

# **Conditions for the installation of the BLUM Touch Probe TC50 / TC52 with BLUM measuring cycles Quickstart on a machine with Brother A00 control**

## **BLUM fittings:**

- Touch Probe TC50 / TC52
- Stylus
- IR Receiver IC56 / IC57
- Interface IF59
- Tool holder: Komet ABS 50 for TC50, Komet ABS 25 for TC52  
(Can be ordered by Blum)
- Calibration Master (not included in delivery)
- Measuring cycles Quickstart

## **Hardware conditions**

- Brother A00 control since software version 23
- The IR Receiver has to be mountable in a suitable place inside the machine (described in the set-up manual).
- One free position in the tool magazine to store the BLUM Touch Probe has to be available.
- For the calibration a calibration master with µm precise diameter is needed.

## **Pneumatic connection (optional)**

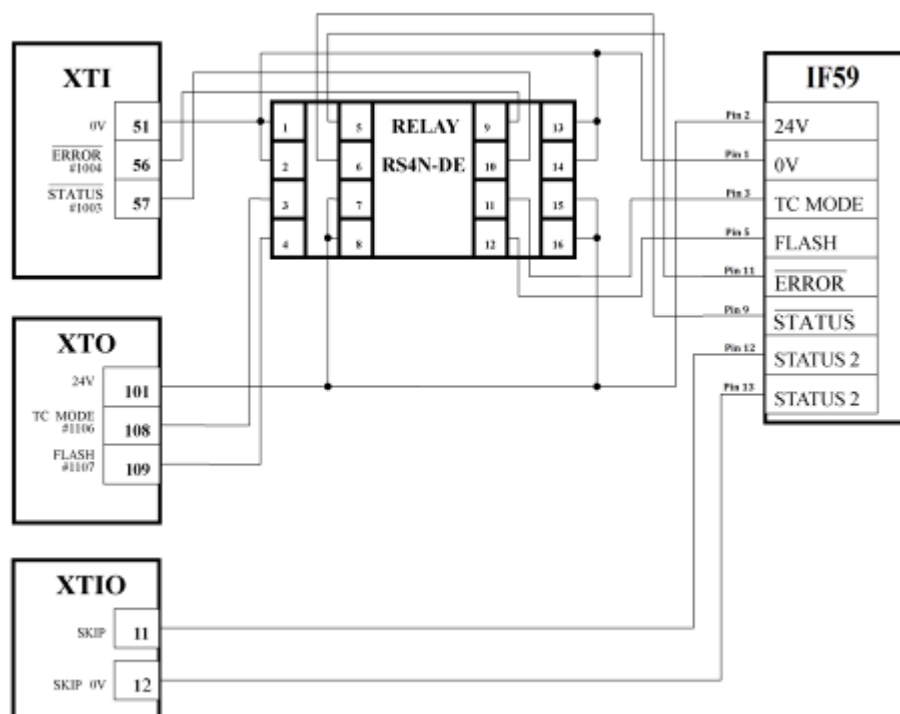
- The IC56 has a blow nozzle for cleaning the glass front of the receiver. It can blow shortly with 5 to 6 bar at the start of the measuring cycle.

## **Electrical connection**

- Operating voltage +15....+30 VDC / 100 mA
- Ca. 100mm free top hat rail for the IF59.

## **Variation 1 (recommended standard)**

- The connection is done with 2 (with blow nozzle 3) outputs, 2 inputs and 1 measuring input (Skip). The probe system is defined as switched on and off and the probe signals (Error inverse, Status inverse) are monitored.



## General

- Maximum load of the PLC outputs:
  - 2 PLC outputs with 10 mA (TC Mode, Flash)
  - 1 PLC output with xx mA (valve for cleaning receiver)

## NC conditions

- Brother control since software version 23
- The set-up of the machine must be finished by the machine tool builder and all of the following machine functions must be fully operational :
  - Movement of all NC axes in manual , single block and automatic mode.
  - Toolchanger.
  - Spindle.
  - Measuring function with the measuring input.
- A capacity of approx. 17 kByte and 9 free program names is necessary for the complete BLUM measuring cycles.
- 6 variables which can be freely selected (#500..) are used to store the calibration values and are not allowed to be overwritten.

## PLC adaptation (Data Bank)

The measuring cycles are using 2 inputs (#1003..#1005) and 2 outputs (3 when using the blow nozzle) (#1106..#1108). If the state of the machine is RESET, the touch probe should be reset also, i.e. in the PLC program all PLC outputs to the touch probe are set to 0.

During the initial commissioning of the probe a service technician or PLC programmer of the machine manufacturer must be present to integrate the activation of the touch probe into the PLC program (please see below).

## Example:

### PMC Outputs:

TC Mode	#1106	output XTO 108
Flash (on / off flash)	#1107	output XTO 109
Option valve for cleaning receiver	#1108	output XTO xxx

### PMC Input:

Status Inverse	#1003	Input XTI 57
Error Inverse	#1005	Input XTI 56

## Preparations

To shorten the time for the mechanical, electrical and pneumatic commissioning the following preparations would be useful if addressed before the arrival of our service technician:

- Mechanical installation of the IR receiver in the working area of the machine like shown in the set-up manual.
- Laying of the electrical cables in the electrical cabinet and connection of the signal lines to the X2 plug of the interface IF59.
- Choosing the inputs, outputs and the variables for the internal communication.
- Measuring the length of the probe and centring the stylus in a pre-setting device.