

# HC 200-A

## Active current converter

**75 A measuring range**

**Additional electronics for signal conditioning**

**Parallel connection of several units possible, e.g. with 3-phase heating**

**High linearity**

**Output voltage limiting**

**Clip-on standard rail mounting (TS35)**

### CONNECTING HINTS

The output signal of converter HC 200-A is a rectified sinus current with a peak-to-peak value corresponding to the root mean square value of the measured current.

The output is designed as a current source. Several converter outputs can be connected to a single measuring input (KS800) in parallel.

With individual channel measurement, only the current of the actually measured channels are included in the total current value (individual current measurement).

When measuring several channels simultaneously, however, the individual current values measured are totalized into a cumulative current measurement result.

If other procedures than peak-to-peak value measurement are used, the relevant corrective factors have to be taken into account (form factor, phase interlinking, r.m.s. values...).

### HINT ON CUMULATIVE CURRENT MEASUREMENT:

The output current values are totalized by direct addition regardless of the phase. Consequently, the cumulative current measured in a three-phase mains at 10 A r.m.s. (prim.) in each phase is 10,7 mA DC (peak-to-peak) instead of 16 mA DC (peak-to-peak).

This factor is only applicable during correct three-phase operation. In case of phase failure, the interlinking factor is different.

### PARTICULARITY:

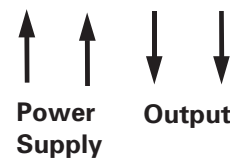
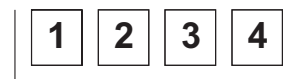
HC 200 A is provided with output current limiting of the current source, which limits the converter output to 7,5 V. Therefore, the maximum internal resistance of subsequent current measurement at 50 mA peak-to-peak is  $7,5/50 \text{ mA} = 150 \text{ } \Omega$ .

### POWER SUPPLY

The HC 200-A output operation is dependent of the power supply potential. If the input of the unit connected in the output circuit is connected to other inputs (e.g. temperature measurement), the current converter or the converter group must be energized from a galvanically isolated voltage source (24 V DC non regulated).

**The power supply must not be grounded.**

### TERMINAL ALLOCATION



### Terminal allocation:

1 - 24 V supply  
 2 - Power supply 0 V  
 3 - Current source output (+)  
 4 - Current source ground (0V)  
 Terminal 2 and 4 are related internally, i.e. the current measurement ground reference is identical with the supply voltage ground.

With parallel connection of several current converters, the power supply connections must be looped through in parallel. Moreover, parallel connection of the converter current outputs by means of a twisted and screened two-wire cable is necessary.

## TECHNICAL DATA

**Power supply:**

24V DC +/-15%

**Power consumption:**

approx. 0,5 W

**Current measurement:**

I(primary) measuring range:

1 A ... 75 A

**Saturation current:**

§ 150 A

**Accuracy:**

within 1 ... 75 A <2%

**Output:**

Max. 50 mA DC current source

(peak-to-peak, dependent of supply voltage potential)

**Transmission ratio:**

1875:1

**Input:**

75A r.m.s (primary)

**Output:**

40mA DC (peak-to-peak)

**HC100 setting required for**

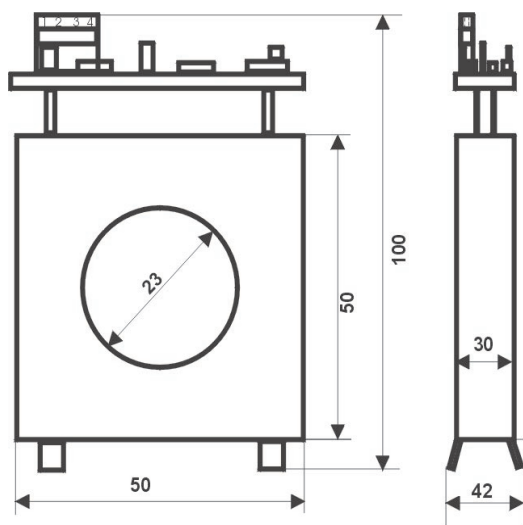
KS800: 78

**Setting of transmission ratio (Tr.Rat)**

**required for**

KS vario: 2600

## DIMENSIONS

**Germany**

PMA

Prozeß- und Maschinen-Automation GmbH

Miramstraße 87, D-34123 Kassel

Tel.: +49 561 505 - 1307

Fax: +49 561 505 - 1661

E-mail: [export@pma-online.de](mailto:export@pma-online.de)

Internet: <http://www.pma-online.de>

**Your local distributor**