



mobile experts



x.com 500/501-Ex

x.com 510/511-Ex

x.com 600/601-Ex

x.com 610/611-Ex

Safety instructions



WWW.CABLEJOINTS.CO.UK
THORNE & DERRICK UK
TEL 0044 191 490 1547 FAX 0044 477 5371
TEL 0044 117 977 4647 FAX 0044 977 5582
WWW.THORNEANDDERRICK.CO.UK

Table of Contents

1. Application	19
2. Safety information	19
3. Faults and damage	19
4. Safety regulations	20
5. Ex-Data	22
5.1 X.com 5xx -Ex	
5.2 X.com 6xx -Ex	
6. Specifications	23
7. Battery	23
7.1 Changing the battery	23
7.1.1 Removing the battery	23
7.1.2 Inserting the battery	24
7.1.3 Charging the battery	25
7.2 Safety information	26
8. Repair	26
9. EC Declaration of Conformity	26
10. Declaration of conformity (X.com 5xx -Ex)	27
11. EC-Type Examination Certificate (X.com 6xx -Ex)	30

Note:

The current safety instructions, the EC Declaration of Conformity and the EU prototype testing certificate can be downloaded from the relevant product page at www.ecom-ex.com, or alternatively they can be requested directly from the manufacturer.

1. Application

The **X.com** 5xx -Ex and 6xx -Ex is an intrinsically safe, splash water-, (dust- according type of device) and impact-resistant mobile phone for industrial application in areas with an increased risk of explosion, in accordance with directive 1999/92/EC (ATEX 137) and 94/9/EC (ATEX 95).

2. Safety information

This operating manual contains information and safety regulations which are to be observed without fail for safe operation in the described conditions. Non-observance of this information and these instructions can have serious consequences or may violate regulations.

Please read these operating and safety instructions carefully before starting to use the unit!

In case of any doubt (in the form of translation or printing errors) the German language operating instructions shall apply.

3. Faults and damage

If there is any reason to suspect that the safety of the unit has been impaired, it must be withdrawn from use and removed immediately from the Ex-area. Measures must be undertaken to prevent it from being restarted accidentally.

The safety of the unit may be compromised, if, for example:

- there is visible damage to the housing.
- the unit has been subjected to excessive loads.
- the unit has been improperly stored.
- the unit has been damaged in transit.
- unit markings or inscriptions are illegible.
- malfunctions occur.

- permitted limit values have been exceeded.

4. Safety regulations

Use of this **X.com** explosion-shielded mobile phone assumes that the operator observes the conventional safety regulations and has read the certificate in order to eliminate faulty operation of the unit.

The following points are to be observed:

- The unit may not be opened inside the Ex-area; the side cover should not be unscrewed
- The battery module may not be changed inside the Ex-area!
- The battery module may only be charged outside the Ex-area and only then using the following appropriate chargers: universal charger LGX 00, desktop charger DCX 00, Car-Kit CKX 00, car charger ALX 00
- The battery module may only be charged in a temperature range of 0 °C - 45 °C.
- Only accessories approved by ecom instruments GmbH may be used.
- The **X.com** 5xx -Ex and 6xx -Ex is not waterproof, therefore keep it dry!
- Observe the corresponding laws that are in force in the respective country regarding the use of mobile phones while operating a vehicle!
- Use of the mobile phone in an airplane is not permitted!
- Switch off the mobile phone when in close proximity to medical instruments and if you are requested to do so by corresponding regulations!
- Manufacturers of cardiac pacemakers recommend a minimum distance of 15.3 cm (6") is maintained between a mobile phone and a pacemaker.
- Do not switch on the mobile phone when the use of such devices is prohibited, as it may cause interference or result in danger.

Only valid for model X.com 50x -Ex

- Only the original battery module AMX 50 (Li-Polymer 3.7V) should be used!
- The charging socket cover must be firmly engaged in the unit.
- When changing the battery (after use in the dust Ex-area) the unit and the battery terminals are to be checked for cleanliness and cleaned, if necessary, using suitable means (brush, compressed air, etc.).
- It must be ensured that the unit is not taken into zones 0 and 1 or 20 and 21!

Only valid for model X.com 51x -Ex

- In principle the unit should not be taken into the dust Ex-area!
- Only the original battery module AMX 51 (Li-Polymer 3.7V) should be used!
- The exposed interface contacts should always be checked for cleanliness and cleaned, if necessary, using suitable means (e.g. brush, compressed air, moistened cloth / diluted soapy water or commercially available handwash).
- It must be ensured that the unit is not taken into zones 0 and 1 or 20, 21 and 22!

Only valid for model X.com 60x -Ex

- Only the original battery module AMX 60 (Li-Polymer 3.7V) should be used!
- The charging socket cover (safety plug) must be firmly engaged in the unit.
- When changing the battery (after use in the dust Ex-area) the unit and the battery terminals are to be checked for cleanliness and cleaned, if necessary, using suitable means (brush, compressed air, etc.).
- It must be ensured that the unit is not taken into zones 0 or 20!

Only valid for model X.com 61x -Ex

- In principle the unit should not be taken into the dust Ex-area!
- Only the original battery module AMX 61 (Li-Polymer 3.7V) should be used!
- The exposed interface contacts should always be checked for cleanliness and cleaned, if necessary, using suitable means (e.g. brush, compressed air, moistened cloth / diluted soapy water or commercially available handwash).

- It must be ensured that the unit is not taken into zones 0 or 20, 21 and 22!

5. Ex-Data

5.1 X.com 5xx -Ex

EC-Declaration of conformity: ZELM 08 ATEX 3380 X

Ex-Designation:

X.com 50x -Ex	X.com 51x -Ex
 II 3G Ex ic IIC T4  II 3D Ex icD 22 T130°C	 II 3G Ex ic IIC T4

X.com 50x -Ex and **X.com** 51x -Ex:

Approved for zone 2, device group II, explosion group IIC (explosive gases, vapours or mist), temperature class T4.

Only **X.com** 50x -Ex:

Approved for zone 22, device group II, explosive dust, temperature T130°C

5.2 X.com 6xx -Ex

EC-Type Examination Certificate No.: ZELM 08 ATEX 0372 X

Ex-Designation:

X.com 60x -Ex	X.com 61x -Ex
 II 2G Ex ib IIC T4  II 2D Ex ibD 21 T130°C	 II 2G Ex ib IIC T4

X.com 60x –Ex and **X.com** 61x –Ex:

Approved for zone 1, device group II, explosion group IIC (explosive gases, vapours or mist), temperature class T4.

Only **X.com** 60x –Ex:

Approved for zone 21, device group II, explosive dust, temperature T130 °C

6. Specifications

Networks:	GSM 900 MHz / 1,800 MHz
Power supply:	Li-ion rechargeable battery with 2000 mAh capacity
Dimensions:	X.com 5xx –Ex: 142 x 64 x 36 mm X.com 60x –Ex: 153 x 64 x 36 mm
Weight:	approx. 240g
CE-Designation:	CE ₀₁₀₂
Ambient temperature:	-20 °C ... +50 °C
Protection rating:	IP64

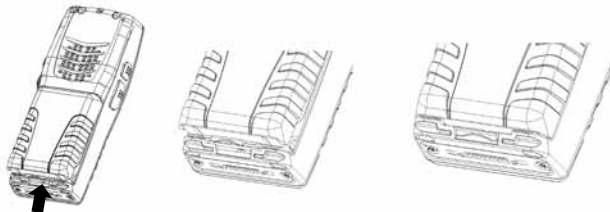
7. Battery

7.1 Changing the battery

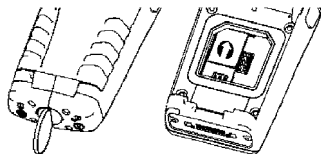
The AMX 5x or 6x for the **X.com** unit may only be changed outside the Ex-area. (The model number AMX 60 may be followed by additional letters or numbers, which are of no relevance to the Ex-area, e.g. AMX 50 / AMX 51 / AMX 60 or AMX 61.) Only those battery modules which are approved by the manufacturer may be used. Other battery modules may not be taken.

7.1.1 Removing the battery

Follow these steps to remove the battery (for example, when exchanging the SIM card): After removing the charging socket cover (safety plug for **X.com** 60x –Ex / not applicable for **X.com** 51x –Ex and 61x-Ex) turn the phone over. Exert pressure in the centre of the recess on the cover and then remove it.



After removing the charging socket cover (**X.com** 50x -Ex) respectively the safety plug (**X.com** 60x -Ex) - not applicable for **X.com** 51x -Ex and **X.com** 61x -Ex -, turn the mobile phone.



7.1.2 Inserting the battery

Proceed as follows to insert the battery: Insert the battery module with the two catches (located at the top of the battery) placed in the recesses in the mobile phone. Then press the bottom of

the battery module into the phone until the retaining spring audibly clicks in place. Mount the charging socket cover (**X.com** 50x –Ex) respectively the safety plug (**X.com** 60x –Ex)

7.1.3 Charging the battery



Your phone is supplied with power via a rechargeable battery. Before a new battery can be used for the first time it must have been charged for at least 4 hours. The full battery performance is only obtained after a few operating cycles.

If the battery charge level falls below the operating value, the phone will indicate this (the empty battery symbol flashes). When this appears charge the battery for at least 15 minutes before making any other calls, in order to prevent your call from being interrupted.

Proceed as follows to charge the battery:

Connect the charger to a wall outlet.

Insert the end of the charging plug into the designated charging socket.

The phone's battery will now be charged. The battery symbol indicates that the battery is being charged. When the battery is fully charged the charging process stops automatically. Remove the charging plug from the phone. Batteries can become warm during the charging process. This is a normal occurrence.

NOTE

- There is a risk of explosion if the battery is not exchanged properly or if it is exposed to a flame.
- Do not short-circuit the battery.
- The battery does not contain any parts that can be exchanged.
- The casing of the battery should not be opened under any circumstances.
- Only use ecom charging accessories (see point 4).
- The use of other chargers or batteries is not permitted. If such items are used, your Ex-protection will expire.
- Used batteries are to be disposed of properly.

- If you do not intend using the phone for a prolonged period, you should remove the battery.
- We strongly advise against connecting your phone to the charger if the battery is not inserted.
- If the battery is completely discharged, the phone will not switch on. Connect the phone to the charger. After charging for a few minutes the phone will switch on. When the Start option appears in the display, you can use the phone again.

7.2 Safety information

Damaged batteries and chargers should be removed from use and sent to ecom instruments GmbH for inspection.

Attention:

- Extreme temperatures can have an adverse effect on charging the battery module AMX 5x or AMX 6x.
- Do not dispose of the battery module in a fire!
- Do not short-circuit the battery module!
- Dispose of the battery module in accordance with local regulations. Do not dispose of the battery module with normal household waste.

8. Repair

Repairs are to be conducted by ecom instruments GmbH or by personnel or service centres authorised by ecom instruments GmbH, because the safety of the unit needs to be tested after repairs are implemented.

9. EC Declaration of Conformity

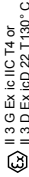
Further details regarding the declaration of conformity can be found at the following address:
<http://www.ecom-ex.com> in the download area.

10. Declaration of Conformity

Declaration of conformity

Translation

- (1) Devices and protection systems for proper designated use in areas with an increased risk of explosion – **Directive 94/9/EC**
- (2) EC type approval test certificate number
ZELM 08 ATEX 3380 X
- (3) Device:
Explosion-protected mobile phone X.com 50x -Ex and X.com 51x -Ex
- (4) Manufacturer:
ecom instruments GmbH
- (5) Address:
D-97959 Assamstadt
- (6) The design of this device and its various approved embodiments are defined in the attachment to this type approval test certificate..
- (7) As the nominated body no. 0820 in accordance with article 9 of the EC council directive dated March 23, 1994 (94/9/EC), the Testing and Certification Body ZELM Ex certifies conformance with the basic health and safety requirements for the design and construction of devices and protection systems for proper designated use in areas with an increased risk of explosion in accordance with Appendix II of the directive.
- (8) The results of the examination are specified in the confidential inspection report No. ZELM Ex 0990724642.
- (9) The basic health and safety requirements are met by virtue of conformance with
EN 60079-0:2006 EN 60079-11:2007 EN 61241-0:2006 EN 61241-1:2006
- (10) If the certification number is followed by an "X", then this indicates that special conditions exist for the safe operation of the device. These special conditions are contained in the attachment to this certificate.
- (11) This EC type approval test certificate only refers to the construction/design, checking and testing of the specified device or protection system in accordance with directive 94/9/EC. Further requirements contained in this directive may apply with regard to the manufacturing process and the supply of the device or protection system. Such requirements are not covered by this certification.
- (12) The device must be labelled with the following information:



Brunswick, 26.01.2009

Certification body ZELM ex
Dipl.-Ing Herald Zelm

Page 1 of 3

Declarations of conformity without a signature and stamp are not valid.
This declaration of conformity may only be circulated without alteration.

Extracts or alterations are subject to approval by the Prüf- und Zertifizierungsstelle ZELM ex

ZELM ex
Prüf- und Zertifizierungsstelle
Sieggraben 56 D-38124 Brunswick

Attachment

(13) Declaration of conformity ZELM 08 ATEX 3380 X

(14) Description of the device

(15) The explosion-protected mobile phones X.com 50x -Ex and X.com 51x -Ex provide communication in explosive areas.

The "x" in the type designation is replaced by a digit or a letter to distinguish between permitted versions of the device (e.g. software versions).

The devices should only be operated with the corresponding battery module and they should only be charged outside the explosive area using the corresponding charging accessory. The housing protection rating for the X.com 50x -Ex mobile phone is IP 64.

Permissible ambient temperature range: -20° C to +50° C

Models and classification:

Device type	X.com 50x -Ex	X.com 51x -Ex
Designation	II 3G Ex ic IIC T4 II 3D Ex icD 22 T130° C Ta -20° C - +50° C	II 3G Ex ic IIC T4 Ta -20° C - +50° C
Covering of the interface	Interface cover	- none -
Battery type	AMX 50*	AMX 51*
Inscription in the battery compartment	Only for AMX 50	Only for AMX 51
Information on the battery	AMX 50* Only for X.com 50x -Ex	AMX 51* Only for X.com 51x -Ex

The "*" in the type designation of the battery module is replaced by a digit or a letter to distinguish between permitted versions.

Page 2 of 3

Declarations of conformity without a signature and stamp are not valid.

This declaration of conformity may only be circulated without alteration.

Extracts or alterations are subject to approval by the Prüf- und Zertifizierungsstelle ZELM ex

ZELM ex

Prüf- und Zertifizierungsstelle

Siekgraben 56 D-38124 Brunswick

Attachment to the declaration of conformity ZELM 08 ATEX 3380 X

Electrical data

Power supply:

from a corresponding battery module AMX 50* or AMX 51*
The internal electrical circuits are intrinsically safe.

Transmitting power:

up to 2 W

Permissible ambient temperature range: -20° C to + 50° C

(16) Test report No.

ZELM Ex 0990724642

(17) Special conditions

1. The safety instructions are to be observed.

2. The devices may only be charged outside the explosive area using the corresponding charger or the appropriate charging accessories.

3. Only the AMX 50* or AMX 51* battery modules may be used.

4. Opening or changing the battery modules is not permitted within the explosive area.

5. The interface cover of the X.com 50x -Ex must be firmly secured in the designated manner within the explosive area.

(18) Basic health and safety requirements
satisfied by virtue of the standards

Brunswick, 26.01.2009

Certification body ZELM ex

Dipl.-Ing Harald Zelm

Page 3 of 3

Declarations of conformity without a signature and stamp are not valid.

This declaration of conformity may only be circulated without alteration.

Extracts or alterations are subject to approval by the Prüf- und Zertifizierungsstelle ZELM ex

ZELM ex

Prüf- und Zertifizierungsstelle

Siekgraben 56 D-38124 Brunswick

Prüf- und Zertifizierungsstelle
ZELM Ex
EC type approval test certificate

Translation

- | | |
|------|--|
| (2) | Devices and protection systems for proper designated use in areas with an increased risk of explosion – Directive 94/9/EC |
| (3) | EC type approval test certificate number
ZELM 08 ATEX 0372 X |
| (4) | Device:
Explosion-protected mobile phone X.com 60x –Ex |
| (5) | Manufacturer:
ecom Instruments GmbH |
| (6) | Address:
0-97959 Assamstadt |
| (7) | The design of this device and its various approved embodiments are defined in the attachment to this type approval test certificate. |
| (8) | As the nominated body no. 0820 in accordance with article 9 of the EC council directive dated March 23, 1994 (94/9/EC), the Testing and Certification Body ZELM Ex certifies conformance with the basic health and safety requirements for the design and construction of devices and protection systems for proper designated use in areas with an increased risk of explosion in accordance with Appendix II of the directive.
The results of the test are documented in the confidential test report no. ZELM Ex 1000724606. |
| (9) | The basic health and safety requirements are met by virtue of conformance with
EN 60079-0:2006/EN 60079-1:2007 EN 61241-0:2006 EN 61241-11:2006 |
| (10) | If the certification number is followed by an "X", then this indicates that special conditions exist for the safe operation of the device. These special conditions are contained in the attachment to this certificate. |
| (11) | This EC type approval test certificate only refers to the construction/design, checking and testing of the specified device or protection system in accordance with directive 94/9/EC. Further requirements contained in this directive may apply with regard to the manufacturing process and the supply of the device or protection system. Such requirements are not covered by this certification. |
| (12) | The device must be labelled with the following information: |

Ex II 2 G Ex ib IIC T4
Ex II 2 O Ex ib O 21 T130°C

Certification body ZELM Ex

Dipl.-Ing. Harald Zelm

Brunswick. 01.04.2008

Page 1/2

EC type approval test certificates without a signature and stamp are not valid.
This EC type approval test certificate may only be circulated without alteration.
Extracts or alterations are subject to approval by the Prüf- und Zertifizierungsinstitute (Test and Certification Body) ZELM Ex.
Prüf- und Zertifizierungsinstitute ZELM Ex • Siekeraben 56 • D-38124 Brunswick

Test and Certification Body ZELM Ex

- (13) Attachment
- (14) EC type approval test certificate ZELM 08 ATEX 0372 X
- (15) Description of the device
 The explosion-protected mobile phone X.com 60x -Ex provides communication in explosive areas.
 The "x" in the type designation is replaced by a digit or a letter to distinguish between permitted versions of the device (e.g. software versions).
 The device should only be operated with the corresponding battery module and it should only be charged outside the explosive area using the corresponding charging accessory.
- Electrical data
 Power supply: from a corresponding battery module
 AMX60*
 (The "x" in the type designation is replaced by a digit or a letter to distinguish between permitted versions).
 The internal electrical circuits are intrinsically safe.
- Transmitting power up to 2W
- permissible ambient temperature range -20 °C to +50 °C
- (16) Test report no.
 ZELM Ex 1000724606
- (17) Special conditions
1. The safety instructions are to be observed.
 2. The device may only be charged outside the explosive area using the corresponding charger or the appropriate charging accessories.
 3. Only the AMX 60* battery module may be used!
 4. Opening or changing the battery module is not permitted within the explosive area.
 5. The interface cover must be firmly secured in the designated manner within the explosive area.

Certification body ZELM Ex

Dipl.-Ing. Harald Zeim

Brunswick, 01.04.2008

Page 2/2

EC type approval test certificates without a signature and stamp are not valid.
 This EC type approval test certificate may only be circulated without alteration.
 Extracts or alterations are subject to approval by the Prüf- und Zertifizierungsstelle (Test and Certification Body) ZELM Ex.
 Prüf- und Zertifizierungsstelle ZELM Ex • Siekgraben 56 • D-38124 Brunswick

1st Amendment

(Amendment in accordance with EC Directive 94/9, appendix III number 6)

to the EC type approval test certificate

Translation

ZELM 08 ATEX 0372 X

Device: Explosion-protected mobile phone X.com 60x -Ex
 Manufacturer: ecom instruments GmbH
 Address: D-97959 Assmannstadt

Description of the amendment

The 1st amendment concerns the expansion of the explosion-protected mobile phone X.com 60x -Ex series to include a model that is exclusively intended for use in areas with an explosive gas environment.

The type designation of this model is: X.com 61 x-Ex.

The "x" in the type designation is replaced by a digit or a letter to distinguish between permitted versions of the device (e.g. software versions).

Furthermore, minor modifications of the internal configuration have been taken into account in the 1st amendment to the EC type approval test certificate. The conformity of the device with the current standards has been verified.

The devices should only be operated with the corresponding battery module and they should only be charged outside the explosive area using the corresponding charging accessory.

The housing protection rating for the X.com 60x mobile phone is IP 64.

In the future the explosion-protected X.com 60x -Ex and X.com 61 x -Ex mobile phones may also be manufactured in accordance with this 1st amendment and designated as follows:

Ignition protection class / designation:

 II 2 G Ex Ib IIC T4 or
 II 2 D Ex IBD 21 T130 ° C

Electrical data

Power supply:

from a corresponding battery module AMX 60*
 or AMX61*.

The internal electrical circuits are intrinsically safe.

Transmitting power:

Permissible ambient temperature range: -20° C to +50° C

All additional technical specifications as well as the information specified in the EC type approval test certificate remain unaffected and are also applicable for this 1st amendment.

Page 1 of 2

EC type approval test certificates without a signature and stamp are not valid.

This EC type approval test certificate may only be circulated without alteration. Extracts or alterations are subject to approval by the Prüf- und Zertifizierungsstelle (Test and Certification Body) ZELM ex

ZELM ex

Prüf- und Zertifizierungsstelle

Siekgaben 56

D-38124 Brunswick

1st Amendment
to the EC type approval test certificate ZELM 08 ATEX 0372 X

Models and classification:

Device type Designation	X.com 60x -Ex II 2G Ex Ib IIC T4 IIP2ExibD 21 T130° C Ta -20° C - +50° C	X.com 61x-Ex II 2G Ex Ib IIC T4 Ta -20° C - +50° C
Covering of the interface	Safety Plug	- none -
Battery type	AMX 60*	AMX 61*
Inscription in the battery compartment	Only for AMX 60	Only for AMX 61
Information on the battery	AMX 60*	AMX 61*
The *** in the type designation of the battery module is replaced by a digit or a letter to distinguish between permitted versions.	Only for X.com 60x -Ex	Only for X.com 61x-Ex

Special conditions:

- The safety instructions are to be observed.
- The devices may only be charged outside the explosive area using the corresponding charger or the appropriate charging accessories.
- Only the AMX 60* or AMX 61* battery modules may be used!
- Opening or changing the battery modules is not permitted within the explosive area.
- The interface cover of the X.com 60x -Ex must be firmly secured in the designated manner within the explosive area.

Test report No.

ZELM Ex 1760824672

Basic health and safety requirements

The conformity of the device with the current standards has been verified within the scope of the 1st amendment.

Furthermore, the basic health and safety requirements are met by virtue of conformance with:

EN 60079-0:2006 EN 61241-0:2006 EN 61241-11:2007 EN 61241-0:2006 EN 61241-11:2006

Brunswick, 30.01.09

Certification body ZELM ex

Dipl.-Ing. Harald Zelm

Page 2 of 2

EC type approval test certificates without a signature and stamp are not valid.

This EC type approval test certificate may only be circulated without alteration. Extracts or alterations are subject to approval by the Prüf- und Zertifizierungsstelle ZELM ex

ZELM ex

Prüf- und Zertifizierungsstelle
Siekgraben 56

D-38124 Brunswick

*Kommunikation
Mobile Computing
Portable Handlampen
Mess- & Kalibriertechnik*

*Communication
Torches/Flashlights
Mobile Computing
Measuring & Calibration*

Copyright© 2009 ecom instruments GmbH.

Der Inhalt dieses Dokuments darf ohne vorherige schriftliche Genehmigung durch die ecom instruments GmbH in keiner Form, weder ganz noch teilweise vervielfältigt, weitergegeben, verbreitet oder gespeichert werden.

Der Inhalt dieses Dokuments wird so präsentiert, wie er aktuell vorliegt. Die ecom instruments GmbH übernimmt weder ausdrücklich noch stillschweigend irgendeine Gewährleistung für die Richtigkeit oder Vollständigkeit des Inhalts dieses Dokuments, einschließlich, aber nicht beschränkt auf die stillschweigende Garantie der Marktauglichkeit und der Eignung für einen bestimmten Zweck, es sei denn, anwendbare Gesetze oder Rechtsprechungen schreiben zwingend eine Haftung vor. Die ecom instruments GmbH behält sich das Recht vor, jederzeit ohne vorherige Ankündigung Änderungen an diesem Dokument vorzunehmen oder das Dokument zurückzuziehen.

Copyright© 2009 ecom instruments GmbH.

The contents of this document, either in part or in their entirety, may not be reproduced, forwarded, distributed or saved in any way without ecom instruments GmbH prior written consent.

The contents of this document are presented as they currently exist. ecom instruments GmbH does not provide any express or tacit guarantee for the correctness or completeness of the contents of this document, including, but not restricted to, the tacit guarantee of market suitability or fitness for a specific purpose unless applicable laws or court decisions make liability mandatory. ecom instruments GmbH reserves the right to make changes to this document or to withdraw it any time without prior notice.



WWW.CABLEJOINTS.CO.UK
THORNE & DERRICK UK
TEL 0044 191 490 1547 FAX 0044 477 5371
TEL 0044 117 977 4647 FAX 0044 977 5582
WWW.THORNEANDDERRICK.CO.UK