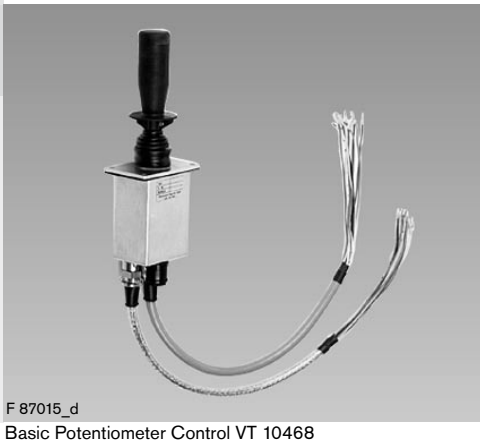
Electronic signal transmitter

RE 29753-01/08.06 1/4
Replaces: RE 29753-D/02.00

Type VT 17328 (mod. VT 10468)

Series 3X
Single axis version



F 87015_d
Basic Potentiometer Control VT 10468

Overview of contents

Features

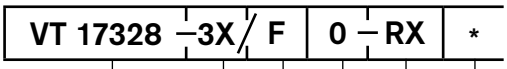
Contained within the VT 17328-3X electronic signal transmitter are the electronic and mechanical components which are used to convert the lever movement into a proportional electrical voltage.

- Basic Potentiometer Control: VT 10468-3X/...
- Change compared with base:
  Output voltage is +10 V in both directions
- Sensitive control due to low operating forces
- Integrated evaluation electronics
- ±15 V DC supply voltage
- Replacable gaiter
- Switched off if there is a cable break in the supply cables
- Polarity protection

Options:

- Dead-man switch in the hand lever
- Additional controls possible via various switches fitted into the hand lever
- Can be held in any position by means of a friction brake
- The zero point may be mechanically locked
- Directional contacts for electrical monitoring of the hand lever movement

Ordering details



Single axis signal transmitter

Series 30 bis 39 **= 3X**
(30 to 39: unchanged technical data and connection allocation)

Additional functions
Spring return **= F**

Lever form	**Additional functions**	**Protection to EN 60529**	
Hand lever	None	IP 65	**= 0**

Futher details in clear text

Direction contact
RX = Contact in the X axis

Function

Mechanics

The simple robust mechanism consists of a control lever mounted in a swivel bearing. By deflecting the lever, the setting of a plastic track potentiometer is changed. Dependent upon the model, the control lever is automatically spring returned to the neutral position or held in any position by a friction brake.
A mechanical detent can also be fitted into the hand lever. The mechanism is protected by a rubber gaiter.

Zero position, directional and dead-man contacts

In order to be able to electrically monitor the direction of lever movement and the zero position, a switch can be fitted per half axis. This switch closes when the lever is moved between ±5 % to ±10 % of the maximum travel (referred to the output signal).

Electronics

The plastic track potentiometer is connected in series with an impedance converter, which ensures that the control curve remains within the specified limits, even with varying loading on the control output. The electronics also carry out other protective functions. Should a cable break in the ±15V lines occur, then the supply to the electronics is automatically switched off internally. The electrical connection is via multi-core screened cable.

The combination of plastic track potentiometer and impedance converter ensures that a long service life is achieved.

Technical data (for applications outside these parameters, please consult us!)

Electronics		
Supply voltage	U	±15 VDC (± 1 %) stabilised
Current consumption	I	Approx. 30 mA
Control outputs		
– Output voltage	U	o to +10 V in both directions
– Output current	I	Max. 5 mA
Switched contacts		2 A, Max. 30 VDC (ohmic load)
Fuse	I_S	2 A, medium blowing characteristics
Mechanics		
Lever displacement angle	α	Approx. 20° from the spring centre position to the end position (when operated in the X direction)
Operating force	F	Start value approx. 6 N Final value approx. 10 N
Protection to EN 60529		
– above the mounting plane:		IP 65
– below the mounting plane:		IP 65
Cable length	l	600 mm
Permissible ambient temperature	ϑ	–25 to +70 °C
Weight	m	Approx. 1.5 kg

Cable allocation

Colour of the connecting cables (cable 1 – screened):

Supply lines:	Red	+15 V
	Black	M0 (measured zero)
	Blue	–15 V
Signal lines:	White	M0 (measured zero)
	Pink	X axis
Screen:	Yellow/green	Housing transmitter
	Transparent	Screen

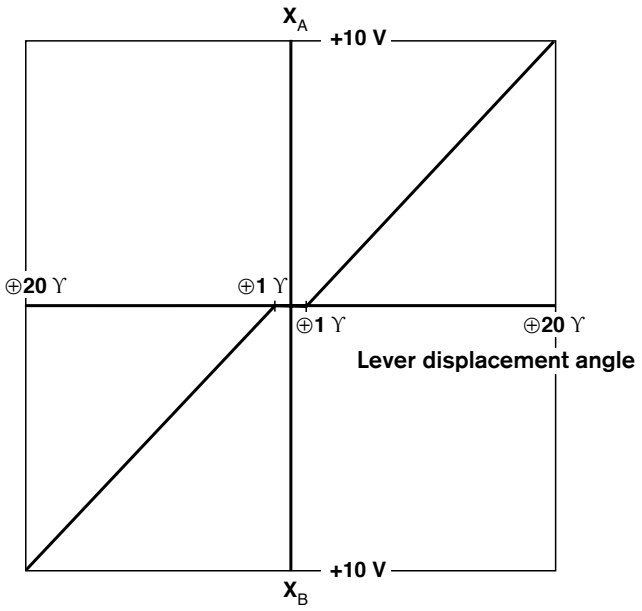
Notes:
- The cable screen is not connected internally!
- If the transmitter is installed in a fully isolated manner, then the transmitter housing must be connected to earth!

Colours of the connecting cables (cable 2 – non screened):

Feed cable:	Blue	
Directional contacts:	Grey/Pink	X_A
	Red/Blue	X_B
Zero position contact:	Black	X axis

Characteristic curves

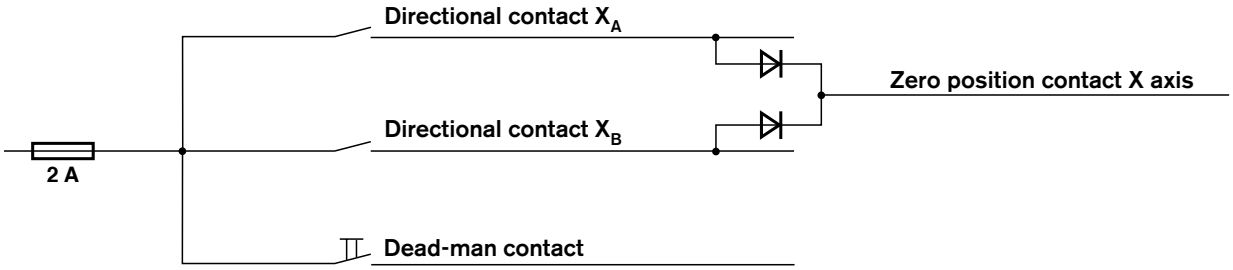
X axis



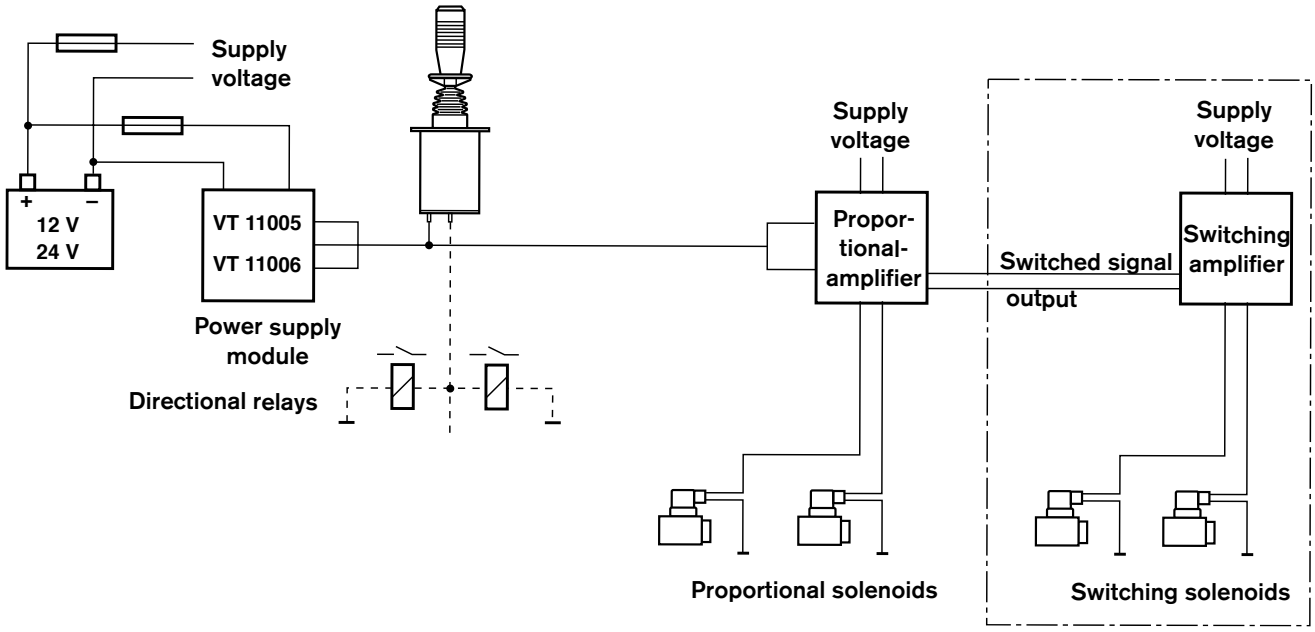
Engineering guidelines

☞ **Note!** If the transmitter is installed in a fully isolated manner, then the transmitter housing must be earthed by a seperate cable!

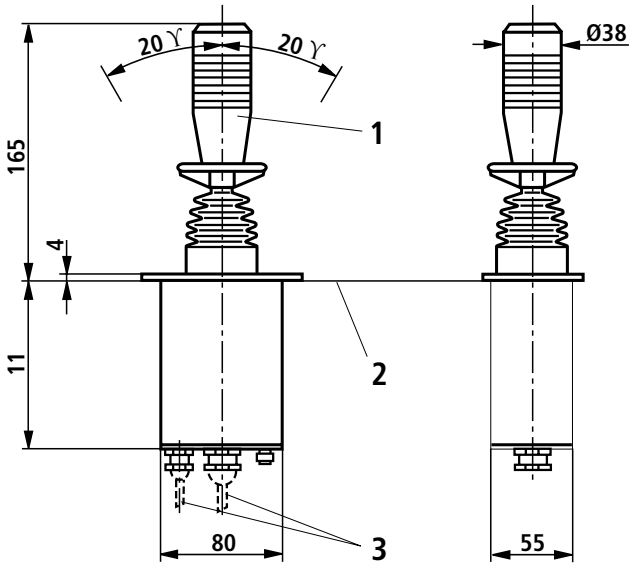
Zero position, directional and deadman contacts

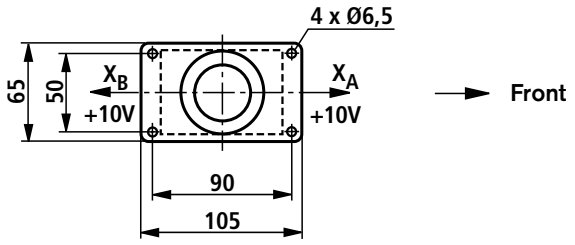


Circuit example



Unit dimensions (dimensions in mm)





1 Hand lever

2 Mounting face

3 Connecting cables (length 600 mm)