZARDOUS LOCATIONS

WARNING: Resistance between Intrinsically Safe Ground and earth ground shall be less than 1.0 Ohm

NON-HAZARDOUS AREA

THIRD ANGLE PROJECTION DO NOT SCALE THIS PRINT

REMOVE ALL BURRS

" 2 WIRE HOOKUP"-

ASSOCIATED

APPARATUS

St Neots, Cambs, PE19 8EU, UK

< 250 V

MATERIAL

FINISH

NOTES:

- 1. Installations in Canada shall be in accordance with C22.1 Canadian Electrical Code, Part 1.
- 2. Associated apparatus must be approved by authority having juristiction and must be installed in accordance with manufacturers instructions.
- 3. The FISCO Supply, FISCO Field Device(s) and FISCO Terminators shall be canadian Approved for installations in Canada.
- 4. FISCO Supply manufacturer's installation drawing shall be followed when installina this equipment.
- 5. Associated apparatus parameters must meet the following requirements:
 - Voc/Uo ≤ Vmax;
 - Isc/lo < Imax;
 - Po or Pt < Pmax
 - Ca > Ci + Ccable • La > Li + Lcable
- 6. The control room equipment connected to FISCO Supply must not generate more then 250 Vrms or Vdc, or marked Um on the associated apparatus.
- 7. A dust tight seal must be used at the conduit entry when the Transmitter is used in a Class II & III location.
- 8. Suitable seperation must be maintained between input wiring and Sensor wiring.
- 9. WARNING: DO NOT DISCONNECT EQUIPMENT WHILE LIVE UNLESS THE AREA IS KNOWN TO BE NON-HAZARDOUS

FISCO CONCEPT

The FieldbuS Intrinsically Safe Concept (FISCO) allows the interconnection one FISCO certified power supply, an unlimited number of FISCO certified intrinsically safe field apparatus, and two FISCO certified terminators, one of each end of the trunk cable. (Note: The FISCO Terminator at the supply end is usually incorporated in to the FISCO Power Supply.)

Each piece of apparatus will be marked with the word "FISCO" followed by the indication of its function, i.e. "Power Supply", "Field Device" or "Terminator".

Interconnection of the FISCO Field Device, FISCO terminators and FISCO Power Supply must be suitable for the same Division or type of protection and Gas Group(s).

The FISCO power supply shall be located not more than 30m from one end of the trunk. Where the power supply is connected via a spur, then that spur is restricted to a length of 30 m.

The cable used to interconnect the devices needs to comply with the following parameters:

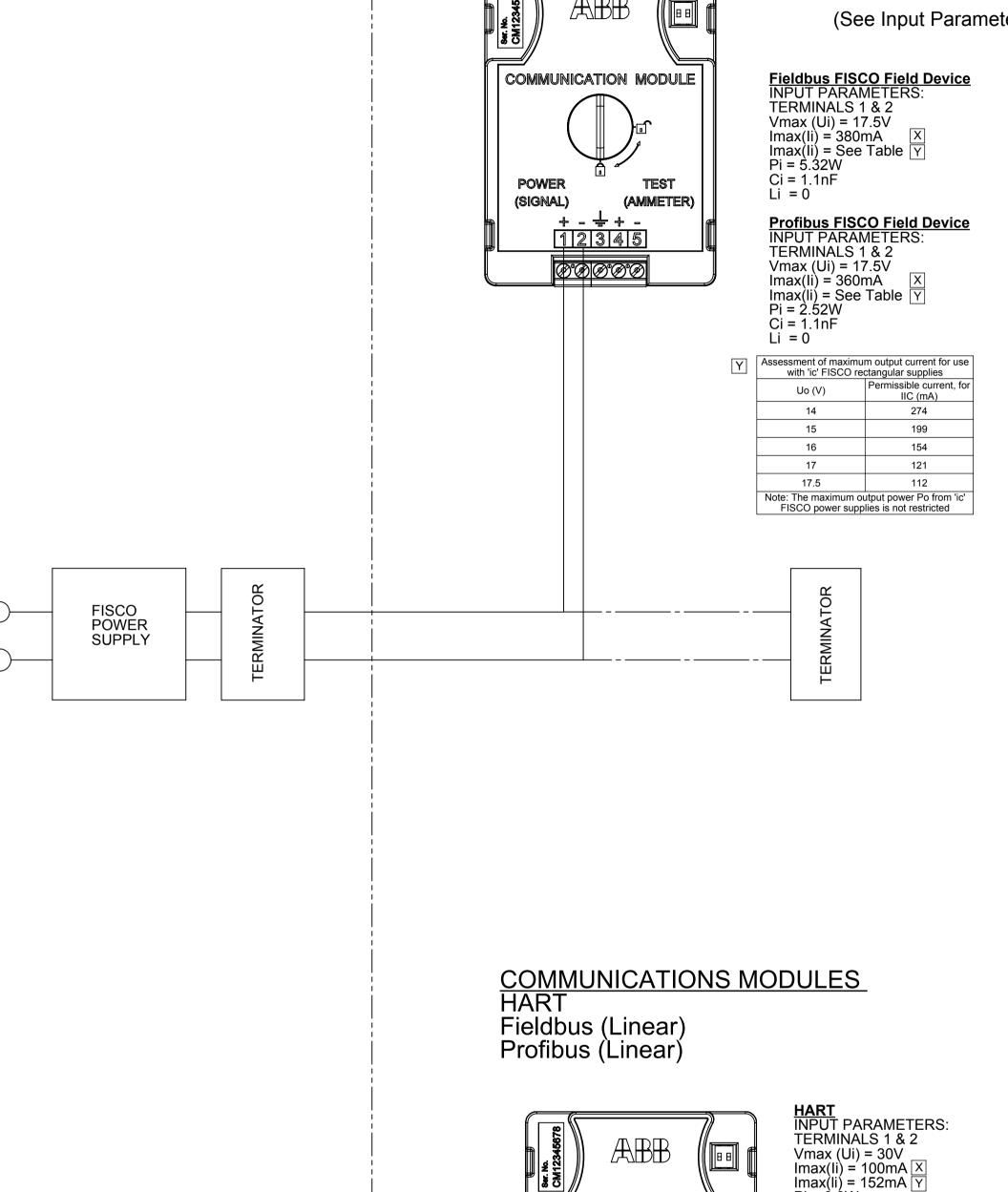
Loop resistance Rc: $15\Omega/km$ to 150 W/km Inductance per unit length Lc: 0.4mH/km to 1mH/km Capacitance per unit length Cc: 45nF/km to 200nF/km
Maximum Length of spur Cable: 60m for IIC and IIB (or Group ABC&D); Maximum length of each trunk cable, including the length of all spurs, 1 km in IIC and

5 km in IIB (Groups ABC&D) and IIIC (Group EFG).

Terminators

At each end of the trunk cable a line terminator with the following parameters is suitable: $\dot{R} = 90\Omega$ to 102W

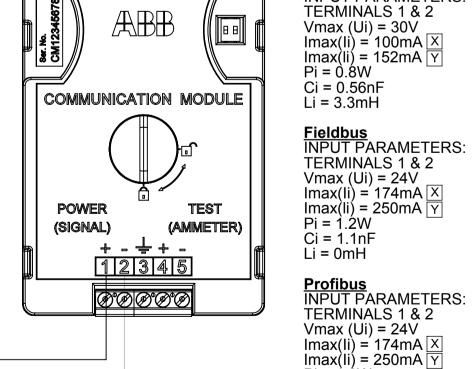
C = 0 to 2.2mF



COMMUNICATION

MODULE :Profibus: FISCO

Fieldbus: FISCO



Pi = 1.2W

Ci = 1.1nF

Li = 0mH

±0,5°

UNLESS OTHERWISE STATED

AWT210 FOR CONNECTION TO:

COMMUNICATION

MODULE

(SIGNAL)

COMMUNICATION MODULE

(AMMETER)

- 1. OTHER SENSORS CERTIFIED FOR USE IN CANADA SUITABLE FOR THE HAZARDOUS LOCATION WITH ENTITY PARAMETERS Vmax/Ui ≥ Voc/Uo; Imax/ Ii ≥ Isc/Io; Pi ≥ Po; Co ≥ Ci + Ccable; Lo ≥ Li = Lcable
- SIMPLE APPARATUS; PASSIVE DEVICE THAT DOES NOT CONTAIN ENERGY STORING COMPONENTS AND DOES NOT GENERATE MORE THAN1.5V, 100mA,

CONTROL DRAWING (CANADA)