The MC30-SG20-i setpoint generator card provides an analogue current signal 0...22 mA. In this range, the current output (0...22 mA) can be adjusted between the high and the low setpoints. Within the adjusted setpoint range, the current signal is processed via a time gradient depending on the selected inputs.

Menu-assisted programming is accomplished via toggle switches located in the front of the card. A four digit front display shows the actual current value.

Changes in the output current are made via 8 digital control inputs on the multiple plug connector:
- direct change of output current to 0 mA or 20 mA
- direct change of output current to minimum or maximum preset
- increase or decrease of output current by 0.1 mA increments
- increase or decrease of output current via a programmable gradient monitoring function

- Setpoint generator card for standard current signals
- Setpoint selection via front toggle switches
- For use with 8 digital inputs
- Programmable timing ramp for setpoint changes
- Storage of setpoints in EEPROM memory
- Galvanic isolation of output circuit from power supply
- Incremental processing of output current
- Continuous automatic gradient monitoring function
The gradient monitoring function can automatically increase or decrease a current drop or rise between the minimum and the maximum preset by setting an intermediate value for the two ranges. This requires:

- the output current to pass the range between the minimum and the intermediate value within $t_1$ time
and the

- output current to pass the range between the intermediate and the maximum value within $t_2$ time.

$t_1$ and $t_2$ time can be adjusted between 0...160 seconds.

If the input signal drops during its passage through the time ramp, the gradient function stops and the output current stays constant.

The card can optionally be operated via an RS485 interface.

### Type
- **MC30-SG20-i**
- **Ident-No.** 90 40 100

### Supply Voltage $U_B$
- Ripple $W_{pp}$ ≤ 10 %
- Power/Current consumption ≤ 200 mA
- Galvanic isolation between output and supply circuit for 250 V$_{rms}$, test voltage 2.5 kV$_{rms}$

### Input Circuit
- **Input** 24 VDC

### Output Circuit
- **Current output** 0...22 mA
- **Load** ≤ 750 $\Omega$

### Interface
- RS232 serial/V.24 via adapter MC-IM-232
- RS485 for data output (optional)

### LED Indications
- **Power “ON”** green
- **Display** red (4 digits)

### Eurocard
- 100 x 160 mm (DIN 41494)
- Material glass-fiber reinforced epoxy resin, quality class FR4
- Front panel plastic, $4\text{TE} = 20.32$ mm individually interlocking
- Connection connector per DIN 41612, type F, 32-pole (seriesz+d)
- Operating temperature -25...+60 °C

### Ramp function - Time dependent current increase and current decrease