

## Thermal converter

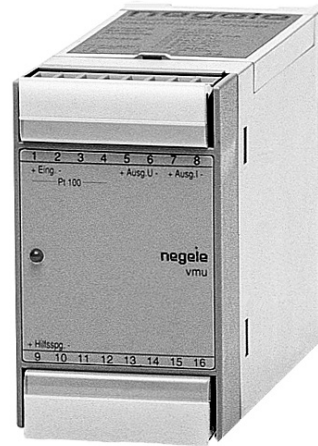
## vmu-th

### Basic function

The measuring transducers **vmu-fk** und **vmu-nc** are used to convert signals of thermocouples into standard signals (0-10V, 0/4-20mA). The cold junction compensation has been integrated into the terminal block. The measuring range can be individually adjusted by means of a gravity switch and a padder. Thus, the converter can be adapted individually on-site. The desired current output signal (0/4-20mA) is reversible by means of a sliding switch. There is a separate voltage output (0-10V). By installing an isolator **mtw-1** the vmu's current output can be decoupled from the input. The measuring transducer **vmu-th** has been integrated into a snap-on case for standard mounting rails.

### Features

- Different measuring inputs possible
- Zero point and amplification can be adjusted individually.
- Decoupled current output possible
- Connection by means of plug-in terminal blocks

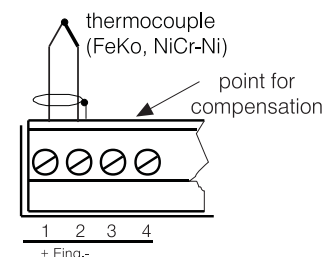
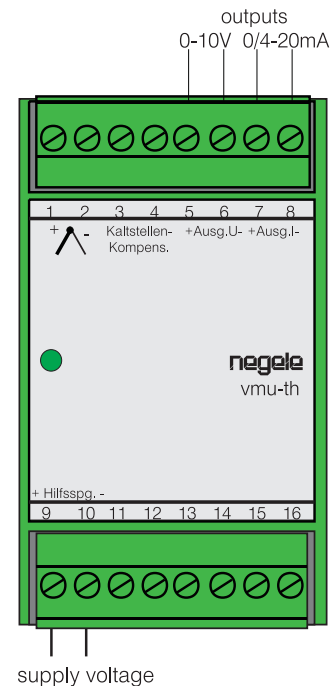


Measuring transducer **vmu-nc**

### Technical characteristics

Case	DIN-Case made of	ABS for mounting rail acc.to EN 50022 45x75x105mm (WidthxHeightxDepth)
System of protection		IP 20, terminals, protected against accidental contact
Ambient temp.	Working temp.	-10...+55°C
	Storing temp.	-20...+70°C
	Humidity	0...95%
Input	Thermocouple	2-contact-connection
Measuring range	chosen individually	see chart overleaf
Output	<b>vmu-th</b>	0/4...20mA Apparent ohmic resistance ≤ 500Ω
		0...10V Working resistance > 1kΩ
Accuracy		typ. ±0,5%, max. 1% of the final value
	Linearity	0,1% typ.
	Temperature drift	0,01%/K
Supply voltage	<b>vmu-th</b>	24, 42, 110, 230V AC, 47...63Hz, 5VA, 15...36V DC, max. 80mA, reverse battery protection

### Connection vmu-th



**Examples for ordering** Following data have to be indicated:

Type	Supply voltage	Measuring range
vmu-fk	230V AC	0...200°C
vmu-nc	110V AC	0...600°C
vmu-nc	24V DC	0...1200°C

10/01Lh/PM6.0

**Types of thermocouples and temperature range** (to be indicated when order is placed)

Thermocouple	FeKo (Type J)	Temp. range	-100...+200°C
	FeKo (Type J)		0...600°C
	NiCrNi (Type K)		-100...+200°C
	NiCrNi (Type K)		0...1200°C
	PtRh-Pt (Type S)		0...1600°C

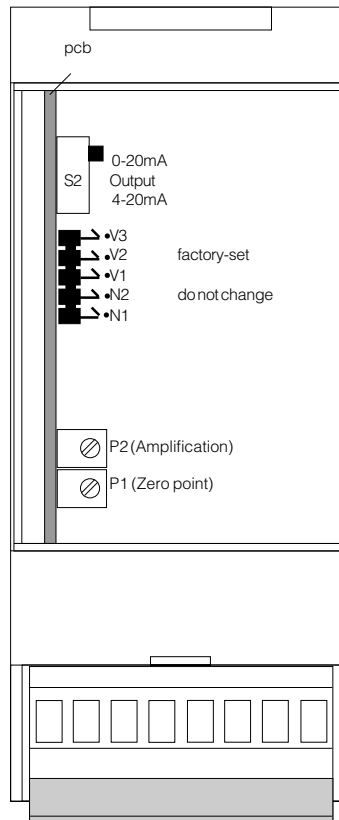
**Padder and selector switch**

- P1 Zero point (N)
- P2 Amplification
- S1 Switch Output 0...20mA or 4...20mA

**Set-up of the converter**

Converter with thermocouple input are factory-set.

**View vmu-th**



**Block diagram vmu-pt and zmu-pt**

