

Characteristic curve - Converter KC 500

Features

- Input
Resistance $50\Omega \dots 100k\Omega$ (etc. NTC, PTC)
Voltage $500\text{ mV} \dots 400\text{V DC}$
Current $1\text{mA} \dots 2\text{A DC}$
- Processor controlled in connection with
12 Bit A-D / D-A Converter
- Accuracy of calculation 32 Bit
floating point arithmetic
- Output $0/4 \dots 20\text{mA}$ and $0/2 \dots 10\text{V}$
- Supply voltage 230V AC or 24V DC
- Isolation between input, output / supply voltage
- 22.5mm case for DIN rail mounting



General

The KC500 converts nearly every input characteristic curve into nearly every output characteristic curve. Generally the output signal is provided as industrie standard signal $0/4\text{-}20\text{mA}$; $0/2\text{-}10\text{V DC}$
For example: Input characteristic curve NTC; wanted output characteristic curve RTD (Pt100 sensor).
Digital signal processing provides high accuracy and low long-term drift.

Short information

Characteristic curve Input- output function are printed as a diagram on the side of the case.

Output The output is switch selectable from $0\dots 20\text{mA}/4\dots 20\text{mA}$ and $0\dots 10\text{V}/2\dots 10\text{V}$.
Maximum burden $1\text{ k}\Omega$.

Technical data

Power supply

Supply voltage	: 85 ... 265V AC or 10 ... 30V AC/DC, 47 ... 63Hz
Power consumption	: < 3VA
Operating temperature	: -10 ... 50°C
Rated voltage	: 250V acc. to VDE 0110 group 2 between input, output / supply voltage
Test voltage	: 4kV- between input, output / supply voltage
CE - conformity	: EN55022, IEC1000-4-3/4/5/11/13, EN61000-3-2

Input

: Measuring signal (R, U or I), measuring range and characteristic curve must be specified with order.

Measuring range

resistance	: R_{max} 50Ω ... 100kΩ,	cond. $\Delta R \geq 0.5R_{max}$
voltage	: U_{max} 0.5V ... 400V,	
current	: I_{max} 1mA ... 2A,	

Output

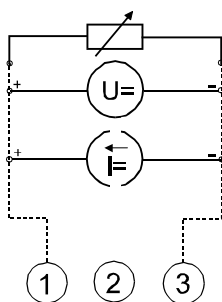
Current output	: 0/4 ... 20mA switch selectable, burden max. 1kΩ
Voltage output	: 0/2 ... 10V switch selectable, short circuit protected, load max. 15mA, (simultaneously with current output max. 5mA)
Rise time (t_{95})	: < 20ms
Temperature coefficient	: < 0.01%

Case

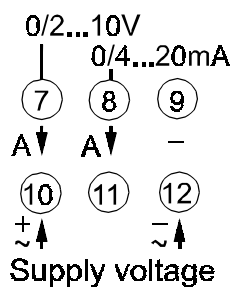
Case	: standard case of polycarbonate 8020 UL94V-1
Weight	: ca. 200g
Connection	: screw terminals with pressure plate, max. 2.5mm ² , wire
Protection	: case IP30, terminals IP20 finger safe acc. to German BGV A2 (old VBG4)

Connection diagram

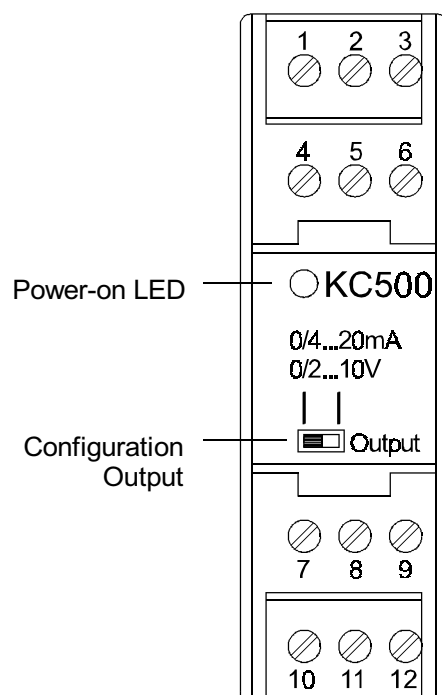
Input



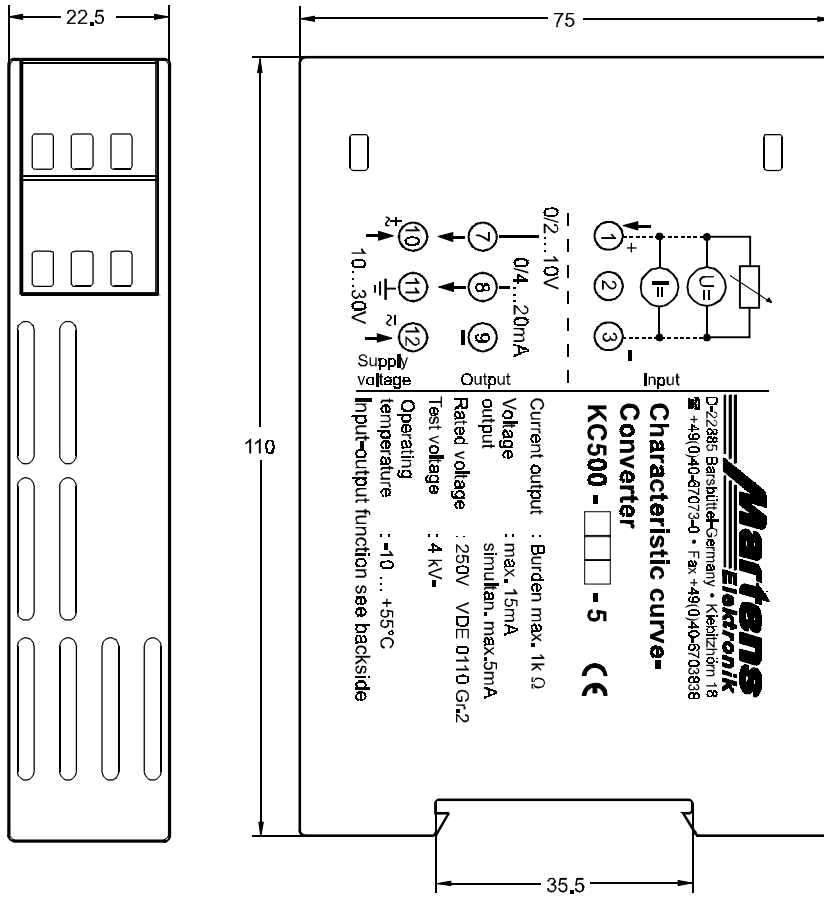
Output



Controls and indicator

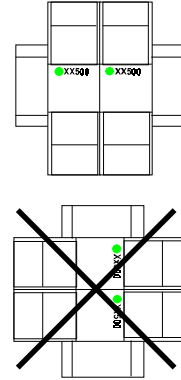


Dimension



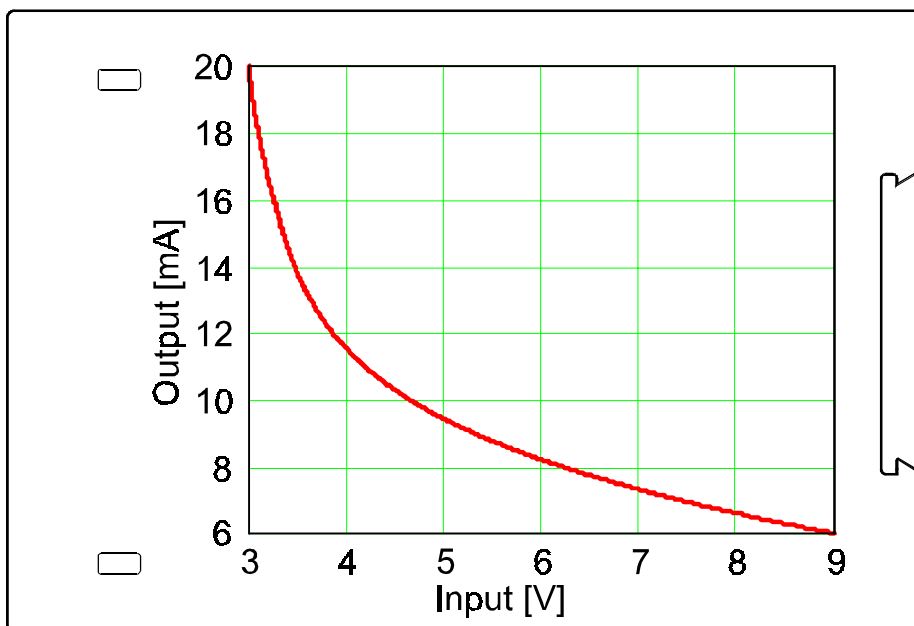
Caution!

Mounting of multiple units without distance is only permitted in horizontal orientation.



DIN rail mounting TS35
 ac. to DIN 46277 and DIN EN 50022

Input- output function



Order code:

KC500 - ^{1.} - ^{2.}

1. **Factory generated code of converter function** Output = f (input)
Please send the specified characteristic alternatively as:
 - 1.) Mathematic formula
 - 2.) Function table
 - 3.) Diagram

2. **Supply voltage**

0	85 ... 265V AC
5	10 ...30V AC / DC