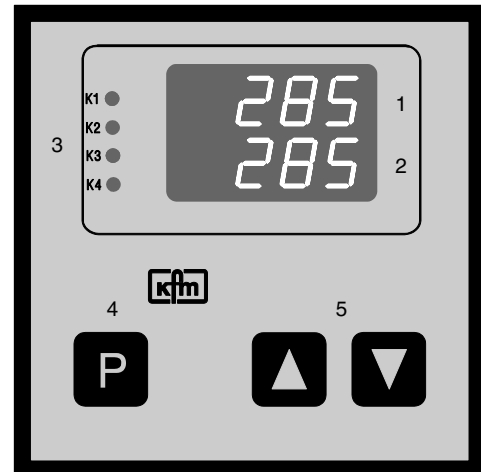


- 1 Digital display actual value
- 2 2nd digital display (if active)
- 3 LED-display relais function
- 4 Key for setpoint and parameter mode
- 5 Setpoint adjustment
- 6 Parameter mode lock switch (back face)



DIN-certificate: TR (TW) 949 ..

Brief description:

KFM 92 is a microprozessor based industry controller series in panel mounting- format 96 x 96 mm. Design and operating elements are especially devised for easy and convenient handling and operation.

An assembly system renders possible the simple basic version as well as a plurality of variants with up to 8 relays, several digital and analog out- and inputs and other additional devices.

Types:

(depending on configuration*):

indicator	9201.
one stage controller	9210.
two stage controller	9220.
heating / cooling controller	9230.
positioner / follow-up controller	9240.
two- point- PID controller	9250.
three- point- PID controller	9260.
three- point- step controller	9270.
continuous controller	9280.
continuous controller, 2 outputs	9281.

Sub-types:

basic function	suffix (*) .0
basic function + 1 additional contact	.1
basic function + 2 additional contacts	.2
2 x basic function	.3
extension: logik output	..L

function extensions

cascade controller	suffix (*) 991k
program controller	991p
ramp set point value	991r
step controller	991t

Additional devices:

additional analog inputs	(*) (99) a
external set value incl. switch-over	(99) bwa
second set value incl. switch-over	(99) bwz
binary input to switch special functions	(99) b..
additional switching contacts	(99) f..
analog signal outputs	(99) o.
serial interface RS 232/485	(99) s.
interface Profibus,Interbus S, other	(99) sp/si.

* In case of more than 1 extension there is at the data plate only once '99' , f.e. 92700-99aw-ogx-rü. For more information see corresponding data sheets.!

...

data subjects to alteration

Inputs:

max. 4 measuring inputs, acc. to sub-type:	type suffix
Pt100 DIN, 0...400°C	none (or 0)
Pt100 DIN, 0...100°C	1.
thermo couple Ni Cr Ni (type K)0...1200°C	n.
thermo couple Fe Cu Ni (type J)0... 900°C	f.
thermo couple Pt Rh Pt (type S)0...1700°C	p.
feedback device 0...100 up to 1000 Ω	w.
standard signal 0(4)...20mA, 0(2)...10V	e.
combined input Pt100 / standard signal	q.

Ranges:

Pt 100: 0...400°C, switchable to °F, optional: other ranges; for standard signal range adjustable -999 to 4000. Setpoint ranges can be limited by menu

Displays:

2 four- figured digital displays, decimal point adjustable, upper display: actual value, lower display: other selectable data,

up to 8 LEDs for relays function display.

Display of function:

Hold down the P-key for more than 5 sec to get a short-cut message of the configured function on the display (=position 3-5 of list number) (in case of locked parameter mode only).

Measuring line monitoring:

Display "Err 1...4" in case of measuring line fault and adjustable safety shut down of all outputs

Outputs:

up to 8 relays with potential free change over switch, as control outputs or as additional contacts, capacity: 250V 2A, incl. spark extinction (for normally open contacts) 1-2 continuous outputs 0/4...20mA, 0/2...10V as control or signal outputs(apparent ohmic load 500 Ω)

Characteristics:

Adjustment on parameter level, with lock switch, pre adjusted on customer's demand.

(parameters depending on sub type:)

Proportional band Xp: 0,1...999,9 %

Integral action time Tn: 0,0...999,9 min

Rate time Tv: 0,0...99,9 min

Sensitivity of response Xsh: 0,1...1,0 %

Travel time of the actuator Tm: 6...600 sec

Switching frequency cy: 2...120 sec

Function characteristics: direct / inverted

Switching interval SA (add. contacts): 0..100,0 K

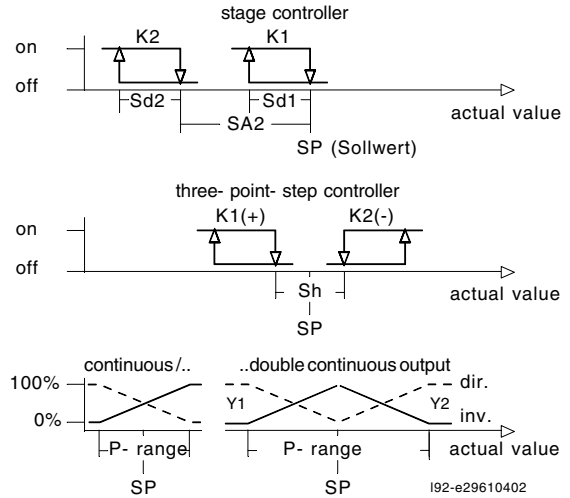
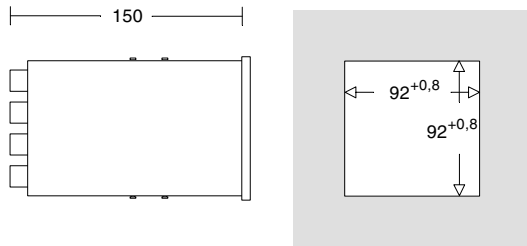
Switching difference Sd: 0,1...100,0 K

Additional contact functions:

As switching interval above and below setpoint or independent adjustable with own setpoint and measuring input, switching function adjustable (ref. to chapter additional switching contacts)

Installation dimensions:

(not valid for integrated version)

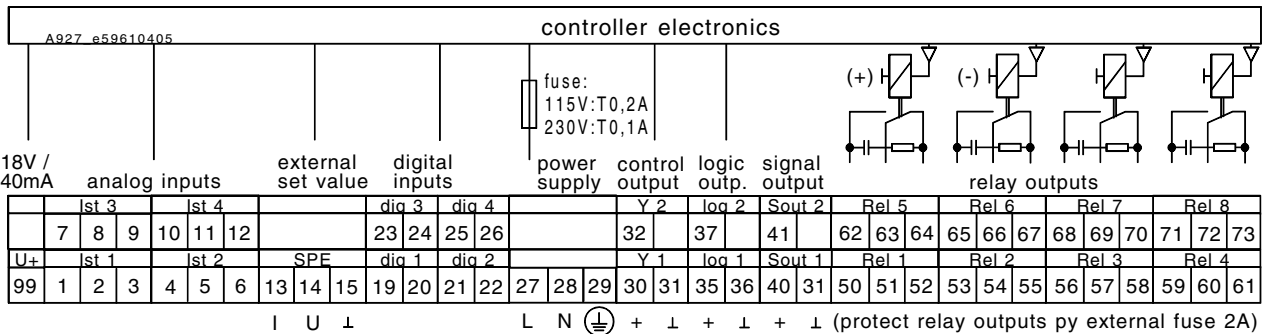


Other data:

- Housing for panel mounting 96 x 96 mm (or integrated version)
- Power supply: 230V or 115 V +/- 10 %, 48...62Hz
- Power consumption: approx. 14 VA
- Protective system DIN 40050: IP54 (terminals IP20)
- Permissible ambient temperature: 0...60°C
- Nominal temperature: 20°C
- Climatic category: KUF to DIN 40050
- Relative humidity <= 75 % yearly average, no condensation
- EMC: refer to EN 50081-2 and EN 50082-2

Wiring diagram:

(Example, depending on sub type some details can be missed valid for each delivered controller is the wiring diagram on its casing only)



wiring examples (for input 1 each)

