



INSTRUCTION
FOR TRANSPORT, STORAGE, ASSEMBLY AND EXPLOITATION OF LOW VOLTAGE
CONTROL CABLES TYPE GAMAFLEX 10-JZ/OZ WITH PVC INSULATION, PVC SHEATH
AND COPPER CONDUCTORS

1. APPLICATION

As control and supply cables for control units in metal working machines, transportation equipment, production lines, as well as for control and measuring systems at rated voltage U_0/U 300/500 V. The cables are suitable for flexible applications for free, non-continuous returning movement, without tensile load as well as for fixed laying. These cables are suitable for use in dry, damp or wet interiors under normal mechanical loads. These cables may only be laid outdoors with UV-protection and in observance of the temperature range.

2. TRANSPORT

- 2.1. The transport of control cables type GAMAFLEX 10-JZ/OZ is done by all kinds of transport means. During their transportation cable products should not be to the exposure to acid vapours, bases and other aggressive environments, atmospheric influences and solar rays.
- 2.2. During transportation the packing units containing cable products (drums, pallets and coils) must be fasten using belts and other means which don't allow their displacement.
- 2.3. During transportation the packing units containing cable products (drums, pallets and coils) must be preserved from mechanical damages and shocks in compliance with the manipulation signs and warning inscriptions.
- 2.4. During the displacement of drums should be respected the rolling direction which is marked by arrows.

3. STORAGE

- 3.1. The cables should be stored indoor at a temperature range from +5 °C up to +40 °C and relative humidity up to 80%.
- 3.2. It is not admissible to store the cables outdoor.
- 3.3. In case the cables are wound on drums, during safe-keeping drums must not lay on their flanges.
- 3.4. The cables must be stored in the original manufacturer's packing.
- 3.5. During safe-keeping drums must be preserved from mechanical exposures, acid vapours, bases and other aggressive environments, solar rays, atmospheric exposures and dust influencing in a negative way the packing and products.
- 3.6. It is recommended cable products to be packed during their storage.

4. EXPLOITATION CONDITIONS

- 4.1. Nominal working voltage: $U_0/U = 300/500$ V.
- 4.2. Maximum conductors temperature: +70°C.
- 4.3. Maximum conductors temperature at short circuit for 5 s: +160°C.
- 4.4. Test voltage: 4kV.

- 4.5. Exploitation temperature range:
for mobile application: from -15°C up to $+70^{\circ}\text{C}$.
for fixed application: from -40°C up to $+80^{\circ}\text{C}$.
- 4.6. Maximum ambient temperature: $+50^{\circ}\text{C}$.
- 4.7. Flame test: flame-retardant according to IEC 60332-1.

5. INSTALLATION CONDITIONS AND MANIPULATION DURING INSTALLATION

- 5.1. The cables are suitable for installation in dry, damp and wet interiors at normal mechanical loads.
- 5.2. The cables installation should be effected at ambient temperature not lower than -5°C .
- 5.3. These cables may be laid outdoors only with UV-protection and in observance of the temperature range.
- 5.4. The minimum bending radius during installation should be:
- at mobile application: $15D$
 - at fixed application: $4D$
- (D – cable's outer diameter)
- 5.5. Removing of the outer sheath:
- for diameters up to 12 mm: the outer sheath should be removed **by making a concentric cut** and then by axial pulling out of the cable bunch with minimum efforts, as it is shown on Picture 1 and Picture 2:



Picture 1



Picture 2

- for diameters more than 12 mm: the outer sheath should be removed **by making a longitudinal cut** and then by removing it from the cable bunch with minimum efforts, as it is shown on Picture 3:



Picture 3

- **It is not allowed to remove the outer sheath by pulling the cable bunch in the opposite direction, without making beforehand the respective longitudinal cut** – as it is shown on Picture 4.



Picture 4

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