

This recommendation was prepared by the Technical Commission of EUROMAP.

A further supplier added (v. 1.1).
Supplier's data amended (v 1.2).
A further supplier added (v. 1.3).

1. SCOPE AND APPLICATION

This EUROMAP recommendation defines the connection between the injection moulding machine and peripheral equipment.

For each peripheral equipment a separate connection shall be used.

Note: An emergency stop circuit is not included in this specification.

2. DESCRIPTION

For analog signals a connection according to 3.1, for binary signals a connection according to 3.2 shall be used.

3. PLUG AND SOCKET OUTLET

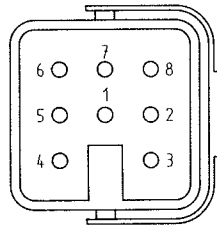
The connection between the injection moulding machine and the peripheral equipment is achieved by the plugs specified below ¹⁾. The same type of plug is fitted to the injection moulding machine and the peripheral equipment.

Arrangement of sockets viewed from the mating side (opposite the wiring side).

¹⁾ See page 6 for suppliers

3.1 ANALOG SIGNALS (Version A)

Gold plated contacts shall be used.



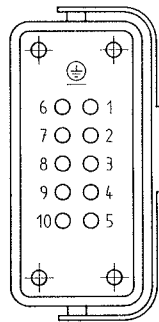
○ Socket

Figure 1: Plug on the injection moulding machine and on the peripheral equipment

Table 1: Plug contact assignment

Plug contact No	Description
1, 2	Set point (from injection moulding machine to peripheral equipment); 0 to + 10 V; reference on plug contact No 2; impedance max. 1 k Ω
3, 4 optional	Actual value (from peripheral equipment to injection moulding machine); 0 to + 10 V; reference on plug contact No 4; impedance max. 1 k Ω
5, 6 optional	Thermocouples (IEC 584 part 1, type Fe - CuNi <J>); positive pole on plug contact No 5
7, 8 optional	Manufacturer dependent; positive pole on plug contact No 7; shield preferably on plug contact No 8

3.2 BINARY SIGNALS (Version B)



○ Socket

Figure 2: Plug on the injection moulding machine and on the peripheral equipment

Table 2: Plug contact assignment

Plug contact No	Description
1	Selection and reference voltage from injection moulding machine; max. 40 V, max. 1A, DC
2	Online of peripheral equipment (input of injection moulding machine)
3, 4	Coding of status, see table 3 (input of injection moulding machine)
5 optional	Manufacturer dependent (input of injection moulding machine)
6	Remote switch on (output of injection moulding machine)
7	Stand by (output of injection moulding machine)
8 optional	Manufacturer dependent (output of injection moulding machine)
9 optional	Manufacturer dependent (output of injection moulding machine)
10	Reference voltage from peripheral equipment, max. 40 V, max. 1A, DC

Table 3. Coding of status

Plug contact No		Description
3	4	
Coding		
0	0	Alarm
0	1	Warning
1	0	Start-up
1	1	Ready for production

0 : High impedance
 1 : Reference voltage

Digital inputs to the injection moulding machine (plug contacts 2 to 5) must be in high impedance when the peripheral equipment is not selected. This allows to use a bus structure to multiplex the input signals of the injection moulding machine (see figure 3).

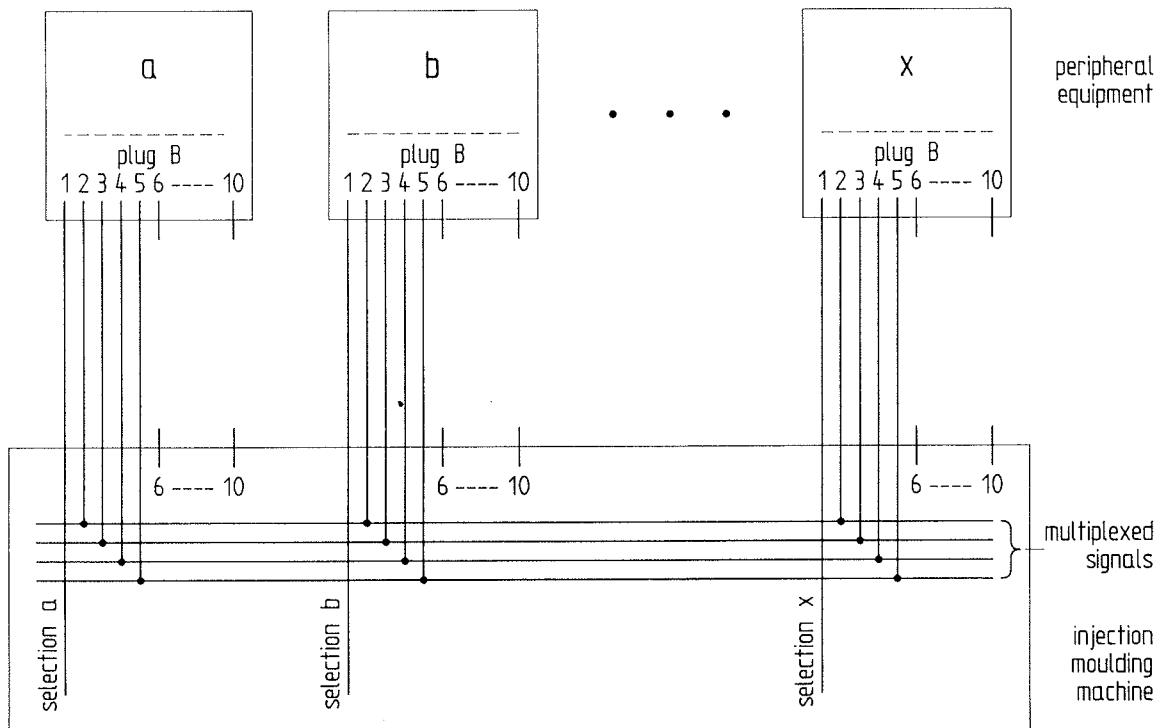
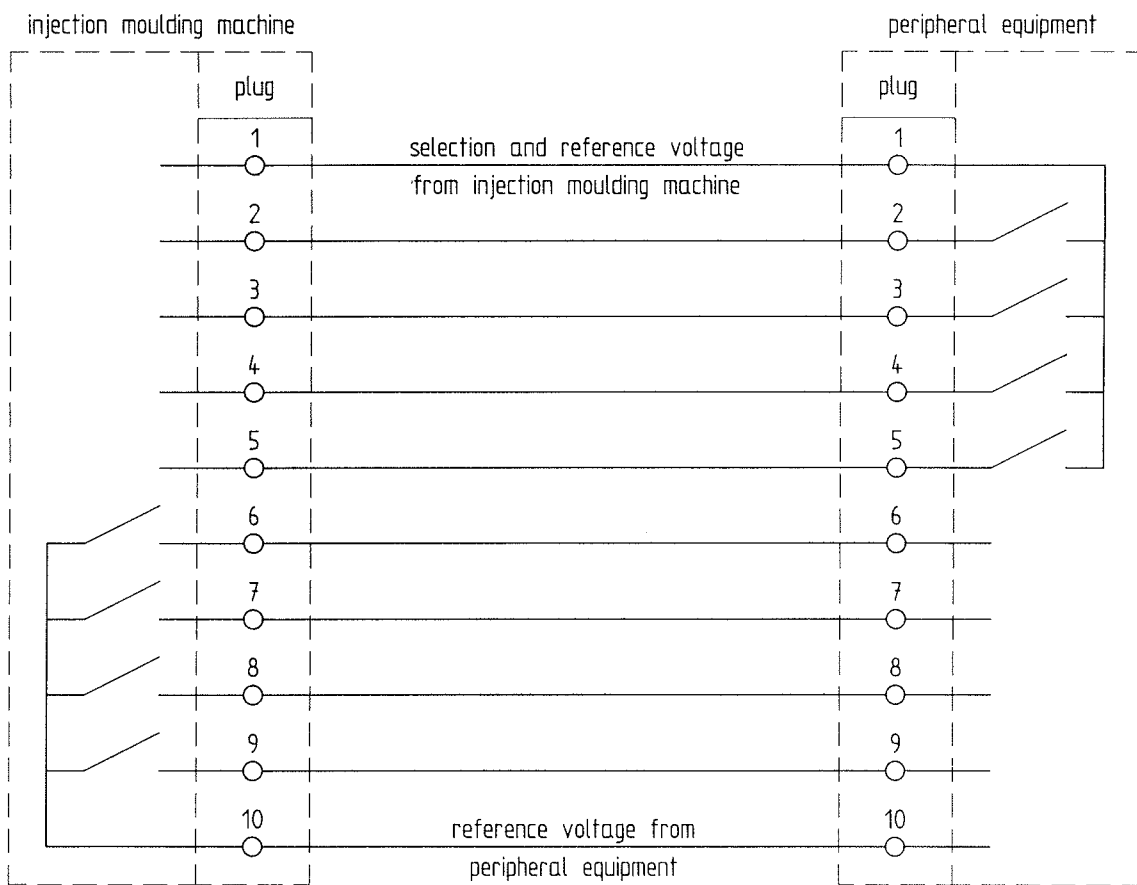


Figure 3: Example of a bus structure of input signals

For better understanding an example of the interconnection between the injection moulding machine and a peripheral equipment is shown in figure 4.



Plug contact No 1 - 5 : isolated in peripheral equipment
Plug contact No 6 - 10: isolated in injection moulding machine
Insulation voltage : 2500 V (IEC 435)

Figure 4: Example for the interconnection between injection moulding machine and peripheral equipment

4. DESIGNATION

The type of interface should be specified to designate the connection between the injection moulding machine and the peripheral equipment.

Example for the designation of such a connector

for analog signals: EUROMAP 16 - A

for binary signals: EUROMAP 16 - B

SOURCES OF SUPPLY

The plugs are available from the following manufacturers, e.g.,

- Amphenol-Tuchel Electronics GmbH, August-Häußer-Str. 10, 74080 Heilbronn/Germany
Version A: C146D; Version B: C146A
- Contact GmbH, Gewerbestr. 30, 70565 Stuttgart/Germany
Version A: -; Version B: Type: H-A 10
- HARTING Electric GmbH & Co. KG, Wilhelm-Harting-Str. 1, 32339 Espelkamp/Germany
Version A: Type HAN 8 U; Version B: Type HAN 10 A
- I.L.M.E. SPA., Via Marco Antonio Colonna 9, 20149 Milano/Italy
Version A: Type CD 08; Version B: Type CDA 10, CDC 10
- Tyco Electronics AMP GmbH, HTS Div., Ohlenhohnstr. 17, 53819 Neunkirchen/Germany
Version A: Type: HN.D8; Version B: Type HA.10
- Walter-Werke GmbH, Postfach 1180, 67298 Eisenberg/Germany
Version A: Type: D 8; Version B: Type A 10
- Weidmüller Interface GmbH & Co. KG, Klingenbergstr. 16, 32758 Detmold/Germany
Version A: Type HD 8; Version B: Type HA 10
- Wieland Electric GmbH, Brennerstr. 10-14, 96052 Bamberg/Germany
Version A: Type revos MINI; Version B: Type revos HD 10
- Westec S.r.L., Via Fiume Lambro 1, 20097 San Donato Milanese/Italy
Version A: Type S-D 8; Version B: Type S-A 10

The plugs from these suppliers are interchangeable.

Note: Further suppliers are invited to be listed.

EUROMAP

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