

INFORMATION SHEET



T 9555 EN

Media Series

Accessories for Differential Pressure and Flow Meters

Application

The accessories listed in this information sheet upgrade the devices of the Media series and customize them to the plant depending on the specific application. The following pages contain exact descriptions of all accessories with order numbers.



Media 05



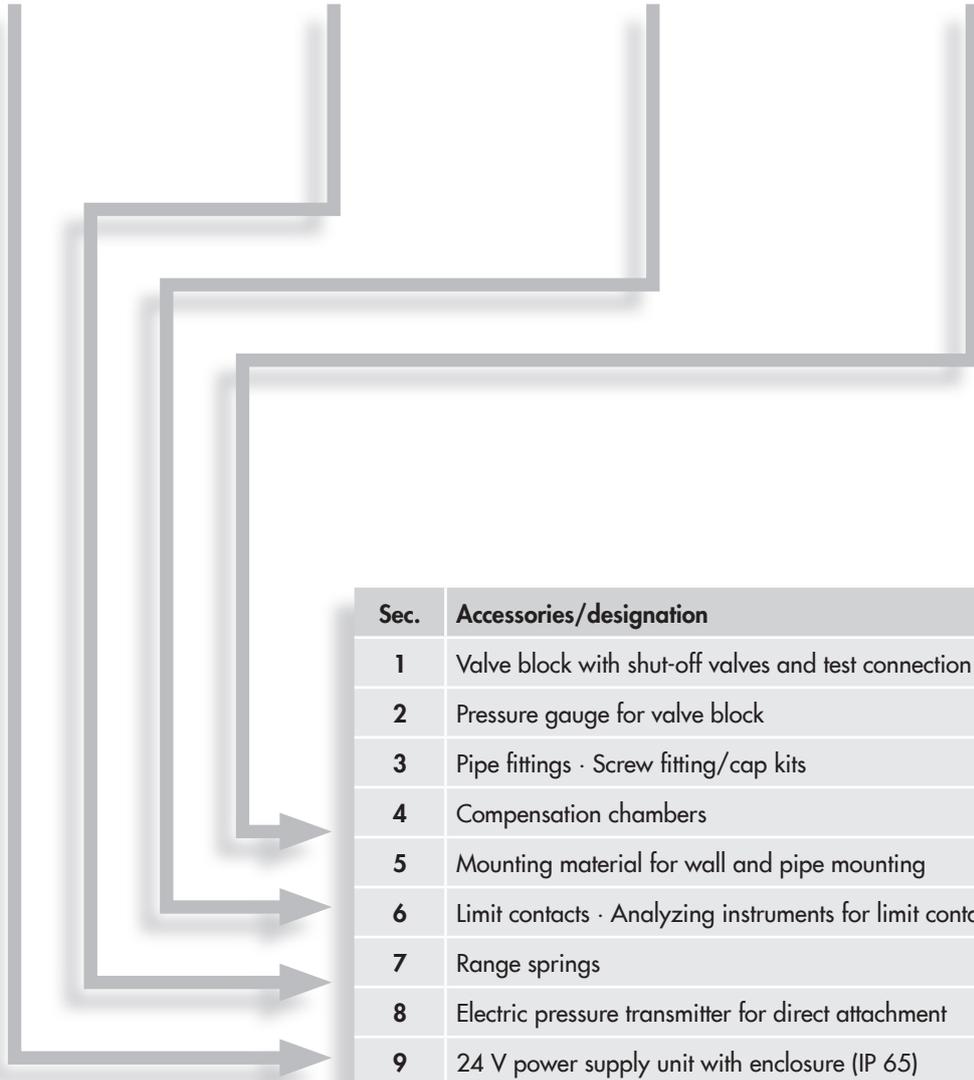
Media 5



Media 6/6Z



Media 7



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1. Valve block with shut-off valves and test connection

Three valves are combined in the valve block for Media devices. The valve block is bolted onto the bottom of the device. It offers the following advantages:

- Mounting of an operating pressure gauge possible.
- Fastened using two additional mounting holes.
- The connected measuring lines can be bypassed. This allows a zero calibration to be performed regardless of the current filling level of the tank.
- The differential pressure meter can be easily removed by shutting off the measuring lines (e.g. to replace a defective device) without disturbing the running process.
- Lead-seal holes

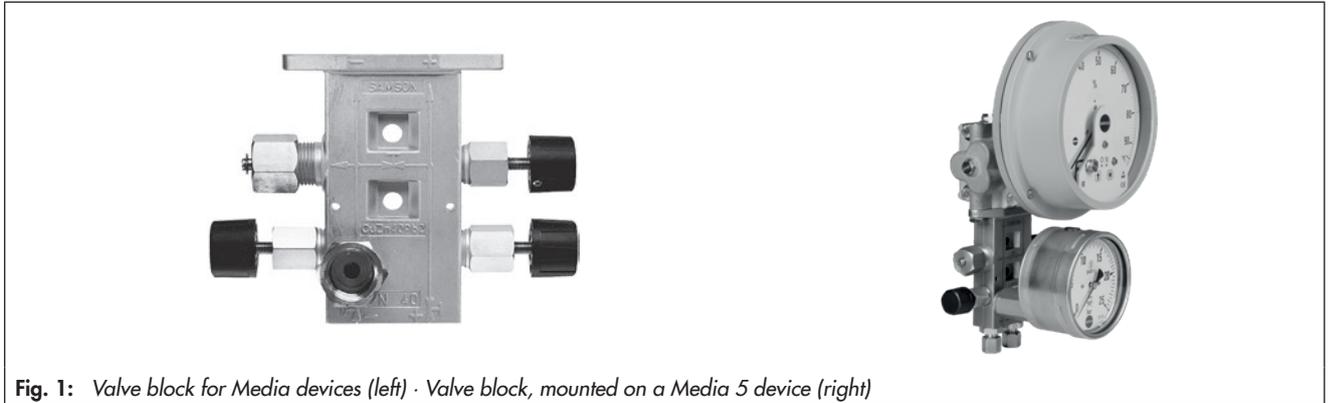


Fig. 1: Valve block for Media devices (left) · Valve block, mounted on a Media 5 device (right)

Table 1: Technical data and materials · Order numbers

Possible fields of application ¹⁾	Material			Approval for oxygen	Minimum temperature (material)	Maximum temperature with Media device	Order no.
	Enclosure	Spindle	O-rings				
Cryogenics (free of oil and grease for oxygen), DIN EN ISO 23208	Brass	Brass	Silicone	Yes: -40 to +60 °C	-40 °C	+80 °C	1400-7077
Cryogenics (free of oil and grease for oxygen), DIN EN ISO 23208	CrNiMo steel	CrNiMo steel	Silicone	Yes: -40 to +60 °C	-40 °C	+80 °C	1400-7078
Tobacco industry/compatible with paint	Brass	Brass	NBR	No	-20 °C	+80 °C	1400-7726
Food industry/Food ²⁾	CrNiMo steel	CrNiMo steel	Silicone	No	-25 °C	+80 °C	1400-7397
Flammable gases	Brass	Brass	FPM	No	0 °C	+80 °C	1400-7794
Flammable gases	CrNiMo steel	CrNiMo steel	FPM	No	0 °C	+80 °C	1400-9184
Standard/cryogenics/flammable gases	Brass	Brass	NBR	No	-30 °C	+80 °C	1400-7160
Standard/cryogenics/flammable gases	CrNiMo steel	CrNiMo steel	NBR	No	-30 °C	+80 °C	1400-7161
Flammable liquids and refrigerants	Brass	Brass	EPDM	No	-30 °C	+80 °C	1400-7795

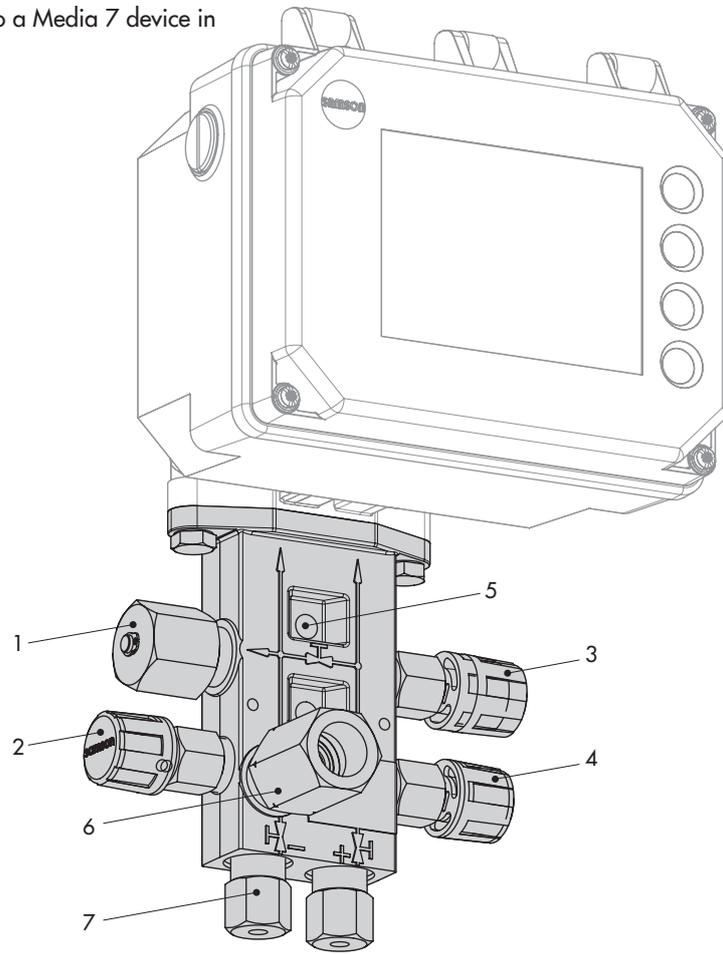
¹⁾ Refer to spec. sheet 1010-4301 for more details on these versions and their requirements

²⁾ Not certified for FDA compliance

Table 2: Screw fittings, locking plugs etc. · Free of oil and grease for oxygen according to DIN EN ISO 23208

Screw fittings, locking plugs etc.	Order no.
Locking plug G ½ LH for valve block pressure gauge connection, brass	1400-7873
Locking plug G ½ LH for valve block pressure gauge connection, stainless steel	1400-7874
Adapter for Media valve block test connection, 8 mm screw fitting, stainless steel	1400-9564
M20x1.5 locking plug for valve block test connection, stainless steel	1400-9745
Two 18x2.5 NBR O-rings for dp-cell connection to valve block	1400-9477
One 13x1.5 NBR O-ring for G ½ pressure gauge connection	1400-9562
One valve block knob (1400-7077 and higher, index 7)	0049-0019

Mounted valve block (onto a Media 7 device in the example)



- 1 Test connection
- 2 Shut-off valve (-)
- 3 Equalizing valve
- 4 Shut-off valve (+)
- 5 Fastening holes (Ø9) for wall mounting
- 6 Combined connection G ½ for pressure gauge NG 100 and G ¼ for pressure gauge NG 63
- 7 Screw fittings for process connections

Valve block · Dimensions in mm

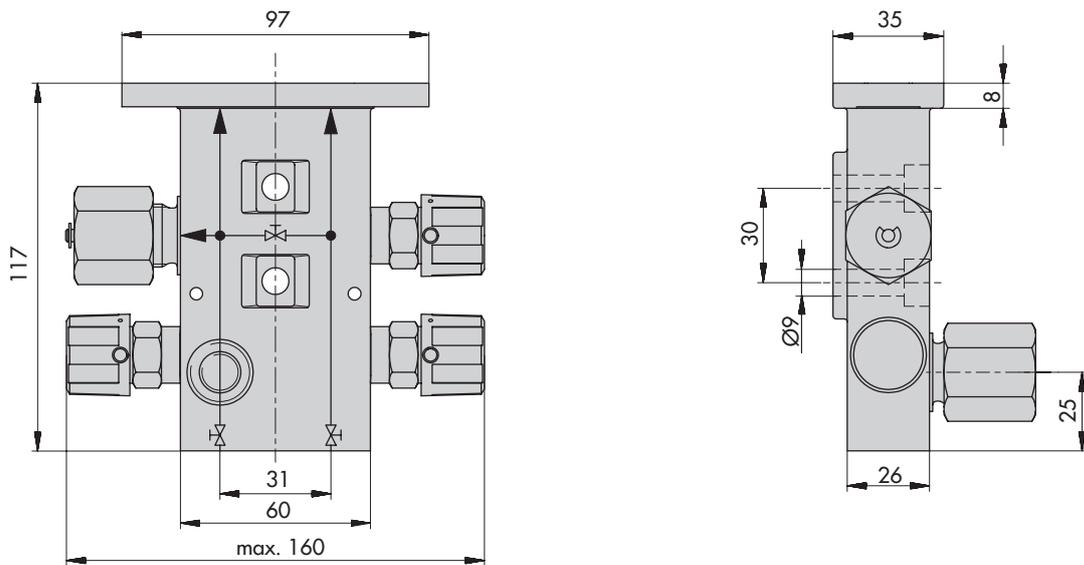


Fig. 2: Valve block · Attachment and dimensions

2. Pressure gauge for valve block

Pressure gauges NG 63 and NG 100

Table 3: Technical data and materials

Versions	
Safety class	S3 (EN 837-1) Safety pressure gauge for oxygen with solid baffle wall, blowout rear panel and red pointer
Cleaning	Free of oil and grease, for oxygen according to DIN EN ISO 23208
Pressure ranges	0 to 2.5 through 0 to 60 bar
Operating temperature	-40 to +60 °C
Degree of protection according to DIN EN 65029	IP 54
Connection	
NG 100	G ½ B (rear)
NG 63	G ¼ B (rear)
Materials	
Housing	CrNi steel
Wetted parts	CrNi steel
Window	Laminated safety glass



Pressure gauge NG 100

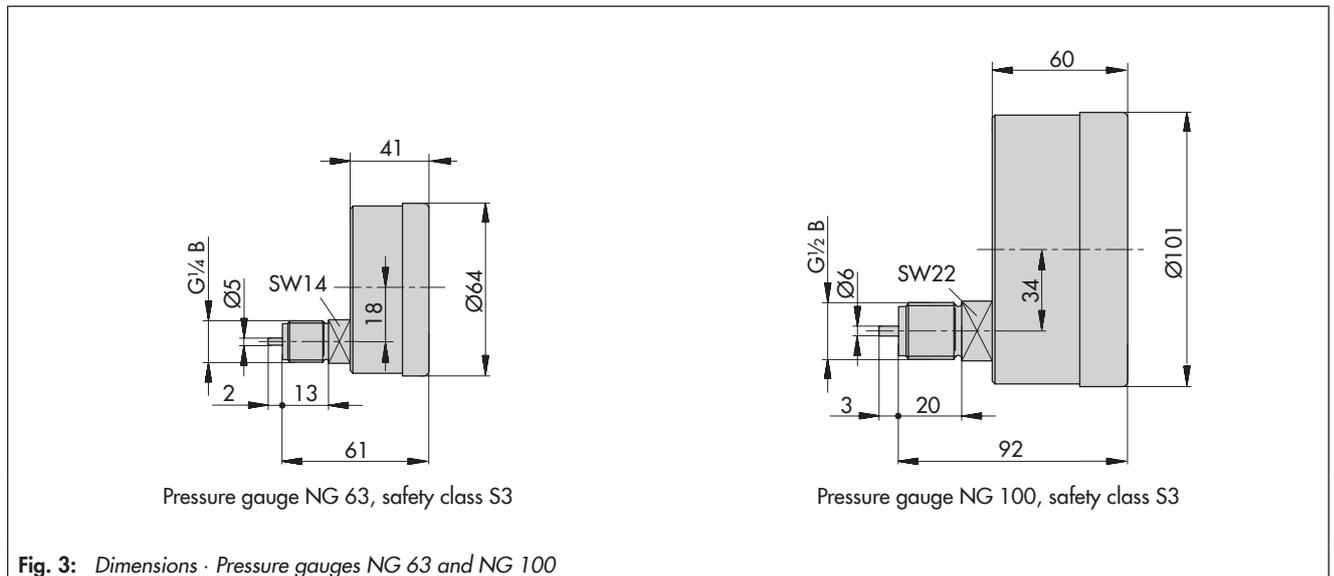
i Note
Observe the selection criteria for pressure gauges (concerning safety) according to EN 837-2 (see also ► AB 09).

Table 4: Order numbers for pressure gauges NG 63 and NG 100

Pressure rating	PN 2.5	PN 4	PN 6	PN 10	PN 16	PN 25	PN 40	PN 60
Pressure gauge NG 63, EN 837-1, S3	8520-2035	8520-2036	8520-2037	8520-2038	8520-2039	8520-2040	8520-2041	–
Pressure gauge NG 100, EN 837-1, S3	8520-2042	8520-1320	8520-1321	8520-1322	8520-1323	8520-1324	8520-1325	8520-2043

- Optional versions (on request)
- Pressure gauge NG 100 with limit contacts on request

Dimensions



3. Pipe fittings · Screw fitting/cap kits

Pipe fittings with restriction · To dampen vibrations of the process medium in the measuring line with integrated restriction (especially for gas flow measurement) · **Compression-type fittings** G 3/8 · To connect the differential pressure lines with outside pipe diameters 6, 8, 10 and 12 mm · **Screw plugs** G 3/8 · To seal the dp-cell · **Vent plugs** G 3/8 · To vent the dp cell · **Additional screw fittings** · Screw fittings for attachment of Media 05/5 to Media 6 · Special screw fittings

Table 5: Screw fittings · Order numbers

Pipe fittings, vent plugs, screw plugs etc.	Order no.	
	Standard	Free of oil and grease for oxygen
G 3/8 compression-type fitting for 12 mm pipe outside diameter, steel	1400-5842	–
G 3/8 compression-type fitting for 12 mm pipe outside diameter, stainless steel	1400-5844	1400-5845
G 3/8 compression-type fitting for 10 mm pipe outside diameter, steel	1400-5846	–
G 3/8 compression-type fitting for 8 mm pipe outside diameter, steel	1400-5860	–
Brass vent plug including copper flat gasket	1400-5654	1400-5658
Brass screw plug including copper flat gasket	1400-5655	1400-5659
Four copper flat gaskets	1400-5660	1400-5661
Two brass G 3/8 screw plugs · Two NBR O-rings	1400-7643	1400-7644
Two 15.6x1.78 O-rings for screw plugs, NBR	–	1400-9563
Two stainless steel G 3/8 screw plugs	–	1400-7872
Screw fitting for attachment of Media 05/5 to Media 6, brass	–	1400-7748
Screw fitting for attachment of Media 05/5 to Media 6, stainless steel	–	1400-7762
Two screw fittings G 1/2 to G 3/8 CuZn, including O-rings (WIKA conversion kit)	–	1400-7749
Special screw fitting in stainless steel, free of oil and grease for oxygen, with restriction made of brass (CW617N), restriction bore: Ø0.5 mm		
G 3/8 straight male connector, CrNi steel	For pipe Ø in mm	Order no.
Ermeto	6	1400-9108
Ermeto	8	1400-9109
Swagelok®	8	1400-9110
Ermeto	10	1400-9111
Ermeto 2553	12	1400-9112

Screw fitting/cap kits for attachment to dp cell and valve block · Free of oil and grease for oxygen · Additional kits on request

Table 6: Screw fitting/cap kits · Order numbers

Attachment to dp cell	Attachment to valve block	Order no.
Two brass screw plugs · Two NBR O-rings	Two 8 mm stainless steel screw fittings	1400-8823
One brass screw plug · One NBR O-ring One 8 mm stainless steel screw fitting (high-pressure connection)	Two 10 mm stainless steel screw fittings	1400-8824



4. Compensation chambers

Compensation chambers · To build a liquid column above the measuring unit (compulsory for steam measurement) · Can also be used as separation chamber for gas measurement by changing the arrangement of screw fittings

Table 7: Technical data and materials

Compensation chambers ¹⁾	Type A			Type 3994-9002		
Max. perm. operating gauge pressure	40 bar	35 bar	20 bar	113 bar	105 bar	93 bar
Max. permissible temperature ²⁾	120 °C	250 °C	400 °C	120 °C	250 °C	400 °C
Weight	0.9 kg			1.25 kg		
Materials · Material numbers according to DIN EN						
Body	1.0037 (St 37-2)			1.4571		
Spindle	-			-		

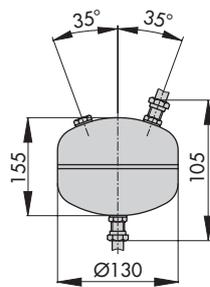
¹⁾ Can also be used as separation chamber for gas measurement by changing the arrangement of screw fittings

²⁾ Max. permissible temperature according to DIN EN 837-1; shut-off valves and pressure gauges must be protected against a temperature increase caused by hot process media through measuring lines or siphons of appropriate length.

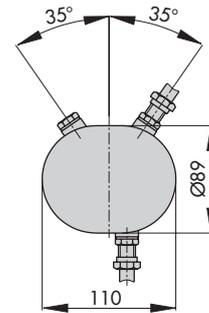
Table 8: Order numbers

Type	Connection	Order no.	
Compensation chamber, Type A	G 3/8 compression-type fitting for 12 mm pipe	1080-0261	
Compensation chamber, Type 3994-9002		3994-9002	

Fig. 5: Compensation chamber



Compensation chamber, Type A



Compensation chamber, Type 3994-9002

Fig. 6: Dimensions · Compensation chambers

5. Mounting material for wall and pipe mounting

Mounting material for all devices of the Media series

Pipe clips for 2" pipe mounting or holding brackets for wall mounting

Table 9: Order numbers

Mounting material	Order no.
Mounting material for 2" pipe mounting	1400-5656
Mounting material for wall mounting	1400-5657

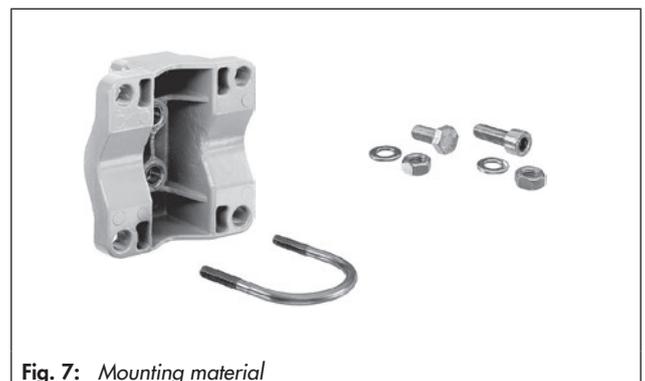


Fig. 7: Mounting material

6. Limit contacts · Analyzing instruments for limit contacts

Table 10: RoHS-compliant retrofit contact module for Media 05/5 · Order numbers

Retrofit contact module	Function	Order no.	
Media 5			
Two inductive limit contacts, SC3,5-NO-BU, acc. to ATEX	Two universal adjustable contacts	1400-8839	
Three inductive limit contacts, SC3,5-NO-BU, acc. to ATEX	Two min. and one max. contacts	1400-8840	
Two inductive limit contacts, SJ3,5-SN, acc. to ATEX, SIL 3	Two universal adjustable contacts	1402-1772	
Media 05			
One inductive limit contact, SJ2-SN, acc. to ATEX	One min. contact	1402-1773	
Two inductive limit contacts, SJ2-SN, acc. to ATEX	Two min. contacts	1402-1774	
Two inductive limit contacts, SJ2-SN, acc. to ATEX	One min. and one max. contacts	1402-1775	

Function

Min. contact: metal tag moves in when the reading decreases · **Max. contact:** metal tag moves in when the reading increases · **Metal tag inside pick-up field:** OFF switching signal (0 signal of the proximity switch) · Contact open or output effectively non-conducting, high resistance (damped), power consumption ≤ 1 mA.

Metal tag outside pick-up field: ON switching signal (L signal of the proximity switch) · Contact closed or output effectively conducting, low resistance (undamped), power consumption ≥ 3 mA.

Analyzing instruments for limit contacts

System K isolating switch amplifier: the isolating switch amplifiers transfer the digital signals of the limit switch (alarm contacts).

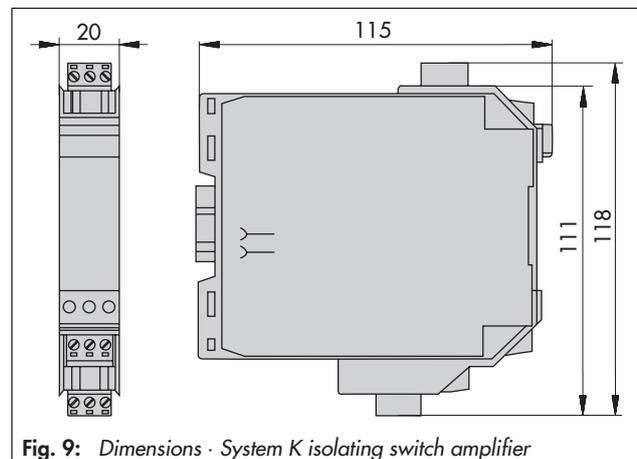
Table 11: Technical data

Type	KFD2-SR2-Ex...	KFA5-SR2-Ex...	KFA6-SR2-Ex...	
Power supply	20 to 30 V _{DC}	103.5 to 126 V _{AC}	207 to 253 V _{AC}	
Nominal data according to DIN 19234 or NAMUR				
Open-circuit voltage/short-circuit current	Approx. 8 V _{DC} /approx. 8 mA			
Switching point/switching accuracy	1.2 to 2.1 mA/approx. 0.2 mA			
Input pulse length/input pulse interval	≥ 20 ms/ ≥ 20 ms			
Line monitor	Rupture I ≤ 0.1 mA			
Maximum values according to certificate of conformity PTB 00 ATEX 2081				
Voltage U ₀	10.5 V	10.6 V		
Current I ₀	13 mA	19 mA		
Power P ₀	34 mW	51 mW		

Fig. 8: System K isolating switch amplifier

Table 12: Order numbers

Type	Implementation	Order no.
KFA6-SR2-Ex1.W	1-channel	8812-0100
KFA6-SR2-Ex2.W	2-channel	8812-0103
KFA5-SR2-Ex1.W	1-channel	8812-0099
KFA5-SR2-Ex2.W	2-channel	8812-0102
KFD2-SR2-Ex1.W	1-channel	8812-0098
KFD2-SR2-Ex2.W	2-channel	8812-0101
In terminal housing	On request	
In alarm system	On request	



7. Range springs

Table 13: Range springs for Media 05/5 · Free of oil and grease for oxygen

dp cell	Diaphragm	Measuring span	Order no.
1	Diaphragm 0.4/60	0 to 60 mbar	1400-7822
		0 to 100 mbar	1400-7823
		0 to 160 mbar	1400-7824
		0 to 250 mbar	1400-7825
		0 to 400 mbar	1400-7826
1	Diaphragm 0.4/60	0 to 600 mbar	1400-7827
		0 to 1000 mbar	1400-7828
		0 to 1600 mbar	1400-7829
2	Diaphragm 0.6/60	0 to 2500 mbar	1400-7830
		0 to 3600 mbar	1400-7831
Tool to mount range springs and diaphragm			1180-9907

i Note

The range springs of Media 6 can only be changed by the manufacturer.

Table 14: Spare diaphragms for Media 05/5/6 · Free of oil and grease for oxygen

Diaphragm	Measuring span	Order no.	Media ...
ECO diaphragm 0.4/60	0 to 400 mbar	1402-0664	05/5/6
ECO diaphragm 0.4/60	600 to 1600 mbar	1402-0665	
ECO diaphragm 0.6/60	2500 to 3600 mbar	1402-0666	
Tool to mount range springs and diaphragm		1180-9907	

i Note

Read the mounting and operating instructions before replacing the range springs and diaphragm.

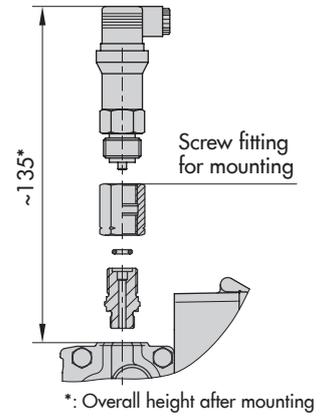
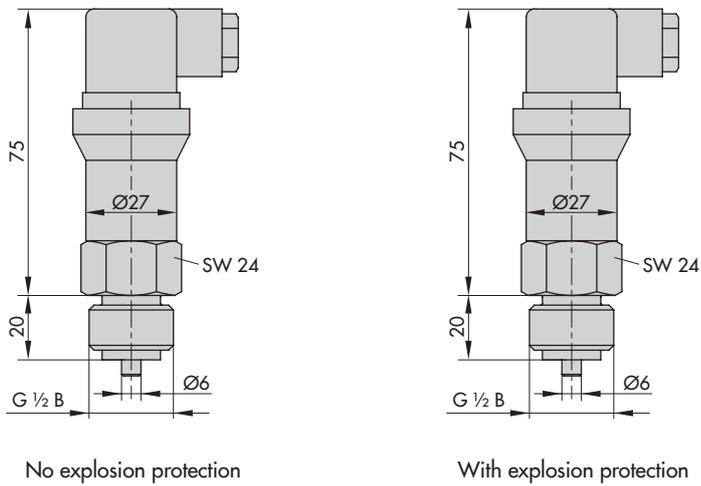
8. Electric pressure transmitter for direct attachment

Table 15: Technical data and materials · Free of oil and grease for oxygen (according to DIN EN ISO 23208)

Pressure transmitters	No explosion protection	With explosion protection ¹⁾
Cleaning	Oxygen according to DIN EN ISO 23208, free of oil and grease	Cryogenic gases according to DIN EN ISO 23208, free of oil and grease
Supply voltage	10 to 36 V DC	10 to 28 V DC
Output signal	Two-wire system (4 to 20 mA)	Two-wire system (4 to 20 mA)
Electrical connection	4-pin M16 connector	4-pin M16 connector
Pressure ranges	0 to 4 through 0 to 60 bar	0 to 4 through 0 to 60 bar
Measuring accuracy	±1 % of URL ²⁾	±0.25 % of URL ²⁾
Permissible ambient temperature	-30 to +60 °C	-20 to +60 °C
Process medium temperature	-30 to +100 °C	-40 to +125 °C
Degree of protection according to EN 60529	IP 65	IP 65
Process fluid connection	G ½ thread	G ½ thread
Type of protection	-	ATEX: II 1G Ex ia IIC T4 + 1D IECEX: Ex ia IIC T4 Ga + Da
Materials · Material numbers according to DIN EN		
Housing	1.4305	1.4435
Gasket	NBR	FKM

¹⁾ The technical data for the explosion-protected devices may be restricted by the limits

²⁾ Upper reference limit (URL) of entire measuring range



Mounted on low-pressure connection of dp cell

Fig. 10: Dimensions · Pressure transmitter

Table 16: Order numbers

Pressure measuring range	Order no.	
	No explosion protection	With explosion protection
0 to 4 bar	8523-0295	100090158
0 to 6 bar	8523-0296	100090159
0 to 10 bar	8523-0297	100090160
0 to 16 bar	8523-0298	100090161
0 to 25 bar	8523-0299	100090162
0 to 40 bar	8523-0300	100090163
0 to 60 bar	8523-1006	100090164

Screw fitting for mounting a pressure gauge with radial connection and pressure sensor · Free of oil and grease for oxygen

- Coupling sleeve G 1/2 (stainless steel)
- 8x3 O-ring, NBR
- G 3/8 x G 1/2 LH screw fitting (stainless steel)

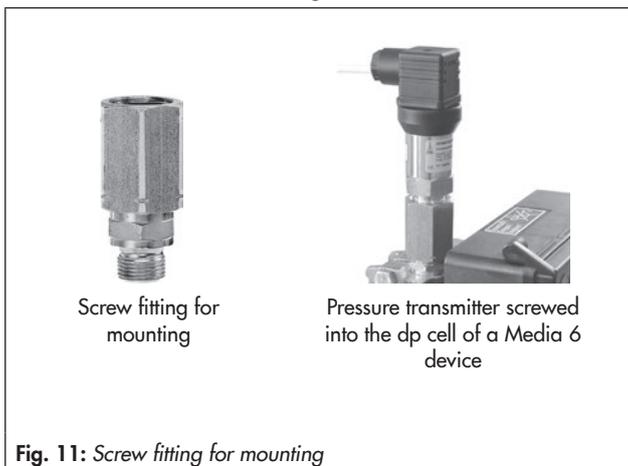


Fig. 11: Screw fitting for mounting

Table 17: Screw fitting for mounting · Order numbers

Screw fitting for mounting	Order no.
Coupling sleeve, O-ring and screw fitting	1400-7642

9. 24 V power supply unit with enclosure (IP 65)

For power supply of Media 7 devices; hardware package consisting of:

- 24 V power supply unit for rail mounting
- Compact electrical distribution board with degree of protection IP 65
- Two cable glands

Table 18: Technical data · 24 V power supply unit with enclosure

24 V power supply unit	
Input voltage	90 to 264 V AC
Output voltage	24 V DC
Max. output current	1.25 A
Power	30 W
Insulation (voltage)	3 kV
Permissible ambient temperature	-25 to +71 °C
Compact electrical distribution board	
Enclosure material	PC with glass fiber reinforcement
Color	RAL 7035
Degree of protection	IP 65
Permissible ambient temperature	-35 to +80 °C
Max. relative humidity	95 % (at +25 °C)
Installation	DIN terminal rail
Weight	Approx. 0.8 kg
Order no. (power supply unit + compact electrical distribution board)	1402-1806

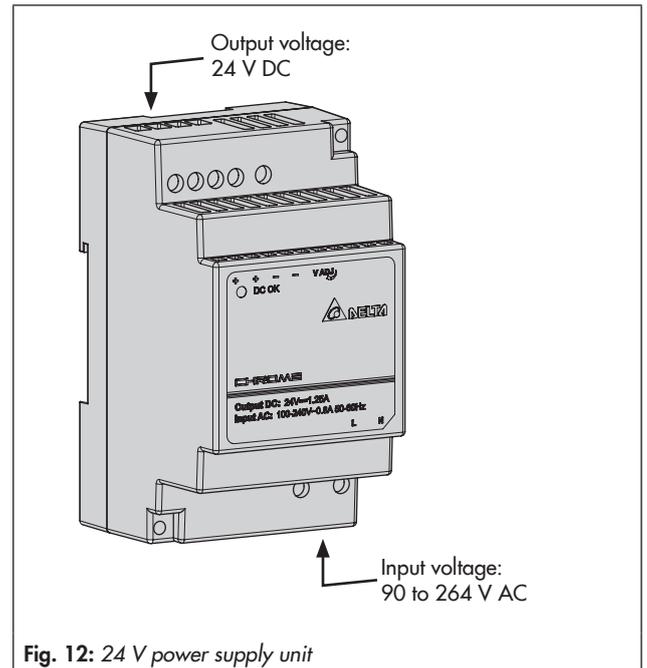


Fig. 12: 24 V power supply unit

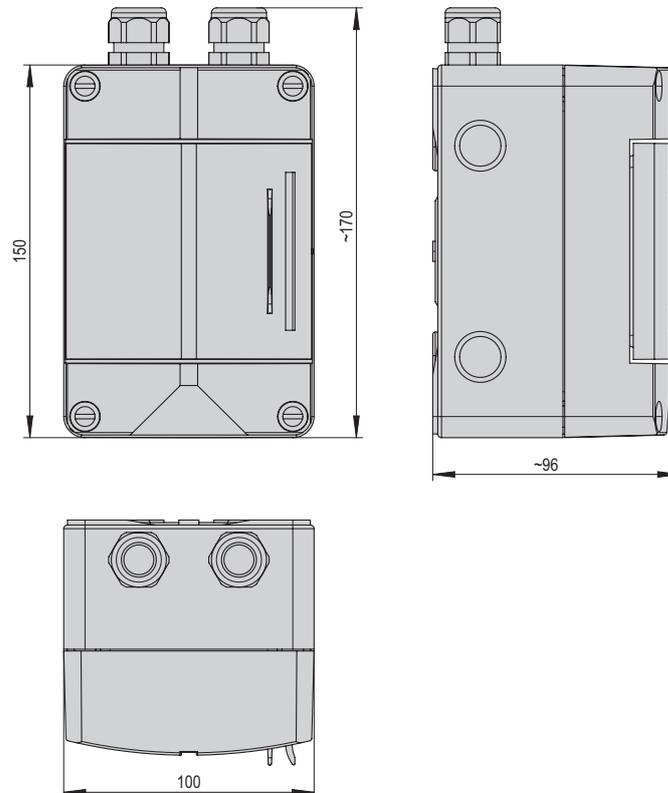


Fig. 13: Dimensions · Compact electrical distribution board with integrated power supply unit

10. Optional additional functions for Media 5 and Media 7 Differential Pressure Meters as well as SAM Connect Gateway

Media 7

The modular design of the Media 7 Differential Pressure Meter allows it to be tailored to meet specific requirements. Additional functions are available through the use of option modules.

SAM Connect Gateway

Upon delivery of the SAM Connect Gateway, at least one option module is installed. Further option modules can be retrofitted.

Option modules (for subsequent installation):

– AI: Analog input

The **AI: Analog input** option module accepts 4 to 20 mA signals from filling level or pressure sensors of external equipment with their own power supply. This module works passively and has galvanically isolated inputs.

→ Order no. 1402-1809 (without explosion protection)

– AIA: Analog input active

The **AIA: Analog input active** option module accepts 4 to 20 mA signals from filling level or pressure sensors of external equipment. This module works actively and has a 12 V output to power external equipment that do not have their own power supply.

→ Order no. 1402-1810 (without explosion protection)

– AO: Analog output (Media 7 only)

The **AO: Analog output** option module issues an internal measuring signal (4 to 20 mA) representing the tank pressure or, depending on the operating mode, the filling level or differential pressure. The analog output parameters can be configured.

→ Order no. 1402-1808 (without explosion protection)

→ Order no. 1402-2086 (Ex IIB)

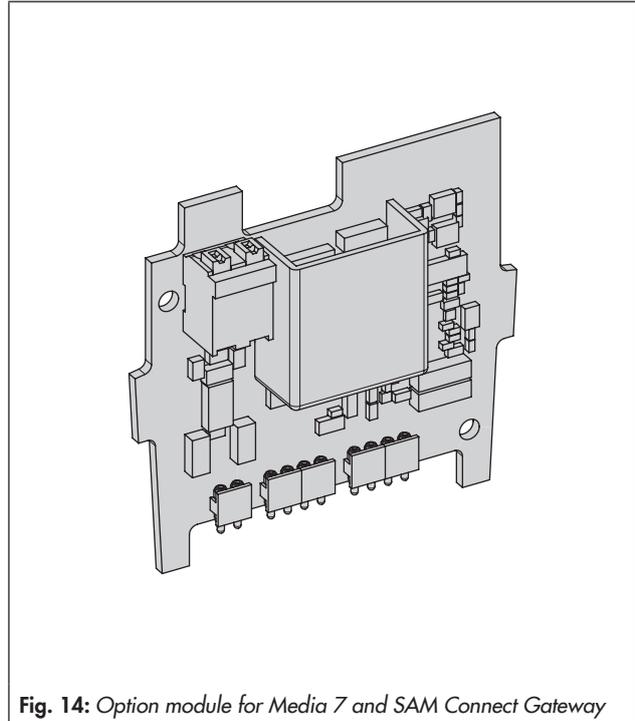


Fig. 14: Option module for Media 7 and SAM Connect Gateway

11. Sun shield

Suitable to protect the differential pressure meter from direct sunlight and in mounting situations where direct sunlight makes it difficult or impossible to read the display.

Table 19: Ordering data

Sun shield	Order no.
For Media 5 and Media 7	100112667

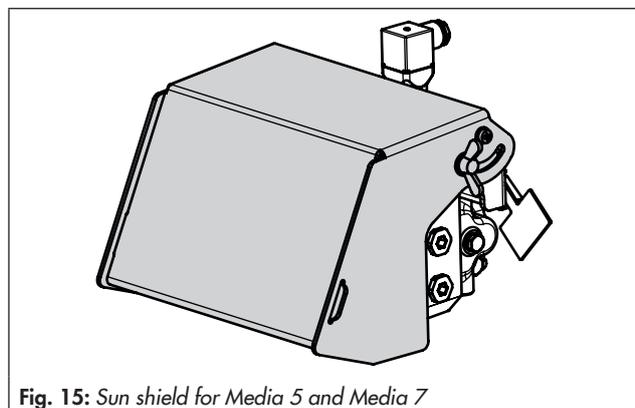


Fig. 15: Sun shield for Media 5 and Media 7

12. Media 5 · Option module with 4 to 20 mA current output

The option module with 4 to 20 mA current output can be added to the standard version of the Media 5. It is installed in the indicating unit and can either be ready installed in the device on delivery or retrofitted later.

The current output module upgrades the analog reading of the device by issuing the current signal which can be used as a reading or for further processing.

The angle of the pointer axis of the Media 5 is measured by the magnetoresistive measuring system and converted into an electric signal. To operate the option module with 4 to 20 mA current output, a transmitter supply voltage of $U_B = 12$ to 36 V (DC) is required for the 4 to 20 mA measuring circuit.

i Note

Details on option module with 4 to 20 mA current output
▶ EB 9519-1.



Option module, installed into Media 5

Fig. 16: Option module with 4 to 20 mA current output

Table 20: Technical data

4 to 20 mA current output	Module 100049064 with explosion protection ¹⁾	Module 100033844 without explosion protection
Version	Magnetoresistive measuring system	
Supply voltage U_B	12 to 28 V DC	12 to 36 V DC
Output signal	4 to 20 mA, two-wire system according to DIN 66258	
Perm. load R_B in Ω	$R_B = (U_B - 12 \text{ V}) / 0.020 \text{ A} \mid (R \leq 600 \Omega \text{ at } 24 \text{ V and } 20 \text{ mA})$	
Power consumption	0.252 mW for 12 V DC and 21 mA	
Settings	Zero calibration Span calibration Characteristic selection Test function	
Characteristic	Output and reading linear or square root extraction depending on installed flow characteristic Characteristic set at the factory	
Deviation from terminal-based linearity	$< \pm 0.2 \%$, related to 270° measuring span	
Sensitivity	$< \pm 0.05 \%$, related to 270° measuring span	
Effect of ambient temperature in the range from -40 to $+80$ °C	$< 0.1 \%$ / 10 K for zero and span	
Type of protection	ATEX: II 2 G Ex ia IIC T4 Gb IECEx: Ex ia IIC T4 Gb	-
Conformity	CE · EAC	

¹⁾ The technical data for the explosion-protected devices may be restricted by the limits specified in the test certificates.

13. TROVIS-VIEW configuration software

TROVIS-VIEW provides a uniform user interface that allows users to configure and parameterize various SAMSON devices using device-specific database modules. The TROVIS-VIEW software enables the user to easily configure the connected device as well as view process parameters online.

i Note

TROVIS-VIEW can be downloaded free of charge from our website at www.samsongroup.com > Service & Support > Downloads > TROVIS-VIEW.

TROVIS-VIEW for Media 7 and SAM Connect Gateway

For this purpose, the device has a SAMSON serial interface (SSP) to allow the USB port of a computer to be connected to it using an adapter cable.

TROVIS-VIEW for Media 6

Media 6 devices need to be connected to the serial interface of the computer using the appropriate connecting cable. Depending on the computer used, a USB to RS-232 adapter may additionally be required.

Memory pen (optional): data can be uploaded from the RS-232 port of an installed Media 6 device to the memory pen.

Accessories	Use with			Order no.
	Media 7	Media 6	SAM Connect Gateway	
Isolated USB interface adapter 	•		•	1400-9740
Modular adapter ¹⁾ 		•		1400-7698
Connecting cable ¹⁾ 		•		1400-7699
Memory pen ¹⁾ 		•		1400-9753
USB to RS-232 adapter 		•		8812-2001

¹⁾ Also included in the hardware package (order no. 1400-9998)



SAM TANK MANAGEMENT is a web-based application specifically developed for monitoring the filling levels of liquids, gases and vapors stored in stationary or truck-mounted pressure vessels.

Any smart mobile device can be used to access SAM TANK MANAGEMENT.

The Media 7 Differential Pressure Meter and the SAM Connect gateway are suitable for wireless connection to SAM TANK MANAGEMENT. This ensures safe data exchange all across the world, polling of states, as well as monitoring and operation of the Media devices.

Additionally, the Media 7 Differential Pressure Meter and the SAM Connect gateway function as a hub, which can connect up to four Media devices to SAM TANK MANAGEMENT and as a result, monitor several tank farms at the same time.

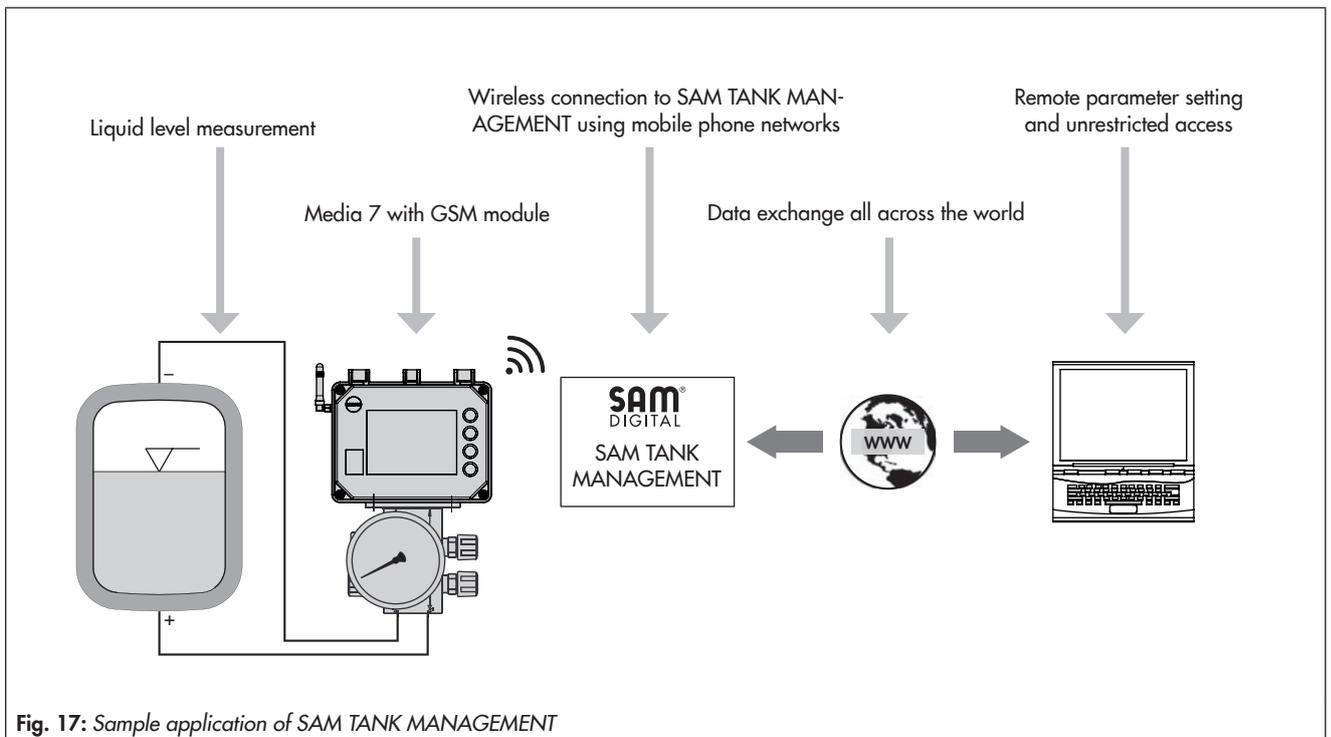


Fig. 17: Sample application of SAM TANK MANAGEMENT

