

HYPERGRIP[®] CONNECTOR SERIES

TECHNICAL NOTE | TERMINATION TIME STUDY



SUPERIOR EFFICIENCY

It was determined, using an independent cable assembly vendor, that the assembly process for the HG series circular medical connectors is a more efficient process than the most used industry standard method. The results of that time study showed a 25% time reduction allowing for greater output in less time and cost.

RELATIVE TIME TO TERMINATE CONNECTORS

CONTACT TERMINATION TYPES:

Comparison of two widely available connector contact terminations

1. Terminate Then Insert *(Crimp & Poke)*



HyperGrip Series

2. Solder Cup Contacts



Common Medical Connectors

STEPS TO TERMINATE CONTACTS

Type 1

- ▶ Crimp wire into contact
- ▶ Insert contact into insulator with insertion tool

Type 2

- ▶ Cut heat-shrink tubing and slide over wire
- ▶ Pre-tin wire
- ▶ Solder wire into contact (avoiding solder bridging to adjacent contacts)
- ▶ Apply heat to heat-shrink tubing over the solder joint

This termination time study was done at an independent cable assembly vendor on 19 position connectors with the two different types of terminations:

- ▶ Hypertac HG3E10GG1904FRAH (*Type 1*)
- ▶ Lemo/Redel CLB.M19.GLLG (*Type 2*)

AVERAGE TIME OF TERMINATION:

Type 1

- ▶ 16.4 mins per connector
- ▶ 0.86 mins (52 secs) per contact



Type 2

- ▶ 22.4 mins per connector
- ▶ 1.18 mins (71 secs) per contact



Therefore, there is an approximate 25% reduction in assembly time using the crimp and poke method vs. soldering into a nest of solder-cup tails. In the example above, if the labor rate was \$10 per hour, the cost to terminate Type 1 would cost \$2.73 per connector vs. \$3.73 per connector (a savings of \$1 per connector – and overhead based on labor rates would also increase these savings). Savings per connector would vary depending on labor rates.

SMITHS CONNECTORS

GLOBAL SUPPORT

AMERICAS

Irvine, CA	1.949.250.1244
Kansas City, KS	1.913.342.5544
Hudson, MA	1.978.568.0451

EUROPE

United Kingdom	44.(0)20.8450.8033
Italy	39.010.60361
Germany	49.(0)991.250120
France	33.(0)2.32969176

ASIA

Shanghai, China	86.21.3318.4650
Suzhou, China	86.512.6273.1069
Singapore	65.6846.1655
Bangalore, India	91.80.4241.0500