

## APPENDIX 11- ~~CABLE IDENTIFICATION~~

**The following text will be effective until [1<sup>st</sup> July 2011].**

A11.1 Within three months of the date of the first issue of this Appendix, for whole current metering, load-carrying conductors shall be marked either L and N for single phase supplies, or L1, L2, L3 and N for polyphase supplies, whenever metering work is carried out. The markings shall be applied as a minimum:

- a) at the meter terminals (except the incoming terminals where security devices are fitted); and
- b) at any equipment fitted by a MOCOPA<sup>®</sup> Operator, Distribution Business or UMetS provider on the outgoing side of the meter which interfaces to the customer's installation (eg isolation/supply switch, timeswitch, terminal blocks).

The markings may be by printed tape, tag or other suitable permanent medium.

A11.2 With immediate effect, the MOCOPA<sup>®</sup> Operator shall only connect a new customer's circuit provided it is clearly and unambiguously identified at the end to be connected, either by colour or marking (eg L, L1, L2, L3, N), in accordance with the current version of BS 7671.

A11.3 By April 2006, MOCOPA<sup>®</sup> Operators, Distribution Businesses and UMetS providers will adopt the new conductor colours for load carrying conductors they provide for all new and replacement wiring. For avoidance of doubt, the insulation of polyphase phase conductors may be either

- a. all brown (but marked L1, L2, L3 at both ends\*) or
- b. brown, black and grey (and additionally marked in accordance with a).

(\*for conductors of less than 500mm in length and visible throughout, marking at one end may be considered acceptable)

All neutral conductors shall have blue insulation and marked N in accordance with a.

A11.4 For avoidance of doubt, the outer sheath may be any colour. This may include grey. It is recommended that only one outer sheath colour is used for new and replacement cables for both phase and neutral conductors.

A11.5 By April 2006, Distribution Businesses adopt the BEBS 12 standard ferruling marking at the interface (test terminal block and/or fuses/link) for all new and altered wiring. At the Distribution Business terminations, the markings shall be:

CTs:

D11, D10, D31, D30, D51, D50 (odd is "feed")

(Where a common return is used, then D10, D30, D50 become D70)

Metering Potentials:

E10 or E11, E30 or E31, E50 or E51

(depending on whether the interface is the fuse/link or the test terminal block after the fuse).

**Comment [THC1]:** Need to make corresponding change to where appendix is referenced and index

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A11.6 By April 2006, Distribution Business CT metering secondary voltage and current conductors shall be either:

- a) all one colour; or
- b) brown, black, grey (phase colours) and blue (neutral).

for all new and altered wiring.

A11.7 By April 2006, MOCOPA<sup>®</sup> Operators shall adopt the BEBS 12 ferruling marking for all new and altered CT metering wiring, and all CT metering secondary voltage and current conductors shall be:

- a) all one colour; or
- b) Brown, black, grey (phase colours) and blue (neutral).

For avoidance of doubt, this may be a different colour to that provided by the Distribution Business. Auxiliary wiring (eg pulse, rate change and communications signals) does not need to conform, but should be suitably identified.

For clarity, the BEBS12 requirements in A11.5 and A11.7 secure a clear identification of the different conductors and should be adopted as best practice for identification.

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**The following text will be effective from [1<sup>st</sup> July 2011]**

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A11.1 For whole current metering, load-carrying conductors shall be marked either L and N for single phase supplies, or L1, L2, L3 and N for polyphase supplies, whenever metering work is carried out. The markings shall be applied as a minimum:

a) at the meter terminals (except the incoming terminals where security devices are fitted); and

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b) at any equipment fitted by a MOCOPA<sup>®</sup> Operator, Distribution Business or UMetS provider on the outgoing side of the meter which interfaces to the customer's installation (eg isolation/supply switch, timeswitch, terminal blocks).

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The markings may be by printed tape, tag or other suitable permanent medium.

A11.2 The MOCOPA<sup>®</sup> Operator or Distribution Business shall only connect a new customer's circuit provided it is clearly and unambiguously identified at the end to be connected, either by colour or marking (eg L, L1, L2, L3, N) in accordance with the current version of BS 7671.

**Comment [THC2]:** Added to allow for scenario where Distributor connects "large" LV tails directed into LV distribution switchgear

A11.3 For single insulated cables, or the insulation of insulated and sheathed cable, the MOCOPA<sup>®</sup> Operators, Distribution Businesses and UMetS providers shall use the following colours where they provide new or replacement cables.

The insulation of the line conductors of a polyphase phase supply shall be either:

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a. all brown and marked L1, L2, L3 at both ends, or

b. brown, black and grey and marked L1, L2, L3 at both ends.

All neutral conductors shall have blue insulation and marked N at both ends.

For conductors of less than 500mm in length and clearly visible throughout, marking at one end may be considered acceptable.

A11.4 For insulated and sheathed cables the sheath may be the same colour as the insulation (as defined in A11.3). Where the sheath colour is not the same as the insulation, then it should be a colour other than brown, black, grey, blue, yellow, red, green or green-yellow, i.e. not any colour that is currently, or has historically, been used to identify line, neutral or earth conductors.

Where cables between the cut-out and outgoing side of the metering equipment require replacement then all cables should be replaced by cables which comply with the A11.1 A11.3 and A11.4.

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A11.5 Distribution Businesses will use the BEBS 12 standard ferruling marking at the interface (test terminal block and/or fuses/link) for all new and altered wiring. At the Distribution Business terminations, the markings shall be:

CTs:

D11, D10, D31, D30, D51, D50 (odd is "feed")

(Where a common return is used, then D10, D30, D50 become D70)

Metering Potentials:

E10 or E11, E30 or E31, E50 or E51

(depending on whether the interface is the fuse/link or the test terminal block after the fuse).

A11.6 Distribution Business CT metering secondary voltage and current conductors for all new and altered wiring shall be either:

- a) all one colour; or
- b) brown, black, grey (phase colours) and blue (neutral).

A11.7 MOCOPA<sup>®</sup> Operators shall use the BEBS 12 ferruling marking for all new and altered CT metering wiring, and all CT metering secondary voltage and current conductors shall be:

- a) all one colour; or
- b) brown, black, grey (phase colours) and blue (neutral).

For avoidance of doubt, this may be a different colour to that provided by the Distribution Business. Auxiliary wiring (eg pulse, rate change and communications signals) does not need to conform, but should be suitably identified.

For clarity, the BEBS12 requirements in A11.5 and A11.7 secure a clear identification of the different conductors and should be adopted as best practice for identification.

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