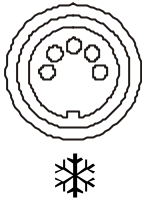


10. Electrical connections



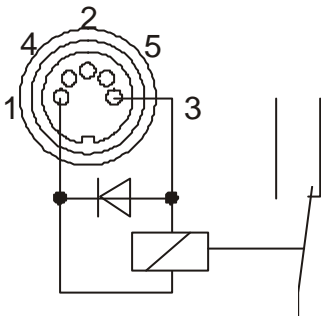
Notice:

Use shielded cables only. The shield of the connecting cable is electrically connected to the plug housing.



❄ / Control output

The ❄ connector may be used for control of JULABO refrigerated circulators or as output for alarm messages.



Circuit: Operation = relay powered
 Alarm = relay not powered

Pin assignment:

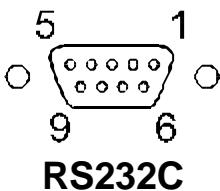
Pin	Signal
1	+24 V (I max. current 25 mA)
2	0 V
3	Alarm relay
4	Reserved - do not use!
5	Cooling pulse

RS232 serial interface

This port can be used to connect a computer with an RS232 or RS485 cable for remote control of the circulator.

Pin assignments RS232:

Pin 2	RxD	Receive Data
Pin 3	TxD	Transmit Data
Pin 5	0 VD	Signal GND
Pin 6	DTR	Data terminal ready
Pin 7	RTS	Request to send
Pin 8	CTS	Clear to send



Interface correspondence: RS232

Circulator	PC	Circulator	PC
9-pole	25-pole	9-pole	9-pole
Pin 2 RxD	⇔ Pin 2 TxD	Pin 2 RxD	⇔ Pin 3 TxD
Pin 3 TxD	⇔ Pin 3 RxD	Pin 3 TxD	⇔ Pin 2 RxD
Pin 5 GND	⇔ Pin 7 GND	Pin 5 GND	⇔ Pin 5 GND
Pin 6 DTR	⇔ Pin 6 DSR	Pin 6 DTR	⇔ Pin 6 DSR
Pin 7 RTS	⇔ Pin 5 CTS	Pin 7 RTS	⇔ Pin 8 CTS
Pin 8 CTS	⇔ Pin 4 RTS	Pin 8 CTS	⇔ Pin 7 RTS

RS232 interface cable 9-pin / 9-pin, 2.5 m - Order No.: 8 980 073