

# Severe tests demonstrate the reliability

Before SUHNER crimp connectors are released for manufacture and use by the customer, they are submitted to severe tests. Certain tests are repeated periodically on production batches.

## Crimping force

This measurement is made on a bench press with built-in force transducer. In addition the distance between the inserts is recorded in order to obtain a force/distance diagram (Fig. 10).

## Pull-out force (holding-force of cable)

This measurement is made on a tensile tester. This is one of the most important measurements. Besides the absolute

In Fig. 11 the values attained with optimum dimensioning are compared with those required by MIL.

## Resistance of the crimp joint

The resistance between the cable and the crimped contact is measured (inner or outer conductor). In order to exclude thermal voltages, the measurement is carried out at 1 kHz. The voltage applied across the crimp joint is 200 microvolts, the current is limited to 150 mA.

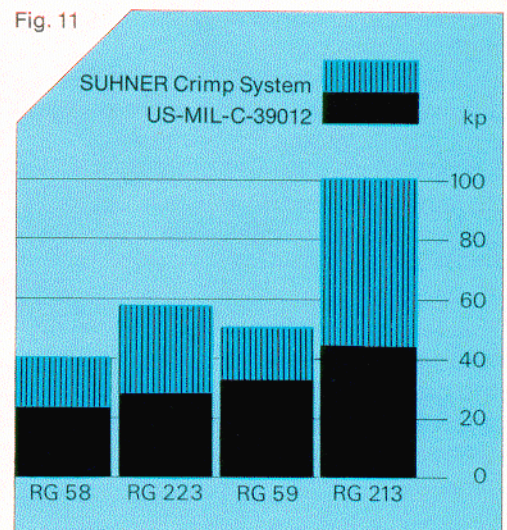
The measurement of the resistance is usually carried out after the temperature tests.

Fig. 10

Cable	Crimp force Inner conductor	Crimp force Outer conductor	Pull-out force Inner conductor	Pull-out force Outer conductor	Pull-out force of complete connector
	kp	kp	kp	kp	kp
RG 196	400	400	3	9	11
RG 188	400	400	8	11	18
RG 58	370	600	12	33	40
RG 223	370	650	14	47	55
RG 59	425	500	14	45	50
RG 213	320	680	75	75	100
RG 214	320	600	75	85	100

magnitude of the force, the type of fracture is of interest. Where possible fracturing of the centre conductor or braid wires is aimed at. In the case of pulling-out from the connector, the pull-out force should be at least 80% of the tensile strength of the cable (Fig. 10).

Fig. 11



## Microsection

A microsection of the crimp joint gives information on the degree of deformation and cold welding (Fig. 4).