IEC 61131-2
(Second edition – 2003)

Programmable controllers –
Part 2: Equipment requirements and tests

CORRIGENDUM 1

Page 10

1.1 Scope

Eighth paragraph, item e)

Instead of:

…(Clauses 7, 10 and 13);

read:

…(Clauses 7, 10 and 14);

Eighth paragraph, item f)

Instead of:

…(5.12, 8.5, 11.18 and Clause 13).

read:

…(Clauses 6, 9, and 12).

Page 11

1.2 Compliance with this standard

Delete last paragraph and place it in Subclause 2.5 after the fifth indent.

1.3 Normative references

Add to the list of normative references:

IEC 60364 (all parts), *Electrical installations of buildings*

Page 13

2 Type tests

First paragraph, first indent:

Instead of:

…given in 5.12, 8.5 and 11.18,

read:

…given in Clauses 6, 9 and 12,

2.1 Equipment to be tested (equipment under test/EUT)

Sixth paragraph

Instead of:

NOTE The application of statistical criteria based on samples for a large number of I/Os (for example, >100) may be considered.

read:

NOTE It may be appropriate to consider statistical criteria based on samples, for a large number of I/Os (for example, >100).

Eighth paragraph

Indent this paragraph and the following three.

Page 20

3.29 insulation

After note 1, create two new notes 2 and 3 and make the existing note 2 a paragraph of note 3.

Page 21

3.33 live part

Add note 1, note 2, note 3 and note 4 before each of the four lines.

3.35 material group

Instead of:

...(see 10.4.3)

read:

...(see 11.4.3)

Page 22

3.43 overvoltage category (of a circuit or within an electrical system)

Note, second paragraph

Make this note 2.

Make first paragraph note 1.

Page 23

3.54 service personnel

Make the note part of the definition.

Page 24

3.59 working voltage

Make the notes part of the definition.

Page 27

Add Subclause 4.3.2 as follows:

4.3.2 Relative humidity

The relative humidity range is 10 % to 95 %, non-condensing.

Requirements of this subclause are verified in accordance with 6.1.3.

Replace the following subclauses by 4.3.3, 4.3.4 and 4.3.5.

Page 30

Table 6 – Rated values and operating ranges of incoming power supply

Note (3), last line:

*Add Annex B after "*equations in*".*

Page 31

5.2 Digital I/Os

Third paragraph after Figure 3, last line:

Instead of:

…Annex A.

read:

…Annex B.

Last paragraph after Figure 3, note:

Replace "NOTE" by "NOTE 1" and make the second paragraph "NOTE 2".

Instead of:

5.2.2 Terminology (U/I operating regions)

read:

5.2.1.1 Terminology (U/I operating regions)

Page 33

Figure 4 – U-I operation regions of current-sinking inputs

Insert, in the centre white box, the label "Transition region"

Page 34

Instead of:

5.2.3 Standard operating ranges for digital inputs (current sinking)

read:

5.2.1.2 Standard operating ranges for digital inputs (current sinking)

Table 7 – Standard operating ranges for digital inputs (current sinking)

In note (3), replace "See 4.1.1.1…" by "See 5.1.1.1".

In note (5), replace "…lower than 11 V…" by "…lower than d.c. 11 V…"

Add, at the end of the table, the following notes:

NOTE Compatibility with 2-wire proximity switches according to IEC 60947-5-2 is possible with Type 2. See also (3).

ND = Not defined.

Instead of:

5.2.4 Additional requirements

read:

5.2.1.3 Additional requirements

Instead of:

5.2.5 Digital outputs for alternating currents (current sourcing)

read:

5.2.2 Digital outputs for alternating currents (current sourcing)

Instead of:

5.2.5.1 Rated values and operating ranges (a.c.)

read:

5.2.2.1 Rated values and operating ranges (a.c.)

Page 35

Table 8 – Rated values and operating ranges for current sourcing digital a.c. outputs

In the tenth line, *replace* "(see Figure 6)" *by* "(see Figure 5)".

Page 36

Instead of:

5.2.5.2 Additional requirements

read:

5.2.2.2 Additional requirements

and change the numbering of the following five subclauses as follows: 5.2.5.2.1 *to* 5.2.2.2.1, 5.2.5.2.2 *to* 5.2.2.2.2, 5.2.5.2.3 *to* 5.2.2.2.3, 5.2.5.2.4 *to* 5.2.2.2.4 *and* 5.2.5.2.5 *to* 5.2.2.2.5.

5.2.2.2.2 Protected outputs

Change the two paragraphs of the existing note to "NOTE 1" *and* "NOTE 2".

Page 37

Instead of:

5.2.6 Digital outputs for direct current (current sourcing)

read:

5.2.3 Digital outputs for direct current (current sourcing)

and change the numbering of the following two subclauses as follows: 5.2.6.1 *to* 5.2.3.1, 5.2.5.2 *to* 5.2.3.2.

Table 9 – Rated values and operating ranges (d.c.) for current-sourcing digital d.c. outputs

In the tenth line, replace "See Figure 7…" by "See Figure 6….".

Page 38

Table 10 – Rated values and impedance limits for analogue inputs

Insert, before the footnote, the number (1).

Page 39

5.7 Peripherals (PADTs, TEs, HMIs) requirements

In the fifth paragraph, first indent, replace "…min, etc." by "…ms, etc."

Page 42

Table 12 – Dry-heat and cold withstand tests

Insert a dividing line between "Initial measurement" *and* "Conditioning".

Replace, under "Climatic conditions", "See 6.1(1)" *by* "See 6.1 and 2.6(1)"

Table 13 – Change of temperature, withstand and immunity tests

Instead of:

Recover

read:

Recovery

Delete, in the fifteenth line, the word "time" *and make it the sixteenth line*.

Replace, under "Climatic conditions", "See 6.1(4)" *by* "See 6.1 and 2.6(4)".

Page 43

Table 14 – Cyclic (12 + 12) damp-heat

Delete the dividing line between "Preconditioning" *and* "Initial measurements".

Delete, in the twelfth line, the word "time" *and make it the thirteenth line*.

Add a dash in the second column opposite "Recovery procedure".

Page 48

Table 23 – Supply voltage variation tests

Replace, in the last line of the first box in the second column, "…of 6.3.1.1" by "…of 5.3.1.1".

Add, at the beginning of the footnote, "(1)".

Page 51

Table 26 – Overload and short-circuit tests for digital outputs

Replace, in the fifteenth line, "…in 4.2.2.2 and 4.2.3.2" by "…in 5.2.2.2 and 5.2.3.2".

Page 52

6.4.3.4 Verification of other requirements

Instead of:

…under 5.2 and the remaining requirements of 5.2.2.2….

read:

…under 5.2.2 or 5.2.3 and the remaining requirements of 5.2.2.2 or 5.2.3.2…

Page 54

7.1 Information on type and content of documentation

Replace, at the end of 7.1, the note before the title of 7.1.1; the title of 7.1.1 then becomes "Information on catalogues and datasheets".

Page 64

Table 29 – Criteria to prove the performance of a PLC-system against EMC disturbances

Replace, in the fifteenth line, "…(1.5.5)" by "…(2.5)".

Page 65

Table 30 – Radiated immunity and enclosure ports

Note (1), first line

Replace (1), (2) and (3) by (a), (b) and (c).

8.3.3 General radiated immunity limits

Replace, in the second line under Table 31, "Figure 12" *by* "Figure 11".

Page 70

Table 36 – Electrostatic discharge immunity test

Replace, in the fourth paragraph of the second column, (1), (2) and (3) by (a), (b) and (c).

Page 71

Table 38 – Power-frequency magnetic field immunity test

Instead of:

"According to PFVP (25.5)"

read:

"According to PFVP (2.5).

Add, before the footnote, "(1)".

Page 73

Table 40 – High-energy surge immunity test

Align "42Ω/0,5 µF CM 42Ω/0,5 µF DM" *with* "Unshielded communication…." *and* "12Ω/9 µF CM 2Ω/18 µF DM" with "AC/DC power (F)".

Page 74

Table 41– Conducted RF immunity test

Replace, in the second line of the second column, "(1.5.5)" *by* "(2.5)".

Replace, in the tenth line of the second column, "Table 64" by "Table D.2".

Replace, in footnote (3), "…Note 2…" by "…(2)…".

Page 76

10 Electromagnetic compatibility (EMC) information to be provided by the manufacturer

Add, in fifth paragraph, after "The EUT software…", *the word* "used".

Page 77

11.1 Protection against electrical shock

Delete the word "NOTE" *after the second paragraph so that the sentence beginning* "SELV/PELV" *becomes part of the text.*

11.1.1.1 Values in normal condition

Add, at the beginning of the second indent of item c), "350 mJ stored…" *and delete* "ed".

Page 78

11.1.3 Enclosed PLC-system equipment

Replace, in the second paragraph, "(see 10.1.3.2)" *by* "(see 11.1.3.2)" *and* "(see 10.1.3.3)" *by* "(see 11.1.3.3)".

Page 79

11.1.3.2 Class II equipment

Replace, in the last line of item 1) of the second paragraph, "…from parts hazardous live…" *by* "…from hazardous live parts…".

Page 80

11.1.5 Operator accessibility

Delete, in the third line, "…as defined below.".

Page 83

11.4 Clearance and creepage distances requirements

Replace, in the last sentence of the seventh paragraph, "For rated voltages…" *by* "For voltage values…".

Replace, in note 1 after the tenth paragraph, "…Table 47, Table 49, Table 50, Table 51, Table 52, Table 53 and Table 54." *by* "…Tables 47, 48, 49, 50, 52, 53 and 54."

Delete the words 1, NOTE 2, NOTE 3 and NOTE 4, making these three notes the last three paragraphs of one single note.

Page 84

11.4.1.1 Clearance for other than field-wiring terminals

Replace, in the second line of the first paragraph, "Table 49" *by* "Table 48".

Table 47 – Minimum clearances in air corresponding to overvoltage category II conditions (except for field-wiring terminals) for basic/supplementary insulation

Add the numbers (1) and (2) before the footnotes.

Table 48

Add the number (1) before the footnote.

Page 85

11.4.1.2 Field-wiring terminal clearances

Replace, in the first sentence, "Table 50" *by* "Table 49".

Table 49 – Minimum clearances in air at field-wiring terminals

Add the numbers (1) and (2) before the footnotes.

Page 86

Table 50 – Minimum clearances in air for micro-environment where the voltages are known and controlled

Add the number (1) before the footnote.

11.4.3 Creepage distances for basic and supplementary insulation

Second paragraph, first line

Instead of:

Table 49 and…

read:

Table 48 or…

Page 89

11.4.5 Creepage for field-wiring terminals

Instead of:

Table 50.

read:

Table 49.

11.5.2 Non-metallic material supporting live parts

First paragraph, second sentence

Instead of:

These properties include:

read:

Examples of these properties are…

Page 90

11.6 Temperature limits

Second paragraph, first line:

Instead of:

Components shall…

read:

Component parts and materials shall…

Third paragraph, second line:

Instead of:

Table 56

read:

Table 55.

Table 55 – Temperature limits

Add the number (1) before the footnote.

Page 91

11.9.1 Protective earthing constructional requirements

Second paragraph:

Add, before “portable peripherals”, “Class I”.

Page 92

11.9.2 Protective earthing material

Seventh paragraph

Instead of:

...112.2.2.

read:

...12.2.2.

Add indents before the last two paragraphs.

Page 95

11.15.6 Rating information

First paragraph, third indent:

Instead of:

...5931...

read:

...5031...

Page 96

11.18 Requirements for information on safety

Instead of:

...Clause 13.

read:

...Clause 14.

Table 56 – Impact withstand test (1)

Add the number (1) before the footnote.

Page 97

Table 57 – Operator accessibility tests (1)

Add the number (1) before the footnote.

Page 100

12.2.1 Dielectric withstand verification test

Seventh paragraph, second line:

Instead of:

...Figure 14.

read: