

digital controller for temperature and process values



Autotuned, microprocessor based digital controller with 2-, 3-point or PID control and adjustable set point gradient (ramp function)

TLK 41 (48 x 48 mm)

as of

Specification:

Measuring inputs: universal input for

- resistance thermometer: Pt100 (3-wire)
- PTC KTY 81-121, NTC 103AT-2 (2-wire)
- Thermocouples: J, K, S
- Normalized signals: 0...20mA, 4...20mA, 0...5V, 0...10V, 1...5V, 2...10V
- mV signals: 0...50mV, 0...60mV, 12...60mV

Measuring ranges:

Pt100: -200...850°C; PTC: -55...+150°C; NTC: -50...+110°C; Type J: -160...1000°C, Type K: -270...1370°C, Type S: -50...1760°C

Resolution: temperature: 0.1, 1°C or 0.1, 1°F

normalized signals: scale freely adjustable, -1999...9999 digit

Accuracy: ±0.15 % FS ±1 digit

Measuring rate: approx. 8 measurements / sec.

Display: 4-digit, 12 mm high LED-display

Outputs: 1 (standard) up to max. 4 outputs

- available output versions (standard = relay-output)
- relay output (close contact, switching power: 5A/2A, 250VAC)
- solid state relay (SSR drive): 14V DC / 20mA

Please pick the possible combinations from the "Output options"-table.

Controller state: 2-point, 3-point or PID (single or double action) control

Autotuning: the autotuning function guarantees the most briefly programming of all requested values.

Alarm outputs: max. 3 (depending from output configuration)

Interface [option]: RS485, optoisolated

Power supply for transmitter: 12VDC / 20mA

Heater break function [option]: the controller is available with a current transformer input for the heater break monitoring

Housing: 48 x 48 x 98 mm, panel cutout: 45.5 x 45.5 mm, Mounting by means of clamping frame

Protection class: front IP54 (mounted in panel with gasket)

Electric connection: screw-type terminals

Operating conditions: 0 ... +55 °C, 30 ... 95 %RH. (non condensing)

Storage temperature: -10 ... +60 °C

Power supply: standard: 90...240 VAC ±10%, 50/60Hz.
option: 24 VAC ±10%, 50/60Hz and 24V VDC ±10%

Order information: For each desired output the referring option has to be stated!

TLK41 / RS485, OUT1 = REL, OUT2 = REL, OUT3 = HLR:
TLK41 with serial interface, as well as 2 relay, 1 SSR output.

Implementations, Options:

24V: Power supply: 24V AC/DC

HBA: current transformer input for heater break function

RS485: serial interface

Output options: **OUT1** **OUT2** **OUT3** **OUT4**

REL: relay output **stand.**

HLR: SSR drive

Limitations: OUT3 and OUT4 have to have the same output option.

digital controller for temperature and process values



Autotuned, microprocessor based digital controller with 2-, 3-point or PID control, 3-point motor valve control and adjustable set point gradient (ramp function)

TLK 43 (48 x 48 mm)

as of

Specification:

Measuring inputs: universal input for

- resistance thermometer: Pt100 (3-wire)
- PTC KTY 81-121, NTC 103AT-2 (2-wire)
- Thermocouples: B, C, E, J, K, L, N, R, S, T
- Normalized signals: 0...20mA, 4...20mA, 0...5V, 0...10V, 1...5V, 2...10V
- mV signals: 0...50mV, 0...60mV, 12...60mV

Measuring ranges:

Pt100: -200...850°C; PTC: -55...+150°C; NTC: -50...+110°C; Type J: -160...1000°C, Type K: -270...1370°C, Type S: -50...1760°C

Resolution: temperature: 0.1, 1°C or 0.1, 1°F

normalized signals: scale freely adjustable, -1999...9999 digit

Accuracy: ±0.15 % FS ±1 digit

Measuring rate: approx. 8 measurements / sec.

Display: two lines, each 4-digit, 7 mm high LED-display

Outputs: 1 (standard) up to max. 4 outputs

- available output versions (standard = relay-output)
- relay output (close contact, switching power: 5A/2A, 250VAC)
- solid state relay (SSR drive): 14V DC / 7mA
- normalized signal 0(4) ... 20 mA or 0(2) ... 10 Volt

Please pick the possible combinations from the "Output options"-table.

Controller state: 2-point, 3-point or PID (single or double action) control, continuous, 3-point motor valve control

Autotuning: the autotuning function guarantees the most briefly programming of all requested values.

Alarm outputs: max. 3 (depending from output configuration)

Analog output: scaleable (normalized signal output necessary)

Interface [option]: RS485, optoisolated

Power supply for transmitter: 12VDC / 20mA

Control input [option]: digital input that permit the remote commutation of the set point.

Heater break function [option]: the controller is available with a current transformer input for the heater break monitoring

Housing: 48 x 48 x 98 mm, panel cutout: 45.5 x 45.5 mm, Mounting by means of clamping frame

Protection class: front IP54 (mounted in panel with gasket)

Electric connection: screw-type terminals

Operating conditions: 0 ... +55 °C, 30 ... 95 %RH. (non condensing)

Power supply: standard: 90...240 VAC ±10%, 50/60Hz., approx. 10VA
option: 24 VAC ±10%, 50/60Hz and 24 VDC ±10%

Order information: For each desired output the referring option has to be stated!

24V: Power supply: 24V AC/DC

HBA: current transformer input for heater break function

RS485: serial interface and digital control input

Output options: **OUT1** **OUT2** **OUT3** **OUT4**

REL: relay output **stand.**

HLR: SSR drive

NS-V: norm. signal 0(2)...10V

NS-A: norm. signal 0(4)...20mA

Limitations: If RS485 is chosen, OUT4 is not possible.

OUT3 and OUT4 have to have the same output option.