

Mecal guide to quality crimping

The following information is referred to standard crimping



www.mecal.net

Specifications subject to change. Consult Mecal s.r.l. for latest specification

Unacceptable

General appearance

Insulation crimping

Wire crimping

Acceptable

General appearance

Both wire and insulation must be clearly visible

Insulation crimping

Wire crimping

The flat spots are an important mark of the anvil on the terminal bottom, they help with the strands compacting and keep the terminal aligned with the anvil itself

Terminal has been cutted according to Mecal internally approved procedure

Checks and evaluations

| Description | Rif. |
|--------------------------|--------------|
| Bent left or right (max) | 3° A |
| Bent up or down (max) | 3° B |
| Torsion (max) | 3° C |
| Bellmouth | 0,2-0,5 mm D |
| Cut-off (max) | 0,5 mm E |
| Wire overlay (min) | 0,5 mm F |

The material extrusion is acceptable when $h \leq 2t$

The tips of the barrel can not touch the terminal bottom

Crimping height measurement

Crimping width measurement

H/L ratio and crimp compacting

Crimp compacting

The H/L ratio is acceptable when within a min of 55% and a max of 70%

The crimp compacting is the difference between the cross section of the wire + terminal before and after the crimping itself. It is acceptable when within a min of 17% and a max of 24%

| Wire sect mm ² | Automotive | | | Electronics/white goods | | |
|------------------------------|-------------------------------------|---------|---------|-------------------------|-----------------|-----------------------------|
| | Min pulling force in Newton Class 1 | Class 2 | Class 3 | Wire section AWG | mm ² | Min pulling force in Newton |
| 0,35 | --- | 34 | --- | 32 | 0,03 | 3 |
| 0,5 | 60 | 80 | 80 | 30 | 0,05 | 5 |
| 0,75 | 70 | 120 | 120 | 28 | 0,08 | 10 |
| 1 | 80 | 160 | 160 | 26 | 0,12 | 20 |
| 1,27 | --- | 160 | --- | 24 | 0,2 | 30 |
| 1,5 | 90 | 200 | 200 | 22 | 0,33 | 34 |
| 2 | --- | 230 | --- | 20 | 0,5 | 60 |
| 2,5 | 100 | 250 | 250 | 18 | 0,75 | 90 |
| 3 | --- | 300 | --- | 16 | 1,25 | 130 |
| 4 | --- | 350 | 350 | 14 | 2 | 150 |
| 6 | --- | 450 | 500 | | | |
| 10 | --- | 800 | 1500 | | | |
| 16 | --- | 1400 | 2400 | | | |
| 25 | --- | 1900 | 3000 | | | |
| 35 | --- | 2270 | 4200 | | | |
| 50 | --- | 2800 | 6000 | | | |
| 70 | --- | 3500 | 8400 | | | |
| 95 | --- | 4200 | 11400 | | | |

Class 1: Terminals with $\emptyset \leq 2,9$ mm/Ampere $\leq 5A$
 Class 2: Terminals with $\emptyset > 2,9$ mm/Ampere $> 5A$
 Class 3: Cylindrical terminals (to be coined)

Ref: DIN EN 60352-2
Mecal Specifications

Measurements

Pull test