Pt100 Two-wire Input Transducer   mpu-4p

General Description

The two-wire input transducer **mpu-4p** converts the tempera-ture signal of the resistance thermometer into a scaled signal (4...20mA) proportional to the temperature, whereby the two-wire loop is conducting both the power supply (voltage) and the output signal (current).

The module directly can be mounted into the connecting head of the temperature sensor (e.g. **TFP-40...52**). To avoid offset faults between sensor and transducer with major wire-lengths connecting by a three- or four-wire current loop is optional. But also with two-wire connection balancing up to 40Ω is possible. By mounting the transducer directly at the point of measure-ment no additional converter in a cabinet system is necessary, this resulting in the advantages of low installation costs, un-complicated wiring and high noise immunity.

The transducer **mpu-4pp** - mounted in a stable Polyamide case - especially suits for temperature sensors with wiring but without connecting head.

two-wire input transducer
mpu-4p

programming adapter **mpu-p**

Features

- installation into the sensor head (e.g. **TFP-40...52**)
- configuration with PC or programming adapter **mpu-p**
- connection directly to the PLC
- temperature linear 4-20mA signal
- very low temperature drift
- lead compensation up to 40Ω with two-wire connection
- fully potted module

Options

- programming adapter **mpu-p**

Specification

Housing	plastics	PA6GV30, Ø44x19mm
	fitting	2 threads M4, spaced 33,0mm
Connector		6-pin screw terminal, inclined 1,5mm²
Ambient	operat. temperature	-40...+85°C
	storage temperature	-40...+120°C
	humidity	0...98% without dew
Input	Pt100-sensor	2, 3, 4-wire connection (2-w: compens. to 40Ω)
Meas. Range	maximum	-200...+850°C, smaller ranges adjustable
	minimum range	25 K
	measure	[°C] or [°F]
Accuracy		<±0,1% of full scale
	temperature drift	0,003%/K typ., 0,01%/K max.
Output	current loop	4-20mA
	overflow	23mA / 3,5mA adjustable
	sensor faults	short circuit <-225°C, open circuit >875°C
Power supply		8...35V DC, ripple ≤±5%

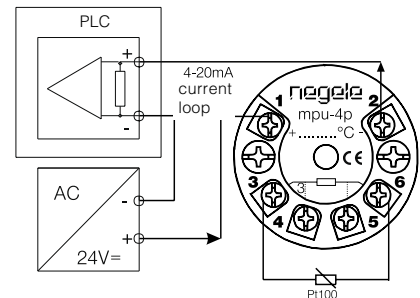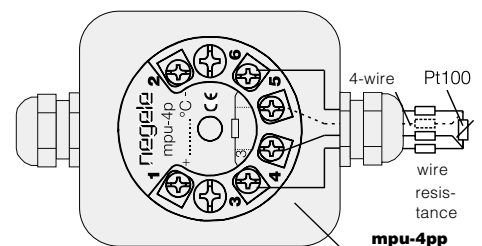### Connection to digital display dpm-gs
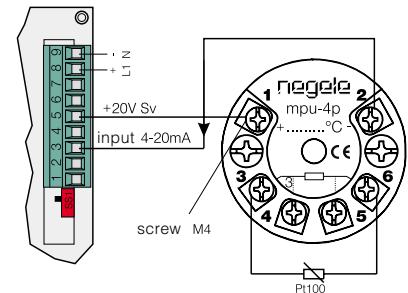
Connection to PLC

3- / 4-wire connection

General Annotations

The programming software is self-explaining and provides detailed help-menues for all functions.

The supply of the programming adapter by a 9V-battery is only necessary for PCs which do not provide a sufficient power supply with the serial port (e.g. laptops). An aptant cable is enclosed in delivery.

System Requirements

Minimum 386 processor, Windows (3.1x, 95, 98, NT) installed, 4 MB RAM, 2 MB free hard disk space, 1 free serial RS 232C port.

Installing the Software SW mpu-ps

1. Windows 95/98/*NT*: in menu **Start** choose **Run**. Enter *a:\setup* and press RETURN.
2. Only Windows 3.1x: Choose **File menu** in the Program Manager. Choose **Run** and enter *a:\setup*. Press RETURN.
3. The setup-program will start. The installation path is *C:\Negele*. Press RETURN or choose another path and confirm with RETURN.
4. After installation run the program by using the options **Start**, **Programs**, **negele**, **NE toolA2**. (Windows 3.1x: *program group negele, NE tool A2*)

Connecting the Programming Adapter mpu-p

1. Disconnect the **mpu-4p** by removing the terminals 1, 2.
2. Connect the programming link according to figure 1. The **mpu-4p** will get supplied by the RS 232C - port.

Parameter Setting

1. Start program (menu **Start**, **Programs**, **negele**, **NE toolA2**).
2. in menu *COM-Port*: choose connection (Com 1...4).
3. in menu *Sprache*: choose language.
4. in menu *Produkte*: choose mpu-4p.
5. in menu *Setup*: choose measure.
6. with EDIT: edit mpu-4p data mask.
7. Adjust parameters. Detailed information for every parameter will show up down left.
8. in menu TAG-Nr.: if required enter measurement point no.
9. OK: confirm parameters, if required store file (*name*.dat).
10. ↓: send parameters to unit, ↑: read out parameters from unit.

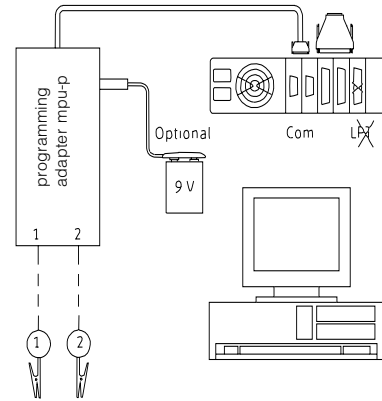### Figure 1 Installing the Programming Adapter

Figure 2 Data Mask Screen

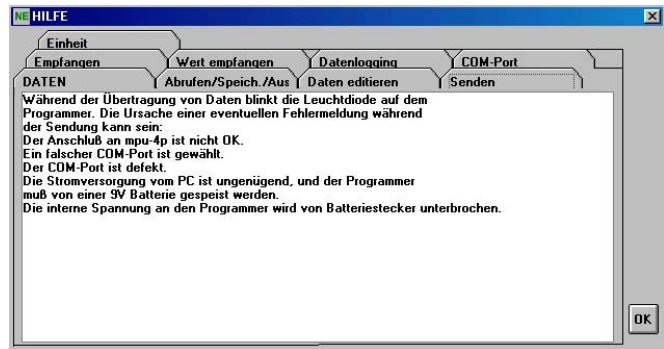### Figure 3 The Help-menu Screen

Figure 4 Measuring Values Output Screen

Open measuring menu

Measuring values, updated every 17 sec.

Automatic lead compensation for 2-wire current loop

Data logging function

Detail information