

### NRS 1-40.1

Self-monitoring temperature switch with periodic self-checking feature to be used in conjunction with a resistance thermometer type TRG 5-6.. and pre-amplifier TRV 5-40. The equipment operates as a safety temperature controller, or in conjunction with an external lock-out in accordance with VDE 0116 (EN 50156) as a safety temperature limiter. An alarm is given as soon as the temperature exceeds a preset limit value. The TRV 5-40 features digital indicators for the actual temperature and switching-off temperature.

### Examples of Installation

- Superheaters for steam boiler plants operating without constant supervision (TRD 604).
- Superheater cascades with up to 4 steps
- In pressurized hot-water plants as temperature limiter for the secondary circuit in accordance with TRD 604 or 12952/..53.
- Furnaces in accordance with DIN 30 683 up to 800 °C.
- Control systems for product heating or cooling

### TRS 5-40

The MIN/MAX temperature switch TRS 5-40 in combination with temperature sensor TRG 5-63 and pre-amplifier TVRV 5-40 serves as temperature controller. Application in steam boilers, pressurized hot-water plants operating without constant supervision (TRD 604) as well as any other type of heat generator. The equipment raises an alarm when the preset MIN/MAX limit value is attained.

### Technical Data of Temperature Sensor

Type	PN	Connections			Pt 100	Max. temperature	Ambient temperature	Lengths available L [mm]
		Screwed BSP	TRV...	Welding stub				
TRG 5-63	40	½"	5-40	–	1	400 °C	100 °C	100 bis 400
TRG 5-64	40	½"	5-40	–	2	400 °C	100 °C	100 bis 400

Accuracy class A

TRG 5-65	160	–	5-40	Form 4	1	540 °C	100 °C	115
TRG 5-66	160	–	5-40	Form 4	1	540 °C	100 °C	140
TRG 5-67	160	–	5-40	Form 4	1	650 °C	100 °C	200
TRG 5-68	160	–	5-40	Form 4	1	650 °C	100 °C	200

Accuracy class B

#### Pt 1000

TRG 5-69	40	½"	CANopen	–	1	400 °C	85 °C	160
TRG 5-70	160	–	CANopen	Form 4	1	540 °C	85 °C	140

### Technical Data of Temperature Pre-Amplifier

Type	Output	Adjustment range	Auxiliary power	Version	Performance test	TÜV	EC
TRV 5-40	CANopen	650 °C	24 V, DC	a	annual	●	●

### Technical Data of Temperature Switches / Controllers / Indicators

Type	Outputs		Control characteristic			Mains supply Standard	Version			Performance test in acc. with DIN 3440	TÜV approval	EC
	Switchpoint	0/4-20 mA	MIN	MAX	Δ T		b	c	e			
NRS 1-40.1	1	–	–	–	–	230 V	●	–	–	annual	●	●
NRS 1-40.2	1	–	–	–	–	230 V	●	–	–	–	●	●
TRS 5-40	4	–	●	●	–	230 V	●	–	–	–	●	





