The MC35-22Ex0-i is an analogue data driver which transfers standard analogue signals from the safe area to the hazardous area.

The dual channel device provides input and output signals of 0/4...20 mA. A green LED gives power "ON" indication.

The input and output circuits are fully isolated from each other and from the supply voltage.

The device is used to modulate intrinsically safe control valves or indicators located in the hazardous area. The input signals are usually provided by regulators or process control systems.
Analogue Data Transmitters

**Type**
- MC35-22Ex0-i/24 VDC
- Ident-No. 90 431 02

**Supply Voltage** $U_B$
- $18...35$ VDC

**Ripple** $W_{pp}$
- $\leq 10\%$

**Overvoltage release**
- $39$ V $\pm 1$ V

**Power/Current consumption**
- $\leq 4$ W

**Galvanic isolation**
- between input circuit, output circuit and supply voltage for $250$ Vrms, test voltage $2.5$ kVrms

**Input Circuits**
- Current
  - $0/4...20$ mA
- Input resistance
  - $100$ $\Omega$
- Current limitation
  - $60$ mA
- Input voltage
  - typ. $15$ V

**Output Circuits**
- Intrinsically safe per DIN EN 50020
- Current output
  - $0/4...20$ mA
  - Load
    - $\leq 600$ $\Omega$

**Ex-Approval acc. to Certification of Conformity**
- TÜV 97 ATEX 1227X

**Output circuit**
- Maximum nominal values
  - No-load voltage $U_0$ $18.9$ V
  - Short-circuit current $I_0$ $65$ mA
  - Internal resistance $R_i$ $550$ $\Omega$ (trapezoidal impedance characteristics)
  - Output power $P_0$ $0.5$ W

**Maximum external inductances/capacitances**
- $[EEx \, ia/ib] \, IIB$ $5$ mH/$500$ nF
- $[EEx \, ia/ib] \, IIC$ $0.75$ mH/$110$ nF

**Transfer Characteristics**
- Linearity tolerance
  - $\leq 0.1\%$ of full scale (typically $0.03\%$)
- Effect of load impedance
  - negligible
- Effect of supply voltage impedance
  - negligible
- Ambient temperature sensitivity
  - $\leq 0.005\%$ / K of final value
- Pulse rise time ($10\%$ ... $90\%$)
  - $< 60$ ms
- Pulse release time ($90\%$ ... $10\%$)
  - $< 60$ ms

**LED Indications**
- Power “ON” green

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

**Coding No. 115**

![Coding No. 115 Diagram]