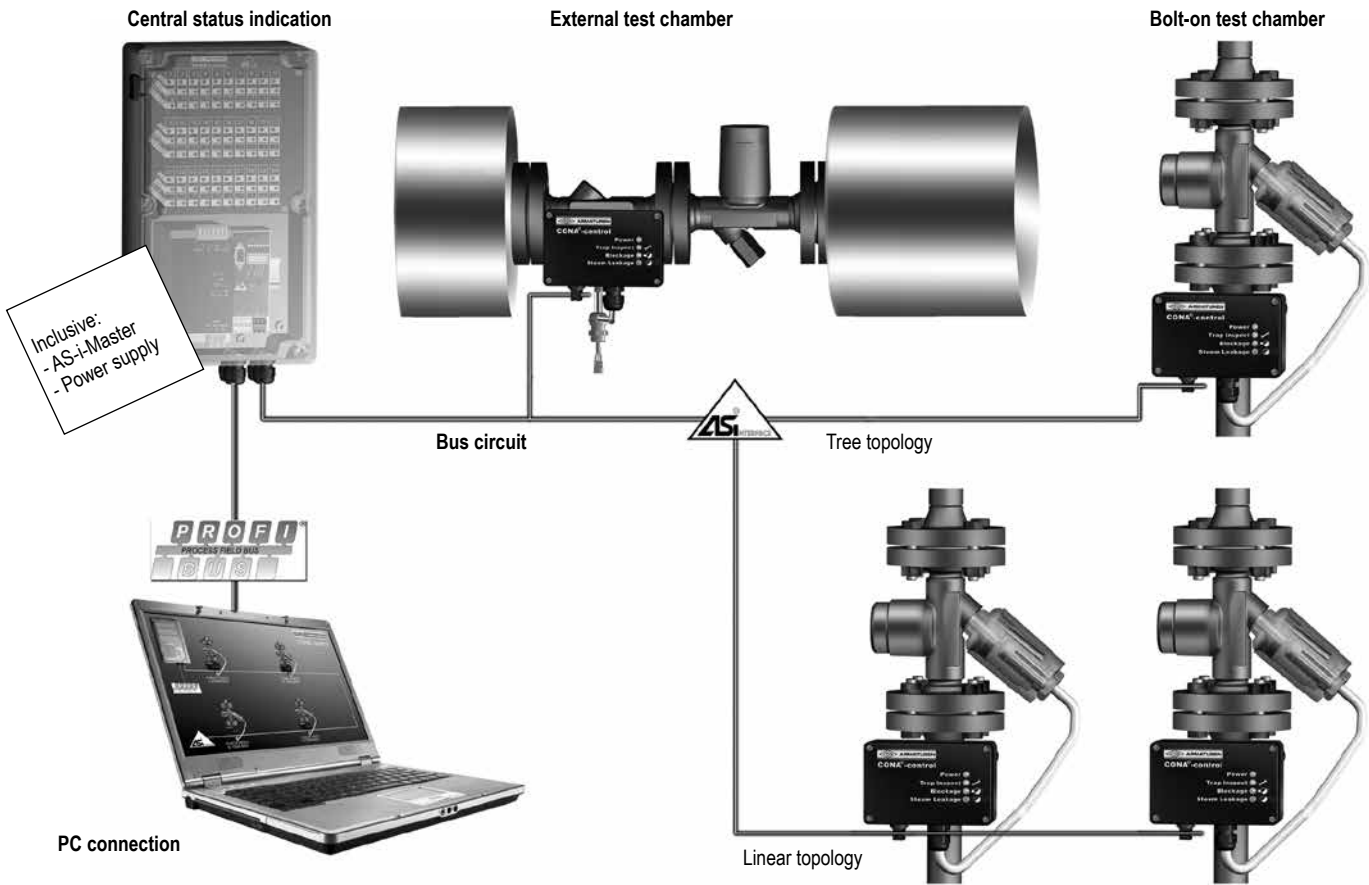
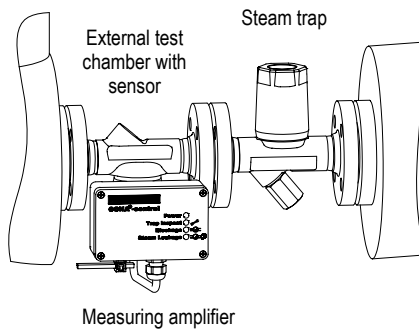


## CONA<sup>®</sup>-control - Monitoring system for steam traps

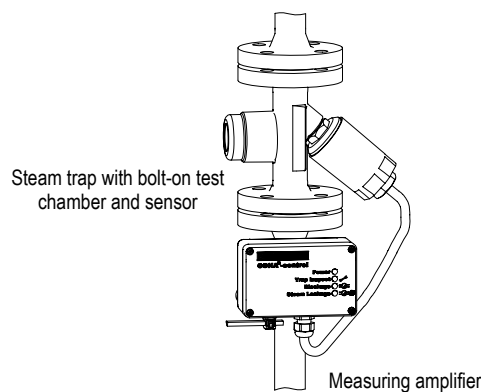


### External test chamber

- with flanges (Fig. 685....1)
- with screwed sockets (Fig. 685....2)
- with socket weld ends (Fig. 685....3)
- with butt weld ends (Fig. 685....4)



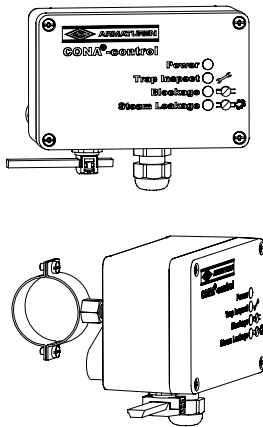
### Bolt-on test chamber (as option for ARI-CONA<sup>®</sup>)



### Features:

- Identification of failed steam traps
  - Leaking steam trap (energy wastage)
  - Blocked steam traps (poor plant performance)
- Patent applied, safe temperature sensor
- Local indication of maintenance requirement
- Continuous monitoring of trap performance for instant indication of failure
- External chamber and sensor may be used on all types and makes of steam trap
- Network compatible by AS-i-Bus linking of chambers and sensors (optional)
- Single operation with relay outputs (optional)
- AS-i-Bus gives the opportunity for visual display (optional)

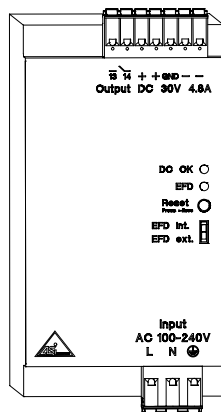
Measuring amplifier



- Indication of operating status for the supervising steam traps by LED's
- Adjustable category temperature for „Blockage“ indication
- AS-i-bus system option (necessary for connection to the central status indication)
- Optionally single operation with relay outputs (evaluation e.g. over SPS possible)
- Measuring amplifier required for each test chamber
- Maybe wall or panel mounted
- Maximum distance to the sensor approx. 1m

Technical data	
Ambient temperature:	0 up to +70°C
Supply voltage:	18-36VDC or by AS-i-Bus
Dimensions of body (HxWxD):	75 x 125 x 60mm
Body material:	Aluminum
Enclosure:	IP65
Current consumption:	<100 mA

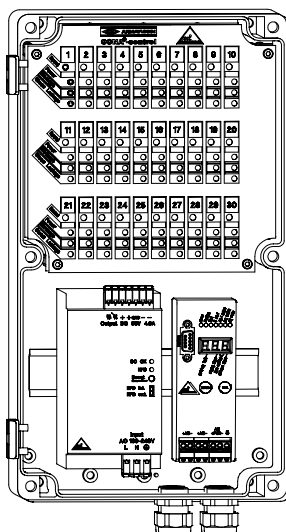
Power supply



- AS-i-Bus compatible
- Built-in appliance for mounting on a profile in the control cabinet

Technical data	
Supply voltage:	100 V AC - 240V AC 45-65Hz
Output voltage:	30V DC
Ambient temperature:	-25 up to +70°C
Input fuse:	5 A slow fuse
Output current:	4,8 A
Enclosure:	IP20
Current consumption:	approx. 2,1 A (120 V AC) / 1A (230 V AC)
Weight:	0,9 kg

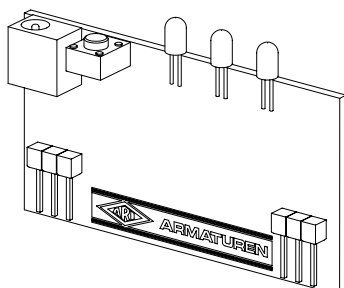
Central status indication



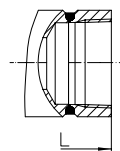
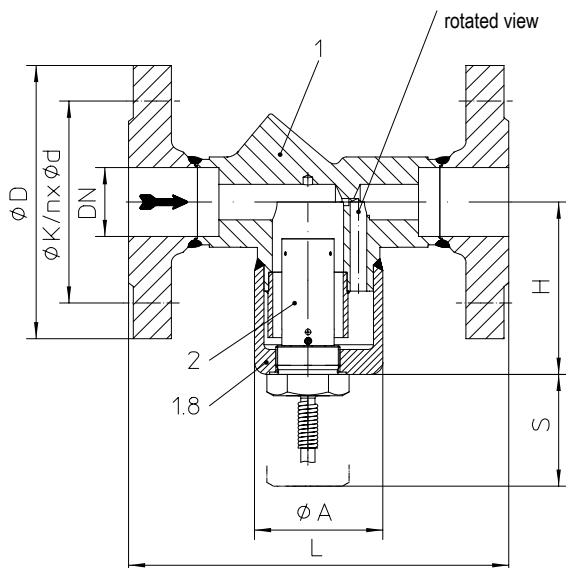
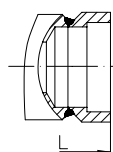
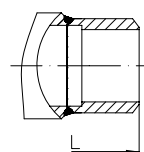
- Central status indication of up to 30 steam traps
- Connection of measuring amplifier by AS-i-Bus
- Integrated AS-i-Master/Gateway
- Integrated power supply for AS-i-Bus system
- One indication card necessary for each measuring amplifier

Technical data	
Internal Bus-system for steam traps:	AS-i-Bus
Interface for superior systems:	Profibus DP other Bus systems on request
Ambient temperature:	0 to +50°C
Supply voltage:	100-240 V ~ optional: 24 V ~
Dimensions of body (HxWxD):	360 x 200 x 160mm
Body material:	PC/ABS
Enclosure:	IP65

Indication card



- Indication card for the central status indication
- Indication of operation standards „Blockage“ and „Steam Leakage“ of the connected steam traps by AS-i-Bus
- Reset button for one or all error messages

**External test chamber (Forged steel, Stainless steel)**

 Fig. 685...2  
 with screwed sockets

 Fig. 685...3  
 with socket weld ends

 Fig. 685...4  
 with butt weld ends

**Fig. 685...1 with flanges**

Figure	Nominal pressure	Material	Nominal diameter / NPS	Operating pressure PS	Inlet temperature TS
45.685	PN40	1.0460	DN15-25 / 1/2" - 1"	32 barg	250 °C
55.685	PN40	1.4541	DN15-25 / 1/2" - 1"	32 barg	250 °C

DIN/EN-Constructions refer to data sheet CONA®-control ANSI

**Types of connection**

Other types of connection on request.

- Flanges ....1 \_\_\_\_\_ acc. to DIN 2635 or DIN EN 1092-1
- Screwed sockets ....2 \_\_\_\_ Rp thread acc. to DIN EN 10226-1 or NPT thread acc. to ANSI B1.20.1
- Socket weld ends ....3 \_\_\_\_ acc. to DIN EN 12760
- Butt weld ends ....4 \_\_\_\_ Weld preparation acc. to EN ISO 9692 identification No. 1.3 and 1.5  
 (Note restriction on operating pressure / inlet temperature depending to design!)

**Features**

- Installation directly in front of the steam trap
- Patent applied, integrated temperature sensor
- Installation position: horizontal, cap downwards!
- Applicable for ball float steam traps CONA S/SC, steam traps of other manufacturers or if a steam trap with screen is necessary

Types of connection	Flanges			Screwed sockets Socket weld ends			Butt weld ends			
	DN	15	20	25	15	20	25	15	20	25
NPS		1/2"	3/4"	1"	1/2"	3/4"	1"	1/2"	3/4"	1"

**Face-to-face acc. to data sheet resp. customer request**

L	(mm)	150	150	160	95	95	95	250	250	250
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**Dimensions**

	(mm)	73	73	73	73	73	76	73	73	73
H										
S		60	60	60	60	60	60	60	60	60
SQR		54	54	54	54	54	54	54	54	54
Ø D		95	105	115	--	--	--	--	--	--
Ø K		65	75	85	--	--	--	--	--	--
n x Ø d	(n x mm)	4 x 14	4 x 14	4 x 14	--	--	--	--	--	--

**Weights**

Fig. 685 (approx.)	(kg)	3,2	3,2	4,2	1,7	1,6	2,1	2,2	2,3	2,4
--------------------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----

**Parts**

Pos.	Sp.p.	Description	Fig. 45.685	Fig. 55.685
1		Body	P250GH, 1.0460	X6CrNiTi18-10, 1.4541
1.8		Cap Sensor	X6CrNiTi18-10, 1.4541	X6CrNiTi18-10, 1.4541
2	x	Sensor, cpl.	X6CrNiMoTi17-12-2, 1.4571	X6CrNiMoTi17-12-2, 1.4571
		↳ Spare parts		

Information / restriction of technical rules need to be observed!

Resistance and fitness must be verified (contact manufacturer for information, refer to Product overview and Resistance list).

 Operating and installation instructions can be downloaded at [www.ari-armaturen.com](http://www.ari-armaturen.com)

External test chamber (Forged steel, Stainless steel)

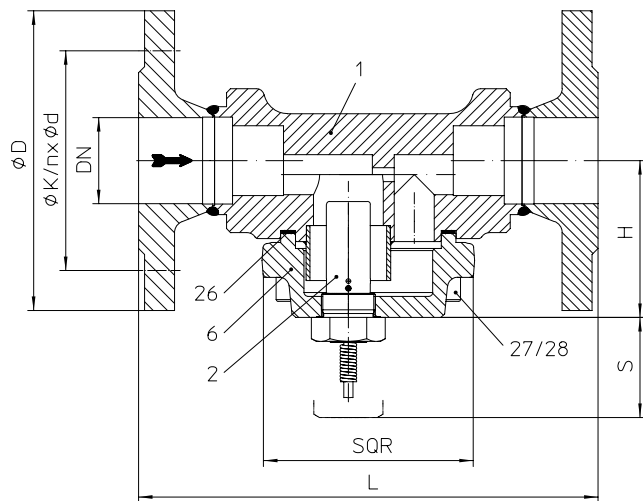


Fig. 685....1 with flanges

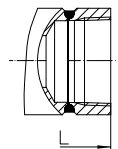


Fig. 685....2 with screwed sockets

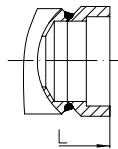


Fig. 685....3 with socket weld ends

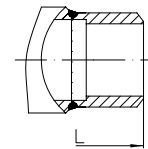


Fig. 685....4 with butt weld ends

Figure	Nominal pressure	Material	Nominal diameter / NPS	Operating pressure PS	Inlet temperature TS
45.685	PN40	1.0460	DN40-50 / 1 1/2" - 2"	32 barg	250 °C
55.685	PN40	1.4541	DN40-50 / 1 1/2" - 2"	32 barg	250 °C

DIN/EN-Constructions refer to data sheet CONA®-control ANSI

Types of connection	Other types of connection on request.
<ul style="list-style-type: none"> <li>Flanges ....1 _____ acc. to DIN 2635 or DIN EN 1092-1</li> <li>Screwed sockets ....2 _____ Rp thread acc. to DIN EN 10226-1 or NPT thread acc. to ANSI B1.20.1</li> <li>Socket weld ends ....3 _____ acc. to DIN EN 12760</li> <li>Butt weld ends ....4 _____ Weld preparation acc. to EN ISO 9692 identification No. 1.3 and 1.5 (Note restriction on operating pressure / inlet temperature depending to design!)</li> </ul>	

Features
<ul style="list-style-type: none"> <li>Installation directly in front of the steam trap</li> <li>Patent applied, integrated temperature sensor</li> <li>Installation position: horizontal, cap downwards!</li> <li>Applicable for ball float steam traps CONA S/SC, steam traps of other manufacturers or if a steam trap with screen is necessary</li> </ul>

Types of connection	Flanges		Screwed sockets Socket weld ends		Butt weld ends		
	DN	40	50	40	50	40	50
NPS		1 1/2"	2"	1 1/2"	2"	1 1/2"	2"

Face-to-face acc. to data sheet resp. customer request				
L	(mm)	230	230	on request

Dimensions				
H	(mm)	78,5	78,5	on request
S	(mm)	60	60	
SQR	(mm)	105	105	
Ø D	(mm)	150	165	
Ø K	(mm)	110	125	
n x Ø d	(n x mm)	4 x 18	4 x 18	

Weights				
Fig. 685 (approx.)	(kg)	9,8	11,2	on request

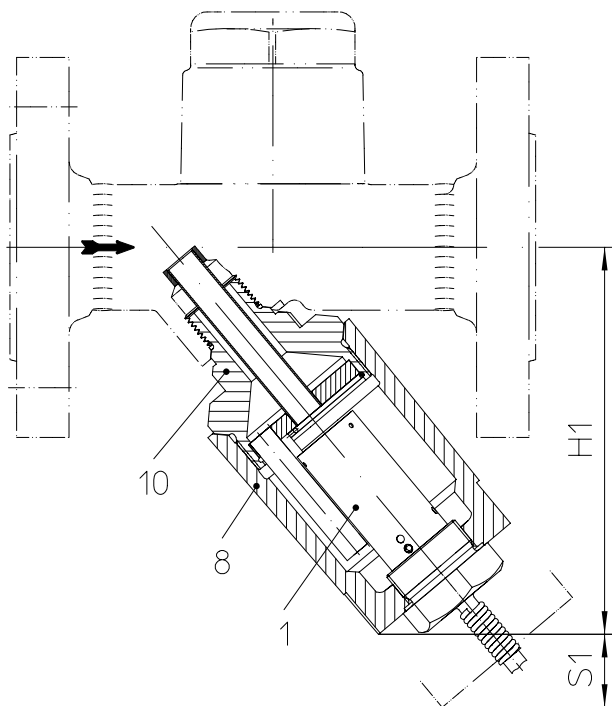
Parts				
Pos.	Sp.p.	Description	Fig. 45.685	Fig. 55.685
1		Body	P250GH, 1.0460	X6CrNiTi18-10, 1.4541
2	x	Sensor, cpl.	X6CrNiMoTi17-12-2, 1.4571	X6CrNiMoTi17-12-2, 1.4571
6		Cover Sensor	P250GH, 1.0460	X6CrNiTi18-10, 1.4541
26	x	Sealing ring	Graphite (CrNi laminated with graphite)	
27		Cheese head screw	21CrMoV 5-7, 1.7709	
28		Hexagonal nut	21CrMoV 5-7, 1.7709	
		L Spare parts		

Information / restriction of technical rules need to be observed!

Resistance and fitness must be verified (contact manufacturer for information, refer to Product overview and Resistance list).

Operating and installation instructions can be downloaded at [www.ari-armaturen.com](http://www.ari-armaturen.com)

**Bolt-on test chamber (Forged steel, Stainless steel)**



**Options Bolt-on test chamber**

Figure	Nominal pressure	Material	Thread	Operating pressure PS	Inlet temperature TS
Bolt-on test chamber	PN40	1.0460	M20 x 1,5	32 barg	250 °C
Bolt-on test chamber	PN40	1.4541	M20 x 1,5	32 barg	250 °C

DIN/EN-Constructions refer to data sheet CONA®-control ANSI

**Types of connection**

- Thread \_\_\_\_\_ M20 x 1,5 (for CONA steam traps)

**Features**

- Suitable for horizontal or vertical installation position of the steam traps; **Test chamber diagonally downwards!!**
- Patent applied, integrated temperature sensor
- Applicable for CONA B (Fig. 601) and CONA M (Fig. 612) with Y-body DN15-25 (design of the steam traps see corresponding data sheets)

Types of connection	Thread
<b>Size</b>	<b>M20 x 1,5</b>

Dimensions	Dimensions and weights of the CONA®-steam traps see corresponding data sheet
H1 (mm)	117
S1 (mm)	25

Weights	
(approx.) (kg)	1,2

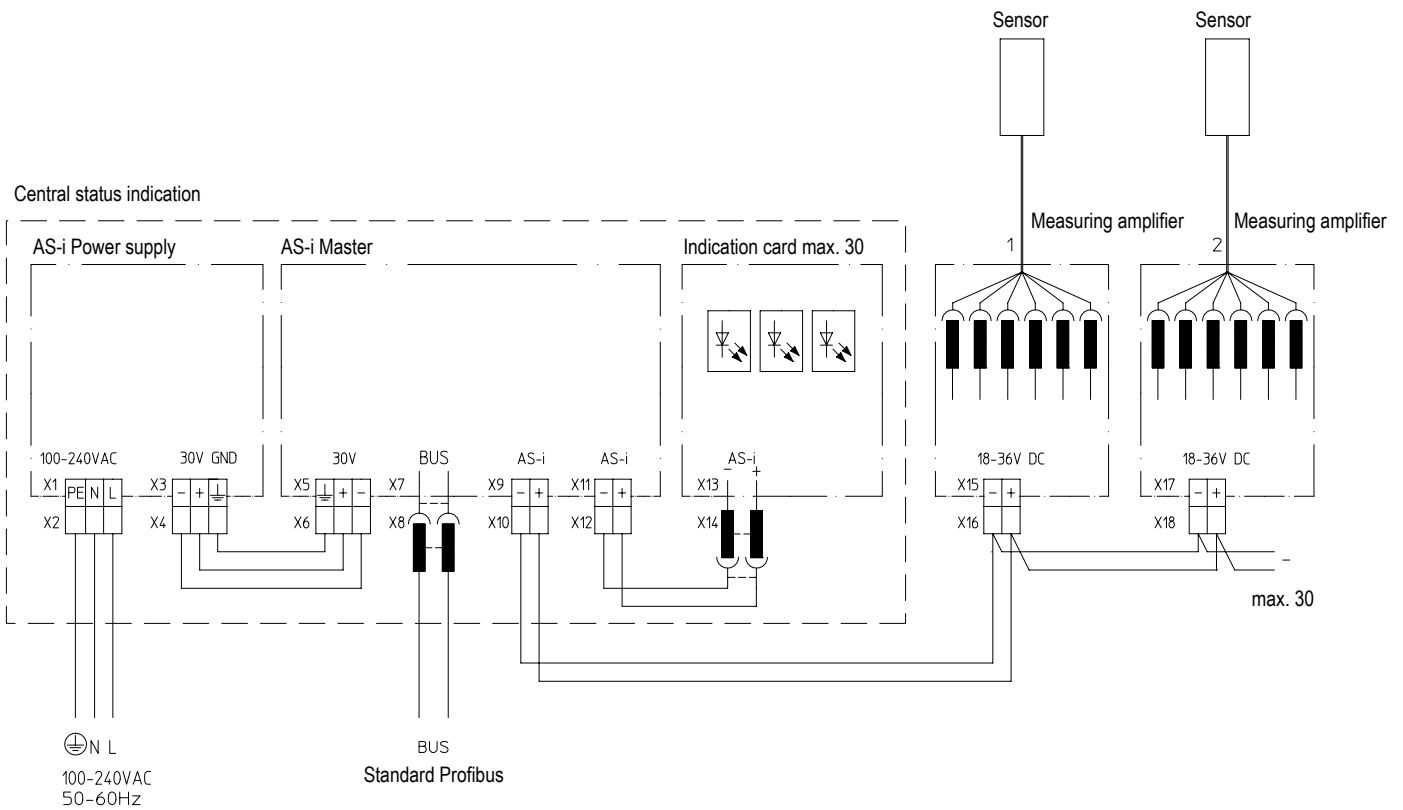
Parts			
Pos.	Sp.p.	Description	Options Bolt-on test chamber
1	x	Sensor, cpl.	X6CrNiMoTi17-12-2, 1.4571   X6CrNiMoTi17-12-2, 1.4571
8		Cap Sensor	P250GH, 1.0460   X6CrNiTi18-10, 1.4541
10		Socket	X6CrNiMoTi17-12-2, 1.4571   X6CrNiMoTi17-12-2, 1.4571
↳ Spare parts			

Information / restriction of technical rules need to be observed!

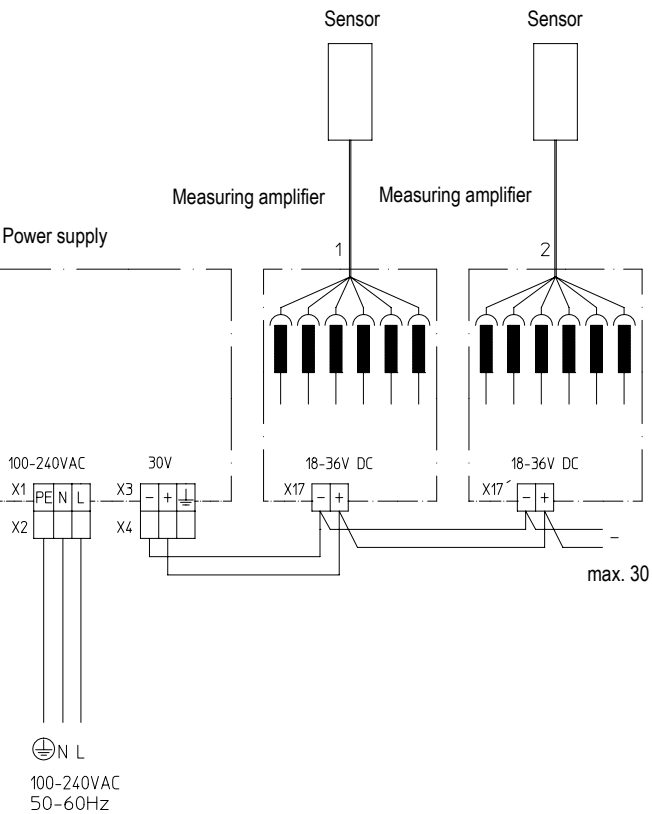
Resistance and fitness must be verified (contact manufacturer for information, refer to Product overview and Resistance list).

Operating and installation instructions can be downloaded at [www.ari-armaturen.com](http://www.ari-armaturen.com)

**Operation with central status indication**



**Single operation without central status indication**



**Single operation without central status indication with relay outputs**

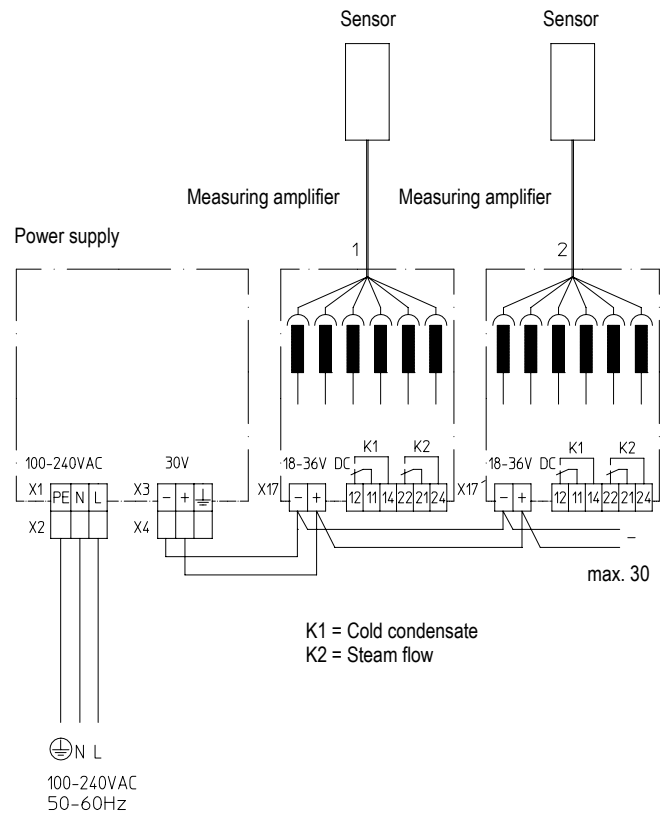
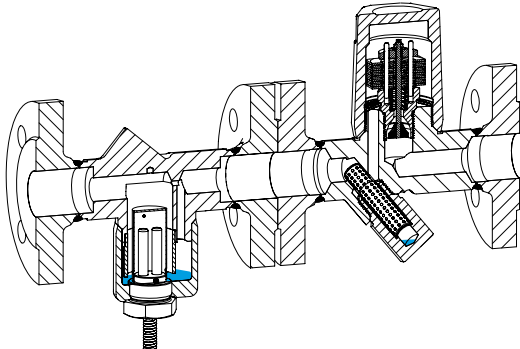
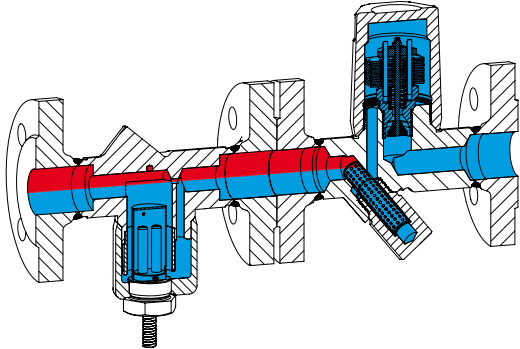
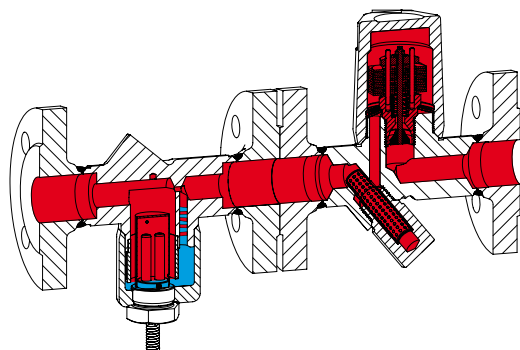
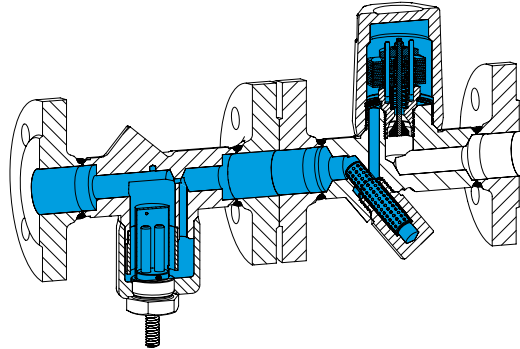


Illustration of test chamber and steam trap	LED indication at the measuring amplifier - Indication by Bus	Operating status
	<ul style="list-style-type: none"> <li>○ Trap Inspect *</li> <li>● Blockage</li> <li>● Steam Leakage</li> </ul>	<p><b>System/steam trap not in operation</b> Sensor in cold air/steam and the temperature is below the specified temperature</p>
	<ul style="list-style-type: none"> <li>○ Trap Inspect *</li> <li>○ Blockage</li> <li>○ Steam Leakage</li> </ul>	<p><b>Steam traps works correct</b> Sensor in hot condensate</p>
	<ul style="list-style-type: none"> <li>☀ Trap Inspect *</li> <li>○ Blockage</li> <li>● Steam Leakage</li> </ul>	<p><b>Steam leakage</b> Sensor in steam and the temperature is above the specified temperature</p>
	<ul style="list-style-type: none"> <li>☀ Trap Inspect *</li> <li>● Blockage</li> <li>○ Steam Leakage</li> </ul>	<p><b>Blocked steam trap</b> Sensor in cold condensate, the condensate is below the specified temperature</p>

\* When using the „Central status indication“ the error will be saved and the LED „Trap Inspect“ is blinking.

## Informations about pipe welding

### Welding groove acc. to DIN 2559

The material used for ARI valves with butt weld ends are:	1.0460	P250GH acc. to DIN EN 10222-2
	1.4541	X6CrNiTi18-10 acc. to DIN EN 10222-5

**Note:** Note restriction on operating pressure / inlet temperature depending to design!

Due to our experience, we recommend to apply an electric welding process.

Because of the different material compositions and wall thickness of the steam traps and the pipe gas welding shall not be applied. Quenching cracks and coarse grain structure may develop.

Steam traps with socket-weld ends shall only be welded by arc welding (welding process 111 acc. to DIN EN 24063).

If during the time of warranty others than the manufacturer or by the manufacturer authorized persons are interfering in the product and/or the setting, the right of claim for warranty will lapse!