

## Mould wiring box MOULD CONNECT

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Fig.: Mould Connect "T" for thermocouples

- **Compact wiring terminal for multizone hotrunner systems**
- **24 or 48 thermocouples per box**
- **Only 1 bus cable to the controller**
- **Can be extended on both sides with other boxes**
- **Mould cavity pressure sensors and step motors can also be connected**
- **Use with all controllers NOLDEN NR7000, injection moulding press ARBURG under development**

### **Application :**

Multichannel wiring terminal especially designed for use with multizone hotrunners and mould systems. Reduces dramatically the wiring effort, simplifies operation and enhances the reliability.

The signals of all connected sensors are digitalized directly on the mould and are then transmitted via just 1 cable directly to the controller or injection press.

Finally, data processing is simplified and downtime for mould changeovers is shortened. Just connect the plug to the controller, the mould is then automatically recognized and all relevant mould data are loaded.

### **Design :**

Rugged, heat resistant and waterproof metal casing. Mounted on a metal bracket with heatproof shock absorbers, usually on top of the hotrunner or mould system. Both front sides with removable closing plates, so, other MOULD CONNECT boxes can be joined. Cable inlets on both sides with "Pflitsch" system, split joints for smaller cables such as thermocouples, so individual cables can easily be exchanged later on in case of a defect element without dismantling the whole box.

Central component mounting rack in the middle of the box, easy access from the top after removal of the upper cover plate.

### **Function :**

#### **Thermocouples**

24 or 48 thermocouples per box. 24 sensors are connected to 1 signal processing unit with quick release terminals, 1 or 2 units per box. Signals are then amplified, digitalized and transmitted via one bus cable to the controller.

#### **Mould cavity pressure measurement**

1-8 pressure sensors per box, standard piezo-electrical sensors can be used. Per sensor 1 pressure transducer, signals are then transmitted via a digital bus coupler to the central mould connecting cable.



#### **Valve gate control**

1-4 step motors per box, as well with and without encoder. Signals and energies for electronics and step motors are being transmitted via the central mould connecting

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cable. Servo drives under development, depending on the size of the drive, those must be connected directly to the controller at present.

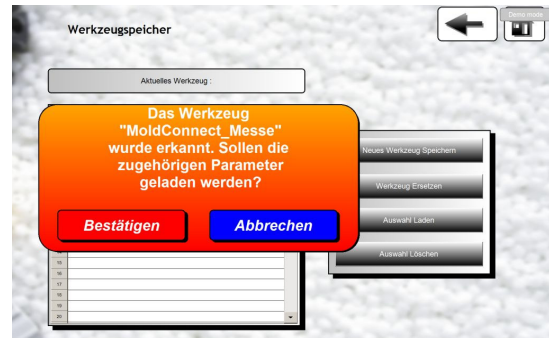
Depending on the application, also other sensors or smaller actuators, e.g. for core pullers or pneumatical valve gates, can be integrated into the box.

### Mould data

The mould designator is coded by the controller and written into the memory of the box, from where it can be read out at any time. Upon connection of the mould cable plug, this is done automatically, the controller then reads all relevant mould data and suggest loading them into the active mould memory.

After confirmation by the operator, you just need to start the system and all relevant

functions (heating, pressure measurement and valve gate) start-up with the right data.



### Specification :

#### Mains voltage

Signal processing : 24V DC +/-10%  
For step motors : 48V DC, max. 10A

#### Thermocouple input (Mould Connect „T“)

24 or 48 sensor channels per box  
Fe-CuNi type J 0...600°C  
other types on request

#### Mould connection bus

Mould Connect „T“ : CAN Open  
Manufacturer specific protocols for injection presses under development

Mould Connect „M“ : EtherCAT®  
Mould Connect „P“ : EtherCAT®

#### Connecting plug

Heavy duty industrial connector 6-pol. or 10-pol. depending on the number of functions  
Plug modular inserts 12-pol. for energy (24/48 Volts)  
Plug modular inserts 9-pol. sub-D for CAN Open  
Plug modular inserts RJ45 for EtherCAT®

#### Dimensions

250 x 135 x 135mm (WxDxH)

#### Colour

Casing and fixation : Structured RAL7035  
Plates : RAL9005 silk gloss

#### Weight

Depending on the version, e.g.  
Mould Connect „T“ 48 channels : ca. 2,4 kg

#### Environmental conditions

Leak tightness IP63 if cable entrances mounted correctly  
Operation temperature max. 55°C, is provided by use of the standard mounting bracket

Designation	Art.-Nr.
Mould Connect «T» 24 channels	84500.24
Mould Connect «T» 48 channels	84500.48
Mould Connect «M» 1-4 step motors	on request
Mould Connect «P» 1-8 pressure sensors	on request