

## T-Mac® Portable Earthing Equipment

### Cables

#### Cable Sizes:

Thew & McCann supplies standard copper flexible short-circuiting and earthing cables in its **T-Mac®** range of portable earthing equipment. Aluminium cables are a special order and available upon request.

Earthing and short-circuiting cables must be of sufficient cross-sectional area to carry the maximum fault current for the designated fault clearing time. Many electrical installations use earthing resistors or reactors to reduce the magnitude of the earth fault current. When neutral earth fault current limiting devices are in service, a smaller cable size may be used for the earth cable than for the short-circuit cables.

Users should be aware that when neutral earth fault current limiters are bypassed (eg for maintenance), the higher earth fault current which would flow may exceed the rating of such a reduced earth cable size. A reduction of the earthing cable cross section is not permissible for equipment intended for use in installations with a solidly earthed neutral.

#### Cable Lengths:

When determining the lengths of cables required for the earthing and short-circuiting equipment, the configuration should be such that the cables are neither too long (whereby they may “whip” about) nor too tight as to be mechanically overstressed under electromagnetic forces.

The recommended length is **at least 20% longer** than the straight-line distance between the connecting points for the installation.

#### Cable Covering:

The clear or opaque electrical insulation on earthing and shorting cables is rated for low voltage only.

The covering on all **T-Mac®** cables is abrasion resistant, durable PVC rated at 0.6/1kV. Whether transparent or opaque, the cable covering is UV-stabilised and offers optimum mechanical protection to the cables.

#### Cable Lugs:

Bell-mouth lugs on all cable ends grip both the conductor core and the outer insulation, providing maximum mechanical stress relief at cable ends. A simultaneous two-part operation produces hexagonal compression for electrical connection to the conductor and round compression for mechanical grip over the cable insulation.

Additional mechanical stress relief is provided by clear PVC heatshrink applied over the barrel of the cable lug and the adjacent cable. This method allows visual inspection of cable ends at all times if required.

