



CCA-Xci

- pressure transmitter for process industry
- nominal pressure: from 0...60 mbar up to 0...20 bar
- output signals: 2-wire: 4...20 mA
- HART® communication
- internal or flush mounted capacitive ceramic sensor
- accuracy 0.1 % span
- turn-down 5:1
- two chamber aluminium die cast case or stainless steel field housing
- optional: integrated display and operating module, several process connections
- certified for contact with drinking water by the Polish National Institute of Public Health (PZH) - EPDM version

The process pressure transmitter **CCA-Xci** measures the pressure of gases, steam and fluids. The special developed capacitive ceramic sensor for this transmitter has a high overpressure capability and excellent media stability. Several process connections e.g. thread or flange are available. The transmitter is as a standard equipped with HART®-communication, the customer can choose between a two chamber aluminium die cast case or a stainless field housing.

PREFERRED AREAS OF USE ARE



Oil and gas industry



Chemical and petrochemical industry

TECHNICAL DATA

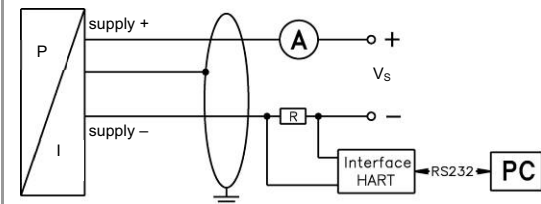
Pressure ranges ¹									
Nominal pressure gauge	[bar]	0.06	0.16	0.4	1	2	5	10	20
Overpressure	[bar]	2	4	6	8	15	25	35	45
Permissible vacuum	[bar]	-0.2	-0.3	-0.5		-1			
¹ On customer request we adjust the devices by software to the required pressure ranges. Within the turn-down-possibility (starting at 0.02 bar).									
Output signal / Supply									
Standard		2-wire: 4 ... 20 mA with HART® - communication					V _S = 12 ... 28 V _{DC}		
Current consumption		max. 25 mA							
Performance									
Accuracy ²		nominal pressure < 1 bar: ≤ ± 0.2 % span							
		nominal pressure ≥ 1 bar: ≤ ± 0.1 % span							
		for nominal pressure ranges: from 0.06 bar up to 0.4 bar				≤ ± (0.2 + (TD-1) x 0.02) % span			
		for nominal pressure ranges: from 1 bar up to 20 bar				≤ ± (0.1 + (TD-1) x 0.01) % span			
		with turn-down = nominal pressure range / adjusted range							
Permissible load		R _{max} ≤ [(V _S – V _{S min}) / 0.02 A] W							

Pressure transmitters

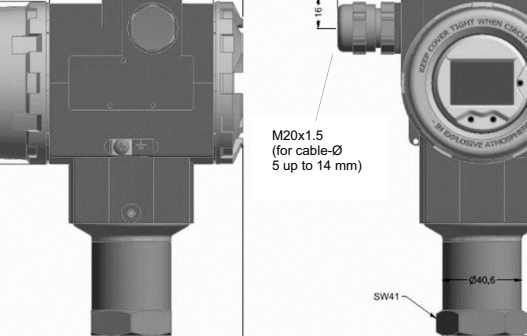
Mechanical stability	
Vibration	5 g RMS (20 ... 2000 Hz)
Shock	100 g / 11 msec
Materials	
Pressure port Standard Optionally for G1 1/2" flush	stainless steel 1.4404 (316L) PVDF
Housing	aluminium die cast, powder-coated or stainless steel 1.4404 (316L)
Cable gland	brass, nickel plated
Viewing glass	laminated safety glass
Seals (media wetted)	FKM EPDM (with drinking water certificate) others on request
Diaphragm	ceramics Al ₂ O ₃ 96% or 99.9 %
Media wetted parts	pressure port, seal, diaphragm
Miscellaneous	
Display (optionally)	LC-display, visible range 32.5 x 22.5 mm; 5-digit 7-segment main display, digit height 8 mm, range of indication ±9999; 8-digit 14-segment additional display, digit height 5 mm; 52-segement bargraph; accuracy 0.1% ± 1 digit
Ingress protection	IP 67
Installation position	any
Weight	min. 400 g (depending on housing and mechanical connection)
Operational life	> 100 x 10 ⁶ pressure cycles
CE-conformity	EMC Directive: 2014/30/EU

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ELECTRICAL CONNECTION

Wiring diagram		
		
Pin configuration		
Electrical connections	aluminium die cast case: terminal clamps (clamp section: 2.5 mm²)	stainless steel field housing: terminal clamps (clamp section: 1.5 mm²)
Supply + Supply - Test	IN+ IN- Test	IN+ IN- -
Shield		





Technical drawings of the G1/2" DIN 3852 pressure washer. The left drawing shows a side view with dimensions: 37, 84, 15, 79, 57, and a diameter of Ø83. The right drawing shows a front view with dimensions: 115.5, 83, 115.8, 57.5, 14, 17, and a diameter of Ø40.6. A label 'SW41' points to a switch on the handle. A callout indicates 'M20x1.5 (for cable-Ø 5 up to 14 mm)' for the top connection. The front view also includes the text 'KEEP COVER TIGHT WHEN CIRCUIT OPEN' and 'NO EXPLOSIVE ATMOSPHERE'.

Technical drawing of the G1 1/2 flush DIN 3852 valve, showing dimensions and details.

Dimensions:

- Total height: 110.5
- Top flange diameter: $\varnothing 59.5$
- Top flange thickness: 9.2
- Side port diameter: $\varnothing 65$
- Side port height: 60
- Bottom flange thickness: 26
- Bottom flange diameter: $\varnothing 65$
- Bottom flange thread: G1 1/2"
- Bottom flange gap: 2.6
- Bottom flange diameter: $\varnothing 26.5$

Details:

- M20x1.5 (for cable- $\varnothing$ 5 to 14 mm)
- SW55
- X (3:1)
- seals

Label: G1 1/2 flush DIN 3852

Technical drawing of the SW41 pressure washer, showing front and side views with dimensions in millimeters.

Front View Dimensions:

- Top width: 15 mm
- Top width: 15 mm
- Top width: 84 mm
- Height: 163 mm
- Base width: 57 mm
- Base width: 57 mm

Side View Dimensions:

- Top width: 115.5 mm
- Side width: 16 mm
- Height: 115.8 mm
- Mounting hole diameter: 40.6 mm
- Base diameter: 40.6 mm
- Base height: 17 mm
- Total base height: 57.5 mm
- Bottom connection: G1/2" DIN 3852

Callout: M20x1.5 (for cable-Ø 5 to 14 mm)

Label: SW41

Technical drawing of the G1 1/2" flush DIN 3852 valve. The drawing includes a side view with dimensions: total height 117.5, top flange diameter $\varnothing 59.5$, top flange thickness 9.2, side port diameter $\varnothing 55$, side port height 58, main body diameter $\varnothing 65$, and bottom flange thickness 25. A detail view of the side port shows an M20x1.5 thread for cable $\varnothing 5$ to 14 mm. A cross-section view (X 3:1) shows the internal seal and a diameter of $\varnothing 26.5$. The valve is labeled G1 1/2" flush DIN 3852.

Technical drawing of a hexagonal bolt. The material is specified as SW41. The drawing shows the hexagonal head and the threaded shank. Dimensions are indicated: the head height is 7 [0.67] and the shank height is 4 [0.55]. The thread specification is G1/2".

Technical drawing of the SW55 pump assembly. The drawing shows a cross-section of the pump with the following dimensions and labels:

- SW55**: Label for the pump assembly.
- Ø65**: Dimension for the outer diameter of the pump body.
- 27**: Dimension for the height of the pump body.
- 22**: Dimension for the height of the base.
- 25**: Dimension for the total height of the assembly.
- A**: Label for the base component.
- G1 1/2"**: Dimension for the base diameter.

4xØ10,5

23,5

17,5

Ø65

Ø84

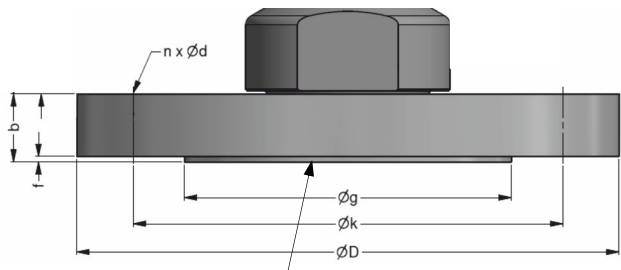
Ø105

flush diaphragm Ø26,5



Pressure transmitters

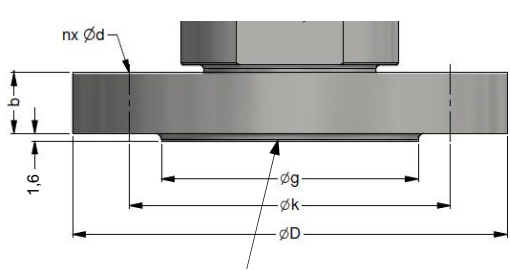
Flange (DIN 2501)



flush diaphragm Ø26,5

DIN 2501 dimensions in mm			
size	DN25	DN50	DN80
D	115	165	200
k	85	125	160
g	68	102	138
b	18	20	20
f	2	3	3
n	4	4	8
d	14	18	18
P _N	≤ 40 bar	≤ 40 bar	≤ 16 bar

Flange (ANSI)



flush diaphragm Ø26,5

ANSI dimensions in mm		
size	2"/150 lbs	3"/150 lbs
D	152.4	190.5
g	91.9	127
k	120.7	152.4
b	19.1	23.9
n	4	4
d	19.1	19.1
P _N	≤ 10 bar	≤ 10 bar

ACCESSORIES

Accessories for aluminium cast (not a part of delivery)

Electrical connection

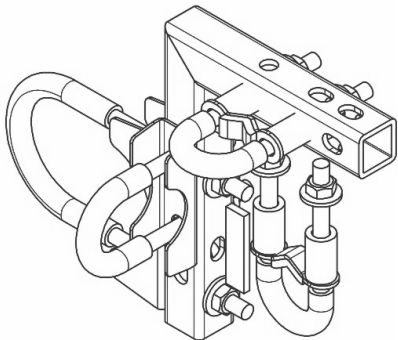
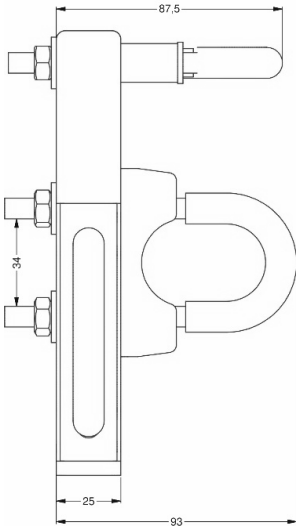
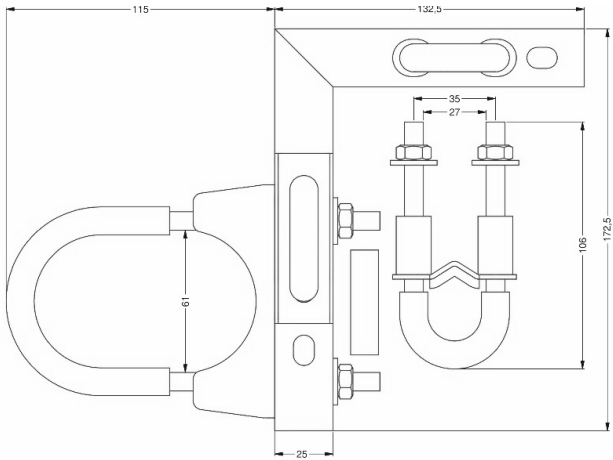
Ordering type	Ordering code
plug thread M20x1.5	1001871
cable gland thread M20x1,5	1001460

Universal holder

Weight	cca 1 kg
Material	0308 (E235)
Surface finish	BIS UltraProtect 1000
Ordering code	5020043



Dimensions (in mm)



Programming kits for HART® devices: CIS 150-RS232 and CIS 150-USB

CIS 150-RS232



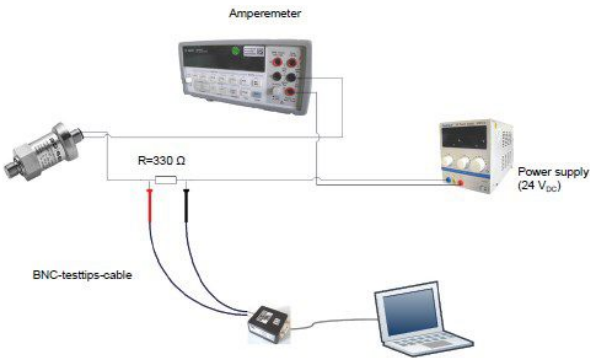
CIS 150-USB



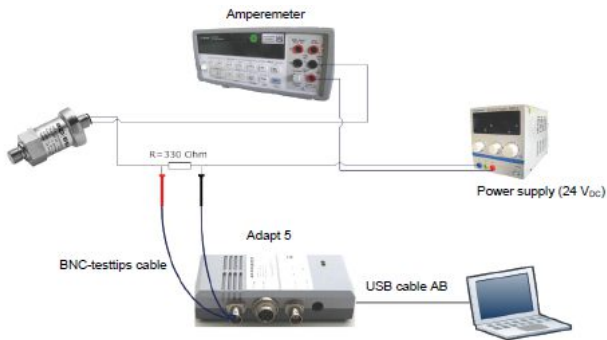
Package contents	Programming software "Config 3.0" on CD operating manual
	CIS 150-RS232: HART® modem (MH-02 Manufacturer: JSP NOVÁ PAKA) connecting cable BNC-Testtip (for measuring device) 9-pin connecting cable RS232 (for PC)
System requirement	CIS 150-USB: Adapt 5 connecting cable BNC-Testtip (for measuring device) USB connecting cable – Type A to Type B – (for PC)
	For the installation of the software, a Windows® PC (95, 98, ME, 2000, NT, XP) with serial interface (RS 232) or USB-interface is required
Please read the operating manual carefully before installing and starting up the programming kit.	

Wiring diagrams

CIS 150-RS232:



CIS 150-USB interface:



Ordering codes

Version:

HART(R) modem with RS232 connection cable for PC

Adapt 5 with USB connection cable for PC

Ordering code:

CIS 150-RS232

CIS 150-USB

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Pressure transmitters

ORDER CODE

CCA-Xci- - - - - - -

Pressure																			
Gauge		5	1	E															
Input [bar]																			
0 ... 0,06					0	6	0	0											
0 ... 0,16					1	6	0	0											
0 ... 0,4					4	0	0	0											
0 ... 1					1	0	0	1											
0 ... 2					2	0	0	1											
0 ... 5					5	0	0	1											
0 ... 10					1	0	0	2											
0 ... 20					2	0	0	2											
Customer					9	9	9	9											
Design																			
Aluminium housing - with display (IP 67)										A	0								
Aluminium housing - without display (IP 67)										A	N								
Stainless steel field housing - with display (IP 67)										F	V								
Stainless steel field housing - without display (IP 67)										F	N								
Output																			
HART® - 4 ... 20 mA / 2-wire										H									
Customer										9									
Accuracy																			
0,1 % (P _N ≥ 1 bar)										1									
0,1 % including Calibration Certificate (P _N ≥ 1 bar)										P									
0,2 % (P _N < 1 bar)										B									
0,2 % including Calibration Certificate (P _N < 1 bar)										Q									
Customer										9									
Electrical connection																			
Terminal clamp - Aluminium housing										A	K	0							
Terminal clamp - Stainless Steel field housing										8	8	0							
Customer										9	9	9							
Mechanical connection																			
G 1/2" DIN 3852										1	0	0							
G 1/2" EN 837										2	0	0							
G 1/2" DIN 3852 - open port										H	0	0							
1/2" NPT										N	0	0							
G 1 1/2" flush DIN 3852										M	0	0							
Dairy pipe DIN 11851 DN 40										M	7	5							
Dairy pipe DIN 11851 DN 50										M	7	6							
Flange DN 80/PN 16 DIN 2501										F	1	4							
Flange DN 25/PN 40 DIN 2501										F	2	0							
Flange DN 40/PN 40 DIN 2501										F	2	2							
Flange DN 50/PN 40 DIN 2501										F	2	3							
DRD Ø 65 mm ¹										D	R	D							
Customer										9	9	9							
Diaphragm																			
Ceramic Al ₂ O ₃ 96 %										2									
Ceramic Al ₂ O ₃ 99,9 %										C									
Customer										9									
Seals																			
Viton (FKM)										1									
EPDM ³										3									
Customer										9									
Pressure port																			
Stainless steel 1.4404 (316 L)										1									
PVDF (only for mechanical connection G 1 1/2" DIN 3852 (M00) ²										B									
Customer										9									
Special version																			
Standard													0	0	0				
Version for oxygen													0	0	7				
Temperature compensation -20 ... 80 °C													1	1	7				
Customer													9	9	9				
Mounting Bracket																			
Universal holder (for pipes Ø ≤ 26,5 mm)																			5020043
Programming																			
HART® modem HM02 + USB including SW CONFIG																			5031837

If setting range shall be different from nominal range please specify in your order

- 1 - mounting flange is included in the delivery (already pre-assembled)
- 2 - for pressure port in PVDF the operation medium temperature is -25 ... 60 °C
- 3 - drinking water certification only possible with EPDM seal

!!! When you make an order it is necessary to fill the questionnaire for transmitters with separators!!!

Manufacturer reserves the right to change sensor specifications without further notice.

