

**MagMaster™
Electromagnetic
Flowmeters**

**Supplementary Instructions
to Book 3.**

**For use where the following
cables are provided in place
of that shown in Book 3:**

**STT 3200/3400 Standard 4-Core
(as used in IEC installation practice)**

**STT 3300 Armoured 4-Core
(as used in IEC installation practice)**

**STT3350 Standard 6-Core
(as used in North American
installation practice)**

ABB KENT-TAYLOR

The Company

ABB Kent-Taylor is an established world force in the design and manufacture of instrumentation for industrial process control, flow measurement, gas and liquid analysis and environmental applications.

As a part of ABB, a world leader in process automation technology, we offer customers application expertise, service and support worldwide.

We are committed to teamwork, high quality manufacturing, advanced technology and unrivalled service and support.

The quality, accuracy and performance of the Company's products result from over 100 years experience, combined with a continuous program of innovative design and development to incorporate the latest technology.

The NAMAS Calibration Laboratory No. 0255(B) is just one of the ten flow calibration plants operated by the Company, and is indicative of ABB Kent-Taylor's dedication to quality and accuracy.

BS EN ISO 9001



St Neots, U.K. – Cert. No. Q5907
Stonehouse, U.K. – Cert. No. FM 21106

UNI EN 29001 (ISO 9001)



Lenno, Italy – Cert. No. 9/90A



Stonehouse, U.K. – Cert. No. 0255

Use of Instructions



Warning.

An instruction that draws attention to the risk of injury or death.



Caution.

An instruction that draws attention to the risk of damage to the product, process or surroundings.



Note.

Clarification of an instruction or additional information.



Information.

Further reference for more detailed information or technical details.

Although **Warning** hazards are related to personal injury, and **Caution** hazards are associated with equipment or property damage, it must be understood that operation of damaged equipment could, under certain operational conditions, result in degraded process system performance leading to personal injury or death. Therefore, comply fully with all **Warning** and **Caution** notices.

Information in this manual is intended only to assist our customers in the efficient operation of our equipment. Use of this manual for any other purpose is specifically prohibited and its contents are not to be reproduced in full or part without prior approval of Technical Communications Department, ABB Kent-Taylor.

Health and Safety

To ensure that our products are safe and without risk to health, the following points must be noted:

1. The relevant sections of these instructions must be read carefully before proceeding.
2. Warning labels on containers and packages must be observed.
3. Installation, operation, maintenance and servicing must only be carried out by suitably trained personnel and in accordance with the information given.
4. Normal safety precautions must be taken to avoid the possibility of an accident occurring when operating in conditions of high pressure and/or temperature.
5. Chemicals must be stored away from heat, protected from temperature extremes and powders kept dry. Normal safe handling procedures must be used.
6. When disposing of chemicals ensure that no two chemicals are mixed.

Safety advice concerning the use of the equipment described in this manual or any relevant hazard data sheets (where applicable) may be obtained from the Company address on the back cover, together with servicing and spares information.

CONTENTS

SUPPLEMENTARY INSTRUCTIONS TO BOOK 3 ELECTRICAL INSTALLATION

Section	Page
1 INTRODUCTION	1
2 CABLE INFORMATION	2
2.1 IEC Installation Practice	2
2.1.1 4-Core Cable Identification	2
2.1.2 4-Core Cable Preparation	2
2.2 North American Installation Practice	3
2.2.1 6-Core Cable Identification	3
2.2.2 6-Core Cable Preparation	3
3 CABLE CONNECTIONS	4
3.1 Sensor Terminal box Connections (Remote System)	4
3.1.1 IEC Wiring Practice	4
3.1.2 North American Wiring Practice	4
3.2 Transmitter Sensor Cable Connections (Remote Transmitter Only)	5

1 INTRODUCTION

1 INTRODUCTION

The cable supplied with your MagMaster flowmeter may not be as described in Book 1 or Book 3 ELECTRICAL INSTRUCTIONS. (Cable Part Numbers are printed/embossed on the cable sheath)

The alternative cables are as follows:

STT 3200/3400 Standard 4-Core Cable as used in IEC installation practice.

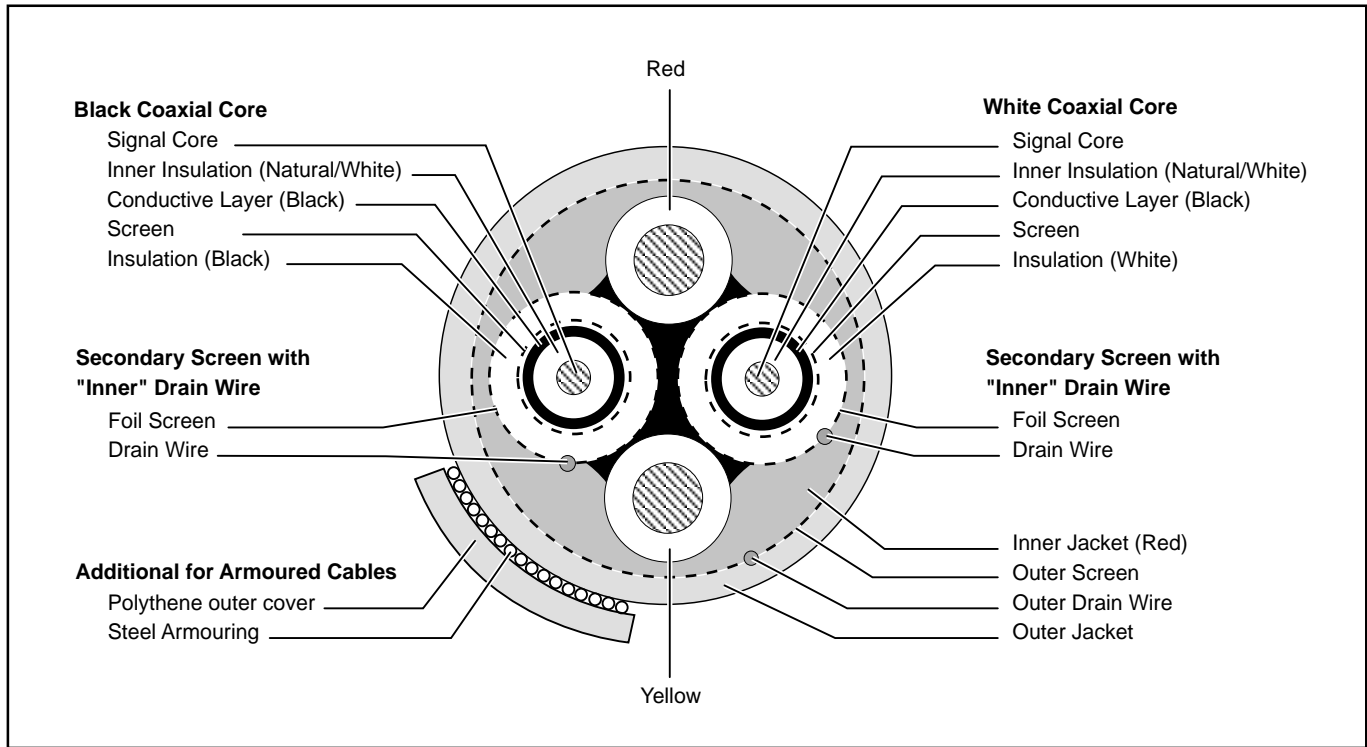
STT 3300 Armoured 4-Core Cable as used in IEC installation practice.

STT3350 Standard 6-Core Cable as used in North American installation practice, and are as described in this supplement.

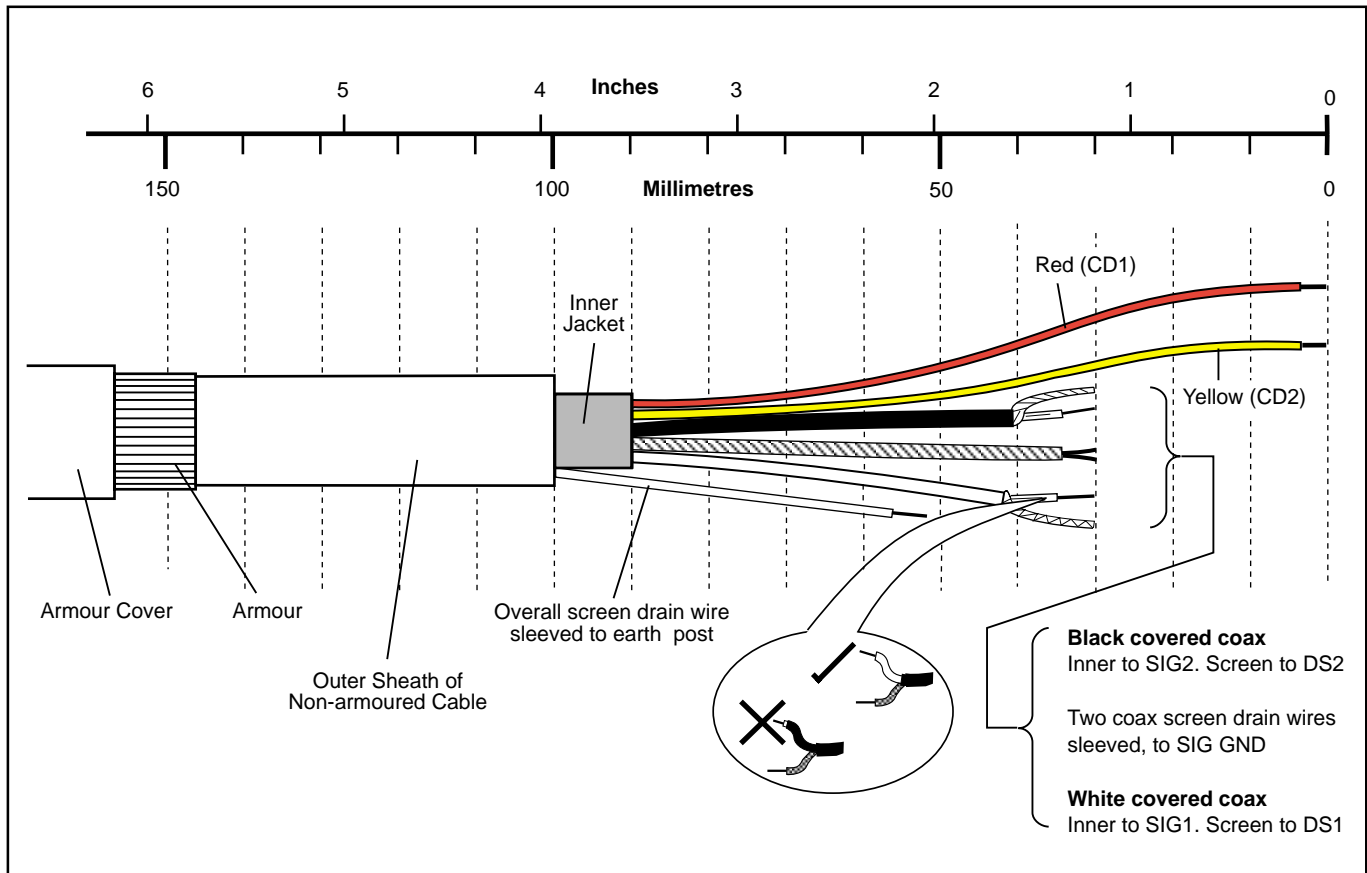
2 CABLE INFORMATION

2.1 IEC Wiring Practice

2.1.1 4-Core Cable Identification

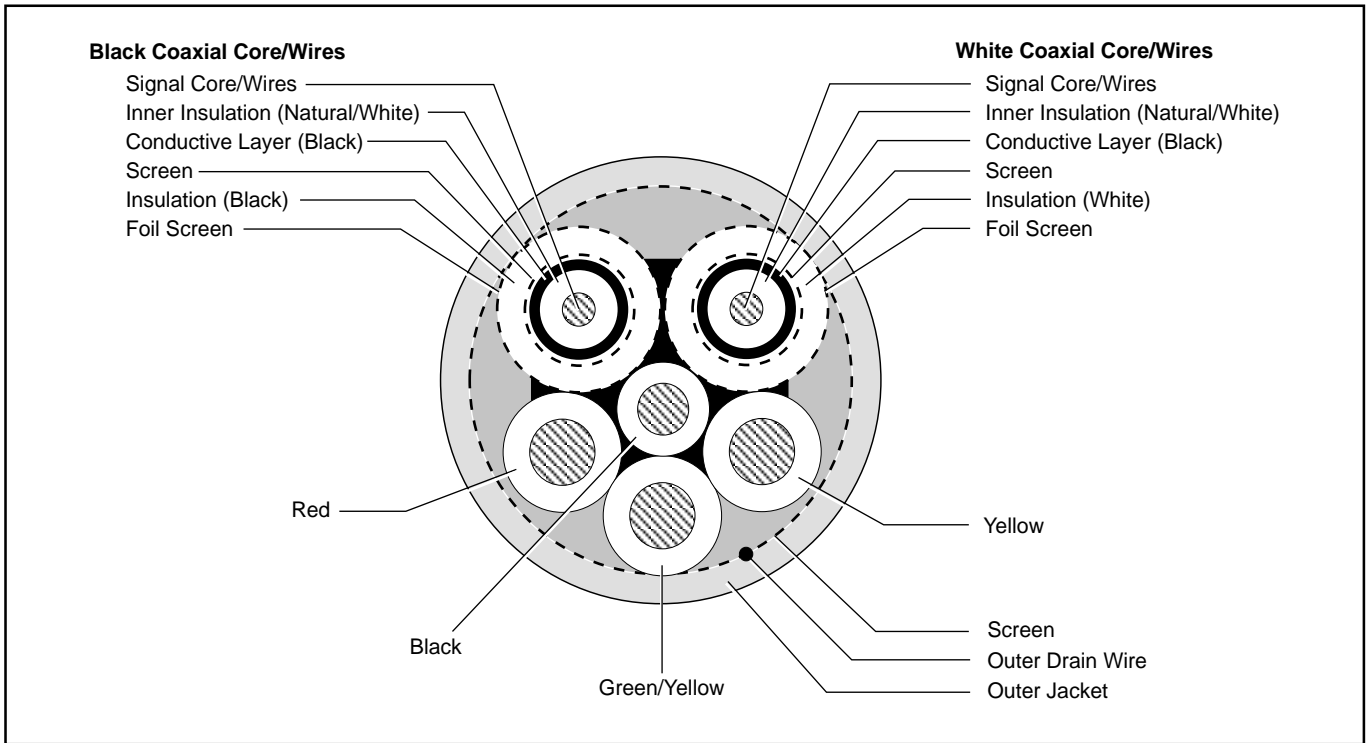


2.1.2 4-Core Cable Preparation

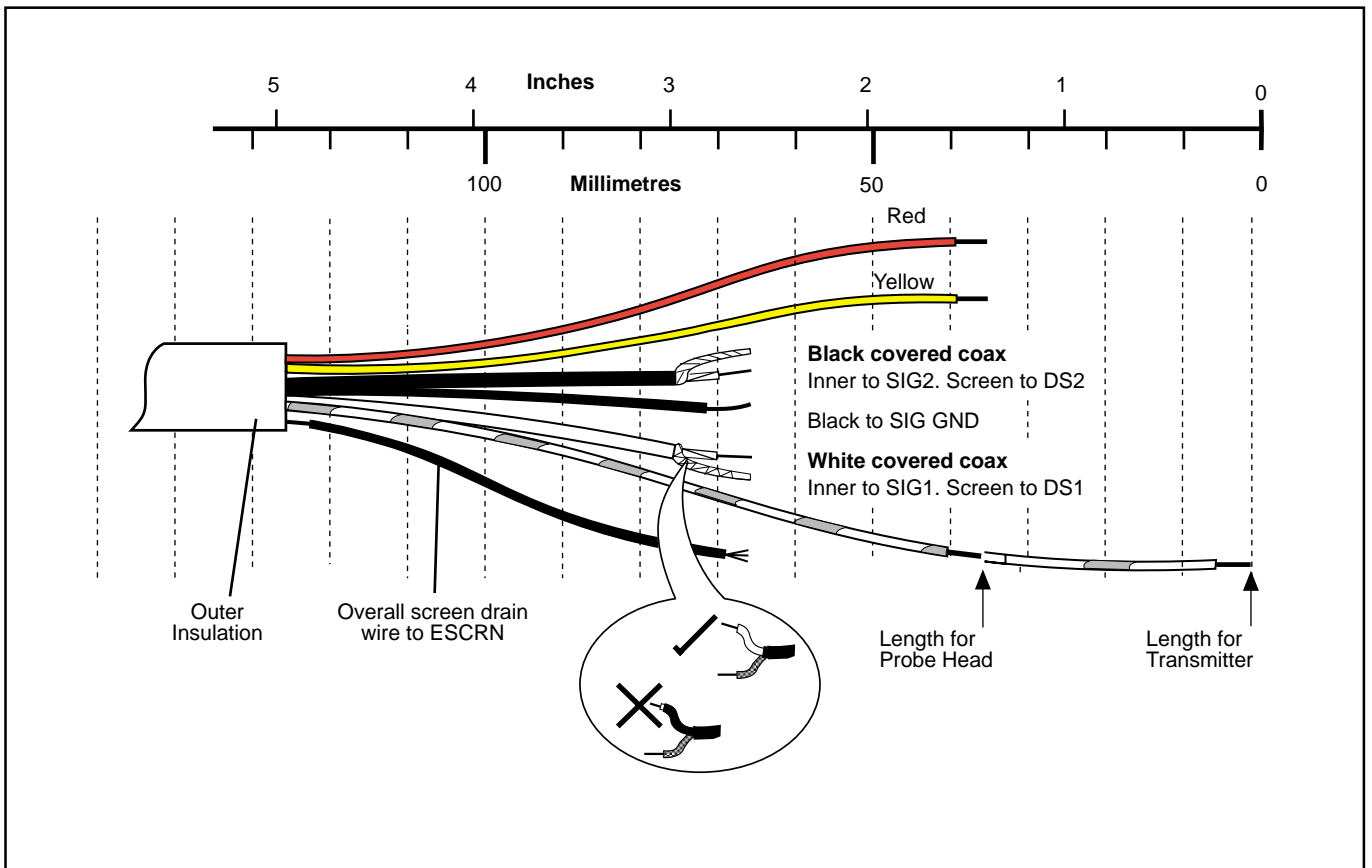


2.2 North American Wiring Practice

2.2.1 6-Core Cable Identification



2.2.2 6-Core Cable Preparation



3 CABLE CONNECTIONS

3.1 Sensor Terminal Box Connections (Remote System)



Caution.

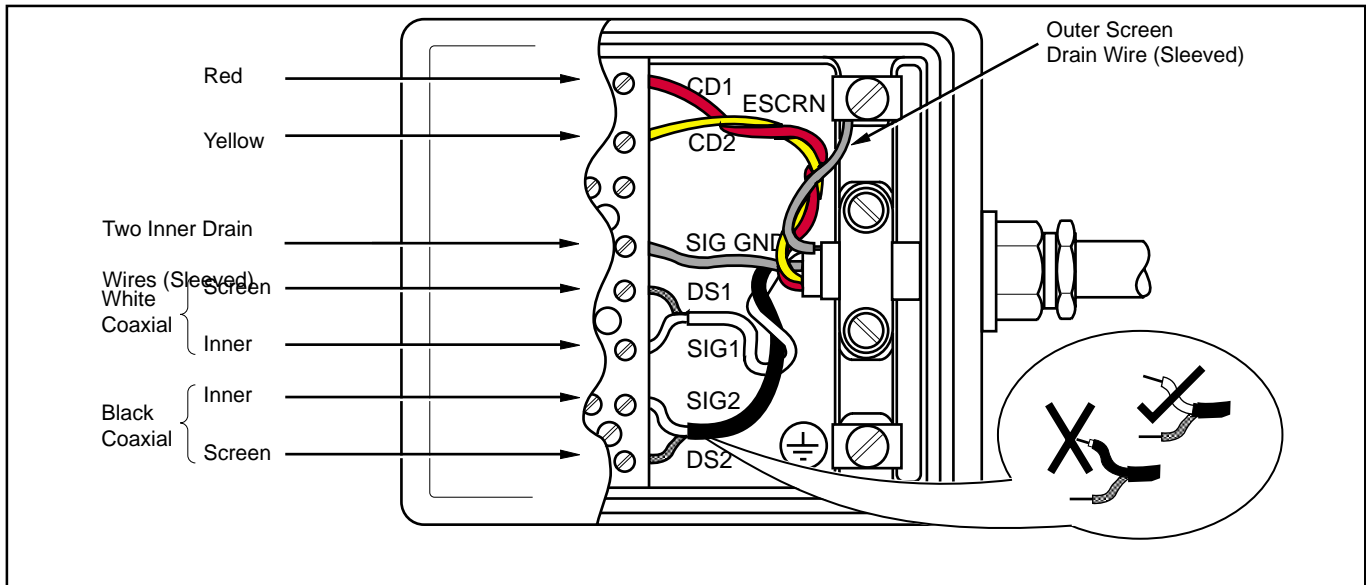
- Remove any exposed black conductive layer from under coaxial screens.
- Make connections only as shown.
- Sleeve all bare wiring.
- Twist RED and YELLOW cores lightly together.
- Twist WHITE and BLACK coaxial cables lightly together.
- Maintain Environmental Protection at all times.
- Conduit connections must provide cable entry sealing.



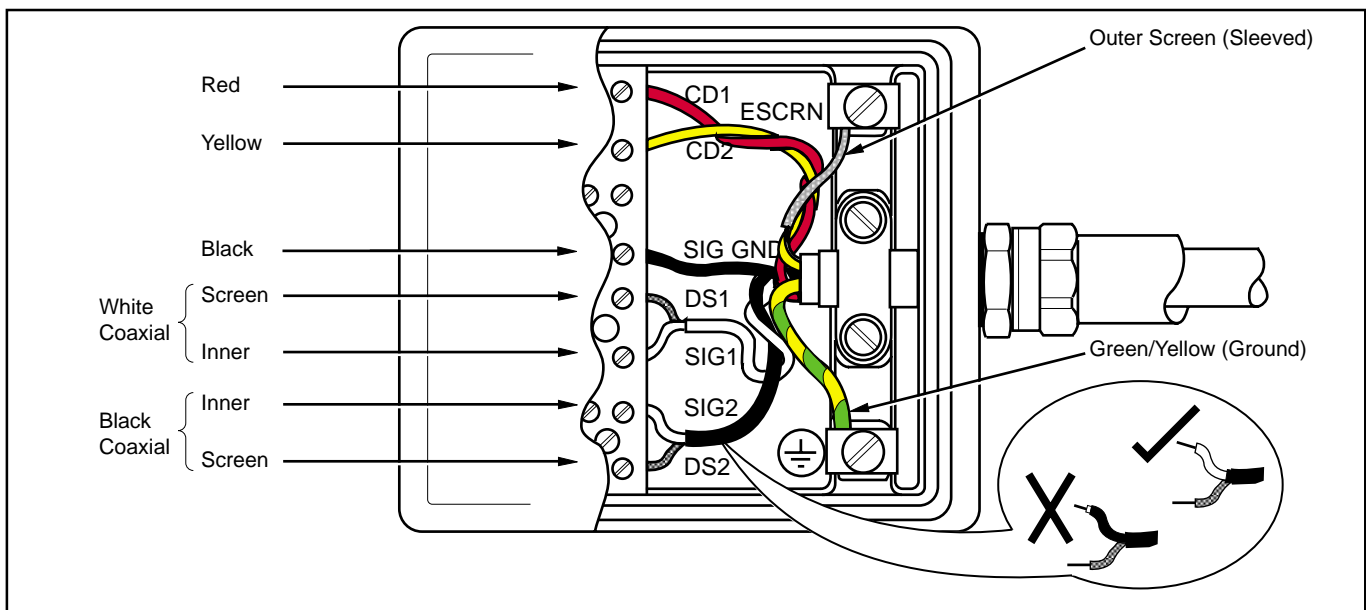
Information.

- Refer to ENVIRONMENTAL PROTECTION (BOOK 3).
- Internal appearance of Terminal Box may vary from that shown.

3.1.1 IEC Wiring Practice – General Locations only (For Hazardous Area Versions see Book 1)



3.1.2 North American Wiring Practice – General Locations and CSA-Hazardous (Non-incendive electrodes). For all other Hazardous Area Versions see Book 1.



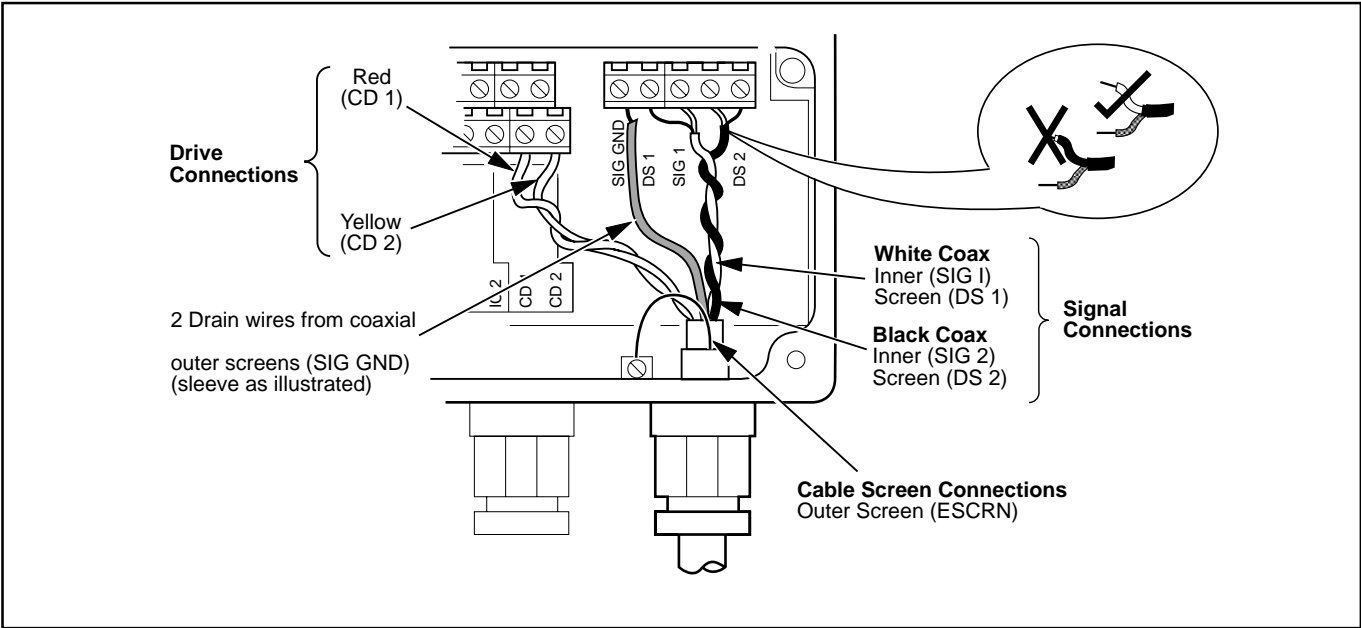
3.2 Transmitter Sensor Cable Connections (Remote Transmitter Only)



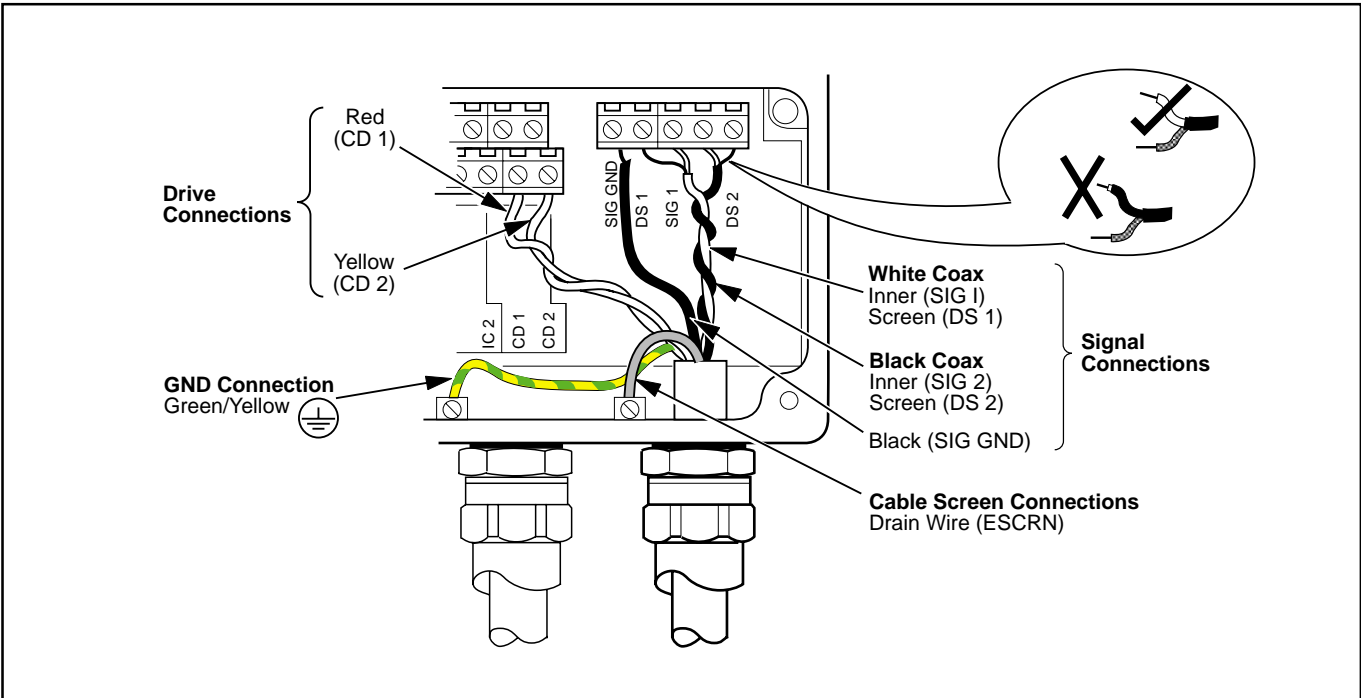
Caution.

- Remove any exposed black conductive layer from the inner insulation of both coaxial cables.
- Substitute sensor cable of any kind is not acceptable.
- Do not make connections except as shown.
- Twist cable pairs together as shown.
- Sleeve ALL bare wires.
- Sensor cable may only be joined using company supplied junction box - available separately.

3.2.1 IEC Wiring Practice



3.2.2 North American Wiring Practice



PRODUCTS & CUSTOMER SUPPORT

A Comprehensive Instrumentation Range

Analytical Instrumentation

- **Transmitters**
On-line pH, conductivity, and dissolved oxygen transmitters and associated sensing systems.
- **Sensors**
pH, redox, selective ion, conductivity and dissolved oxygen.
- **Laboratory Instrumentation**
pH and dissolved oxygen meters and associated sensors.
- **Water Analyzers**
For water quality monitoring in environmental, power generation and general industrial applications including: pH, conductivity, ammonia, nitrate, phosphate, silica, sodium, chloride, fluoride, dissolved oxygen and hydrazine.
- **Gas Analyzers**
Zirconia, paramagnetic, infrared, thermal conductivity.

Controllers & Recorders

- **Controllers**
Digital display, electronic, pneumatic. Discrete single-loop and multi-loop controllers which can be linked to a common display station, process computer or personal computer.
- **Recorders**
Circular and strip-chart types (single and multi-point) for temperature, pressure, flow and many other process measurements.

Electronic Transmitters

- **Smart & Analog Transmitters**
For draft, differential, gauge and absolute pressure measurement. Also, liquid level and temperature
- **I to P Converters and Field Indicators**

Flow Metering

- **Magnetic Flowmeters**
Electromagnetic, insertion type probes and watermeters.
- **Turbine Flowmeters**
- **Wedge Flow Elements**
- **Mass Flow Meters**
Transmitters, sensors, controllers and batch/display units.

Level Control

- **Submersible, Capacitance & Conductivity.**

Pneumatic Instrumentation

- **Transmitters**
- **Indicating Controllers**
- **Recording Controllers**

Customer Support

ABB Kent-Taylor provides a comprehensive after sales service via a Worldwide Service Organization. Contact one of the following offices for details on your nearest Service and Repair Centre.

United Kingdom

ABB Kent-Taylor Limited
Tel: +44 (0)1480 470781
Fax: +44 (0)1480 470787

United States of America

ABB Kent-Taylor Inc.
Tel: +1 716 2926050
Fax: +1 716 2736207

Italy

ABB Kent-Taylor SpA
Tel: +39 (0) 344 58111
Fax: +39 (0) 344 56278

Client Warranty

Prior to installation, the equipment referred to in this manual must be stored in a clean, dry environment, in accordance with the Company's published specification. Periodic checks must be made on the equipment's condition.

In the event of a failure under warranty, the following documentation must be provided as substantiation:

1. A listing evidencing process operation and alarm logs at time of failure.
2. Copies of operating and maintenance records relating to the alleged faulty unit.



The Company's policy is one of continuous product improvement and the right is reserved to modify the information contained herein without notice.

© 1996 ABB Kent-Taylor Printed in UK 8.96

ABB Kent-Taylor Ltd.
St. Neots,
Cambs.
England, PE19 3EU
Tel: (01480) 475321
Fax: (01480) 217948

ABB Kent-Taylor Ltd.
Analytical & Flow Group
Stonehouse, Glos.
England, GL10 3TA
Tel: (01453) 826661
Fax: (01453) 826358

ABB Instrumentation Inc.
PO Box 20550, Rochester
New York 14602-0550
USA
Tel: (716) 292 6050
Fax: (716) 273 6207

ABB Kent-Taylor SpA
22016 Lenno
Como
Italy
Tel: (0344) 58111
Fax: (0344) 56278