

GUIDELINES FOR INSTALLING CABLE TRACK CABLES

- **The laying of cables in cable track has to be done carefully. In general the following points have to be considered:**
1. It is recommended to lay the cables separately side by side. In case that cables with different diameters are laid on top of each other direct by side, we recommend the use of separators.
 2. Cables with an outer diameter < 0.394 inches (10 mm) which cannot be installed with separators, should be loosely placed in a guide hose in the cable track. The section of the hose has to be considerably bigger than the sum of all cable sections.
 3. The cables should be movable in the separator. There must be 10% free space between the cable diameters and the internal dimensions of the cable track for safety reasons.
 4. Please observe that the cables pass the bend radius without being forced. In case of several cable layers, the cables need a corresponding clearance among each other in the bend. In principle the cables must be able at any time to move freely lengthwise and there is no tensile force on the cable in the radius. It is recommended to control the position of the cable after a short operating time and to pay attention to an efficient installation and look for abrasion aspects.
 5. A torsion-free laying of the cables in the cable track has to be observed (non-rotational). Therefore, the cables have to be unwound from reels before being installed. (Do not lift off the cables in loops).
 6. The weight arrangement in the cable track or in the links has to be done symmetrically. Heavy cables have to be laid towards the outside of the cable track and the smaller ones in the middle.
 7. All cables have to be strain-relieved at the fixed point and at the driving feature, at least at the end of the chain. In long chains the connection of the cable is only connected at the driving end. It has to be observed that there is only large-surface pressure on the outer jacket. Careful clamping avoids any squeezing of the conductors and at the same time any displacement of the cable.
 8. In general only cable track cables should be used. The allowed bending radius of cables has to be strictly observed. The information to the minimum bending radius for the cables are based on the application at normal temperatures. Under circumstances other bending radius can be recommendable. The choice of a bigger radius as the minimum radius will have a positive effect on the service life.
 9. The following standards have to be considered for the installation and grouping of cables in cable tracks:
 - ▶ DIN VDE 0100
 - ▶ DIN VDE 0113