



## Electrical connections





## 8 Electrical connections

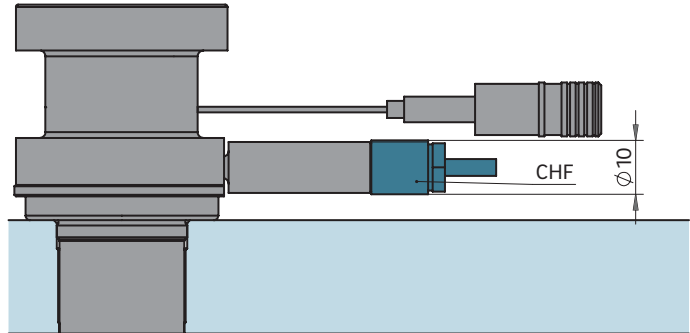
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POWER CONNECTORS AND THERMOCOUPLE CONNECTORS

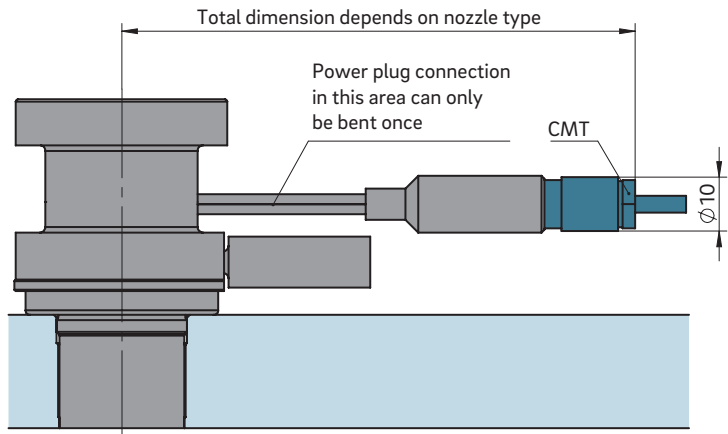
Plug-in type power connector CHF (BlueFlow®)

Order designation	Cable length (m)
CHF 100	1.0
CHF 200	2.0



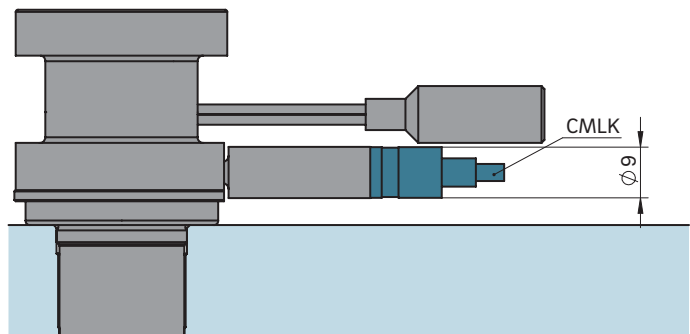
Plug-in type power connector CMT (conventional)

Order designation	Cable length (m)
CMT 100	1.0
CMT 200	2.0



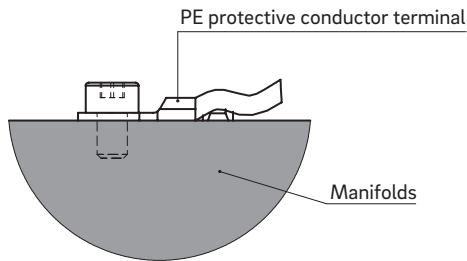
Plug-in type thermocouple connector CMLK

Order designation	Cable length (m)
CMLK 100	1.0
CMLK 200	2.0





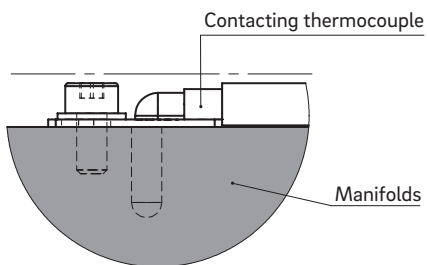
### PE PROTECTIVE CONDUCTOR TERMINAL



The protective conductor terminal is required for earthing the manifold. Includes cable and cylinder screw  
DIN EN ISO 4762 – M4 × 6 – 12.9

Order designation	Cable length (m)
110.229	2.0
110.230	1.0

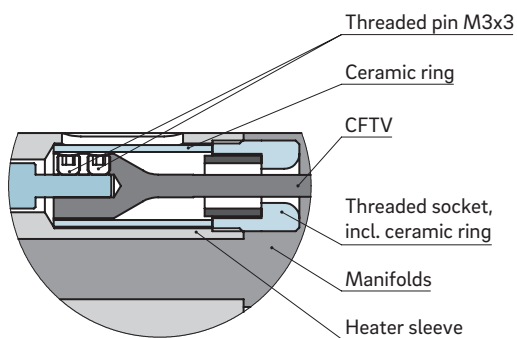
### CONTACT THERMOCOUPLE 151HF



The contacting thermocouple is used as the thermocouple for all manifolds and is resistant to high temperatures. Includes cable and cylinder screw  
DIN EN ISO 4762 – M4 × 8 – 12.9

Order designation	Cable length (m)
151HF	1.0
151HF/2	2.0

### MANIFOLD POWER CONNECTOR

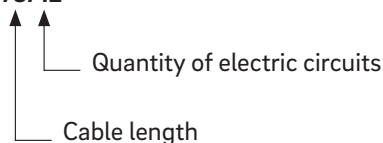


Socket for the power connection of the manifold, incl. two threaded pins, ceramic ring, cable, threaded socket and heater sleeve.

Order designation	
CFTV100H	Cable length: 1.0 m
CFTV200H	Cable length: 2.0 m
111.021	Ceramic ring

**POWER CABLE**

Power cable STT/3/12

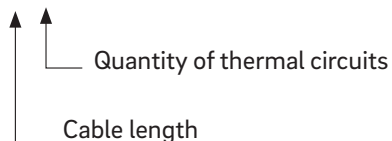


Order designation	Controller						Quantity of control circuits	Attachment housing on mould
	DPT6	DPT12	DPT18	DPT24	DPT30	DPT36		
STT/3/12	1	1	2	2	3	3	12 per cable	AG12

Order designation	Controller						Quantity of control circuits	Attachment housing on mould
	DPT42	DPT48	DPT54	DPT60	DPT66	DPT72		
STT/3/12	4	4	5	5	6	6	12 per cable	AG12

**THERMOCOUPLE CONNECTING CABLE**

Thermal connecting cable TVK/3/12



Order designation	Controller						Quantity of control circuits	Attachment housing on mould
	DPT6	DPT12	DPT18	DPT24	DPT30	DPT36		
TVK/3/12	1	1	2	2	3	3	12 per cable	152/T12

Order designation	Controller						Quantity of control circuits	Attachment housing on mould
	DPT42	DPT48	DPT54	DPT60	DPT66	DPT72		
TVK/3/12	4	4	5	5	6	6	12 per cable	152/T12

Hot runner connecting cables can also be made according to the customer's wishes. Please contact us for further information.

**COMPACT CONTROLLER**

Control unit	Combination cable	Attachment housing for power/thermocouple
DP1	KK1	AG1
DP2	KK2	AG2
DP3	KK3	AG5, 152/T5
DP6	KK6	AG8, 152/T8

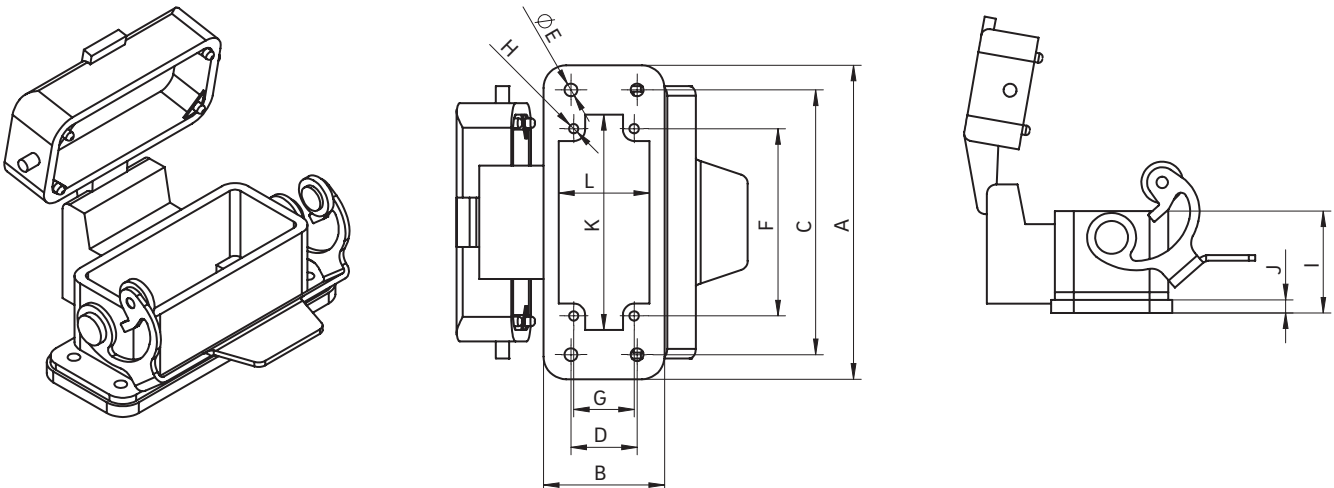


## ATTACHMENT HOUSING

The power and thermocouple plug connections are to be made at an attachment housing.

Order designation	Connections	Version
AG1	Max. one 230 V electric circuit and one thermocouple pair	Pins Pins
AG2	Max. two 230 V electric circuits and two thermocouple pairs	Pins Pins
AG5	Max. five 230 V electric circuits	Pins
AG8	Max. eight 230 V electric circuits	Pins
AG12	Max. twelve 230 V electric circuits	Pins
152/T5	Max. five thermocouple pairs	Socket
152/T8	Max. eight thermocouple pairs	Socket
152/T12	Max. twelve thermocouple pairs	Socket

### AG1, AG5, AG8, 152/T5 AND 152/T8



#### Order designation

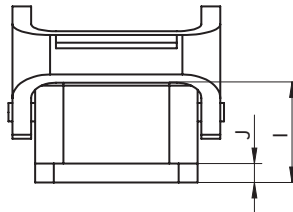
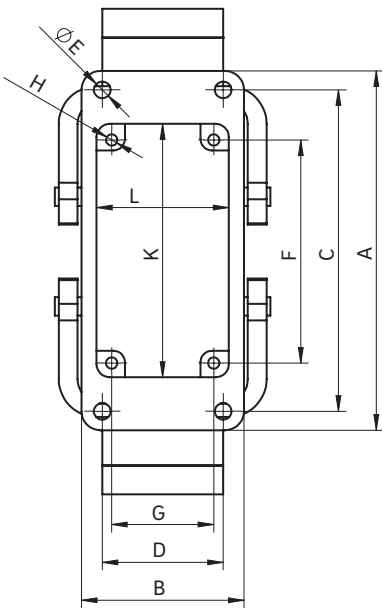
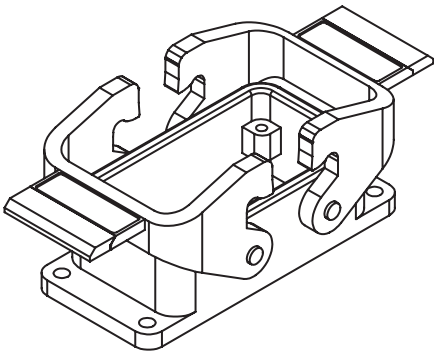
Thermocouple plug connection	Power connection	A (mm)	B (mm)	C (mm)	D (mm)	Dia. E (mm)	F (mm)
AG1		80.0	43.0	70.0	32.0	4.4	44.0
152/T5	AG5	81.0	29.0	70.0	17.5	3.4	49.5
152/T8	AG8	96.0	29.0	86.0	17.5	3.4	66.0

#### Order designation

Thermocouple plug connection	Power connection	G (mm)	H (mm)	I (mm)	J (mm)	Installation cut-out	
						K (mm)	L (mm)
AG1		27.0	M3	28.9	5.3	48.0	35.0
152/T5	AG5	16.0	M3	26.0	4.5	57.0	24.0
152/T8	AG8	16.0	M3	26.0	4.5	73.0	24.0



AG2, AG12 AND 152/T12



Order designation

Thermocouple plug connection	Power connection	A (mm)	B (mm)	C (mm)	D (mm)	Dia. E (mm)	F (mm)
AG2		93.0	43.0	83.0	32.0	4.4	57.0
152/T12	AG12	140.0	43.4	130.0	32.0	4.4	104.1

Order designation

Thermocouple plug connection	Power connection	G (mm)	H (mm)	I (mm)	J (mm)	Installation cut-out	
						K (mm)	L (mm)
AG2		27.0	M3	8.9	5.3	60.0	35.0
152/T12	AG12	26.9	M3	28.9	5.3	108.0	35.0



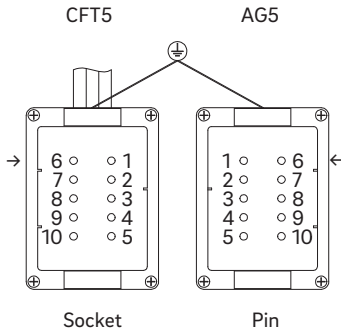


**WIRING DIAGRAMS FOR THE POWER AND THERMOCOUPLE PLUG CONNECTIONS**

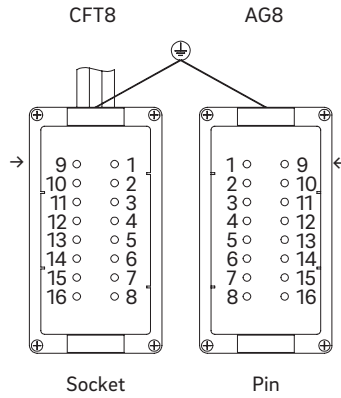
View of the plug connector attachment side.

An attachment housing (pin) AG5, AG8 or AG12 is connected to the mould.

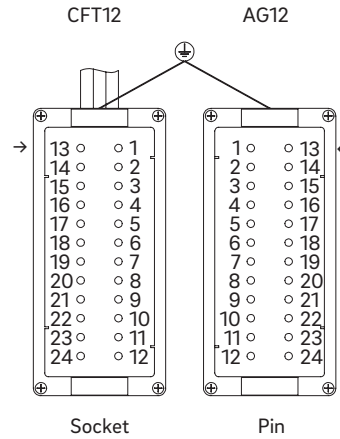
**DP3**



**DP6**



**DPT6-72**



Control circuits as per the GÜNTHER standard:

Control circuit 1 = PIN 1/6 (1/9; 1/13)

Control circuit 2 = PIN 2/7 (2/10; 2/14)

etc.

If using a control unit other than the one specified by us, the wiring diagram is no longer valid.

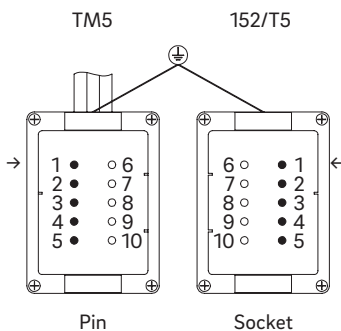
→ Control circuit

⊕ Protective conductor terminal

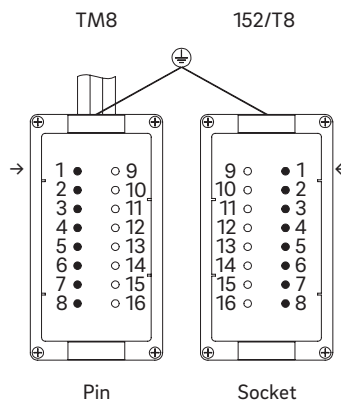
View of the plug connector attachment side.

An attachment housing (socket) 152/T5, 152/T8 or 152/T12 is connected to the mould.

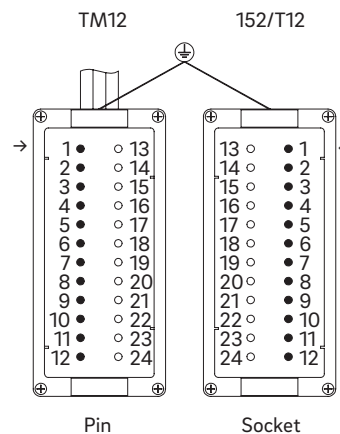
**DP3**



**DP6**



**DPT6-72**



Control circuits as per the GÜNTHER standard:

Control circuit 1 = PIN 1/6 (1/9; 1/13)

Control circuit 2 = PIN 2/7 (2/10; 2/14)

etc.

If using a control unit other than the one specified by us, the wiring diagram is no longer valid.

● Iron (Fe) +, red

○ Constant (CuNi) -, blue

→ Control circuit

⊕ Protective conductor terminal



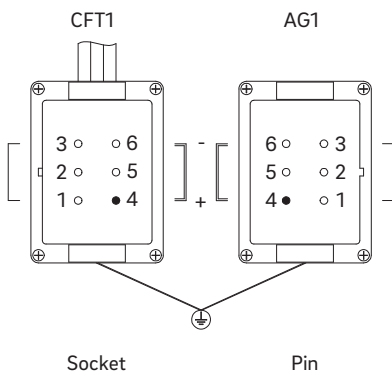
### WIRING DIAGRAMS FOR POWER AND THERMOCOUPLE PLUG CONNECTIONS

View of the plug connector attachment side.

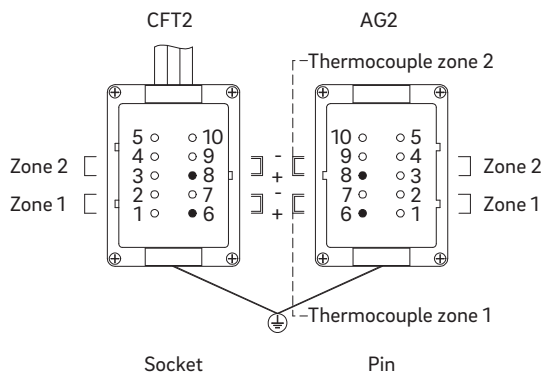
A connector (pin) AG1 or AG2 is connected to the mould.

Note: Socket insert on combination cable KK1/KK2.

#### DP1



#### DP2



— Electric circuit

≡ Thermocouple (zone 1/zone 2)

⊕ Protective conductor terminal

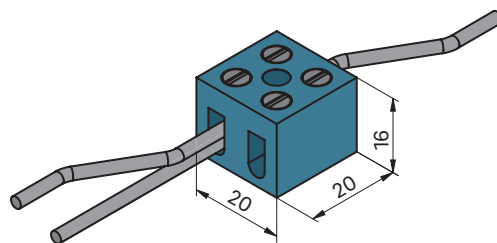
● Iron (Fe) +, red

○ Constant (CuNi) -, blue

### CONNECTOR BLOCK

The connecting terminal is used if two heating circuits of a manifold are connected to a control circuit of the control unit. Due to the high temperatures near the manifold, the connecting terminal is made of ceramic.

**Order designation:** 110.120



### HARDWARE UPGRADE

Each control unit is designed for the operation of up to 24 control points. This is why a DPT6 can be expanded up to a DPT24 using internal upgrades. Up to 72 control zones can be operated with three control units in this way.

Please contact us if necessary.

### FUSES

Order designation	Name	used for
110.114	FF16A/250 V	DP1-2, DP3-6 and DPT6-72



## INTERFACES

Using the interface, the control unit can be controlled from the injection moulding machine. The required software is already contained within the controller.

IF-AR-DPK/DPT	Arburg
IF-EN-DPK/DPT	Engel

## COUPLING MULTIPLE CONTROL UNITS TOGETHER

Using the master/slave cable, multiple control units can be coupled together so that, for example, two DPT24s can be used as a 48-zone control unit.

IFM/S-KIT 2	Master/slave, 2 units
IFM/S-KIT 3	Master/slave, 3 units