

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
- diaphragm Al₂O₃ 99.9 %
- optional: integrated display and operating module, several process connections

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 steel field housing.

PREFERRED AREAS OF USE ARE



Oil and gas industry



Chemical and petrochemical industry

TECHNICAL DATA

Pressure ranges										
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					load during HART®-communication: R _{min} = 250 W				
Influence effects	supply: 0.05 % span / 10 V					permissible load: 0.05 % span / kW				
Long term stability	± 0.1 % span / year									
Response time	200 msec – without consideration of electronic damping						measuring rate 5/sec			
Adjustability	electronic damping: 0 ... 100 sec offset 0 ... 80 % span; turn-down of span: max. 5:1 (span min. 0.02 bar)									
² accuracy according to EN IEC 62828-2– limit point adjustment (non-linearity, hysteresis, repeatability)										
Thermal errors / Permissible temperatures										
Thermal error	± (0.02 x turn-down) % span / 10 K in compensated range -20 ... 80 °C									
Permissible temperatures ³	without display:		medium: -25 ... 125 °C		environment: -40 ... 70 °C		storage: -40 ... 80 °C			
	with display:		medium: -25 ... 125 °C		environment: -20 ... 70 °C		storage: -30 ... 80 °C			
³ for pressure port of PVDF the minimum permissible temperature is -25...60 °C										
Electrical protection										
Short-circuit protection	permanent									
Reverse polarity protection	no damage, but also no function									
Electromagnetic compatibility	emission and immunity according to EN 61326									

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 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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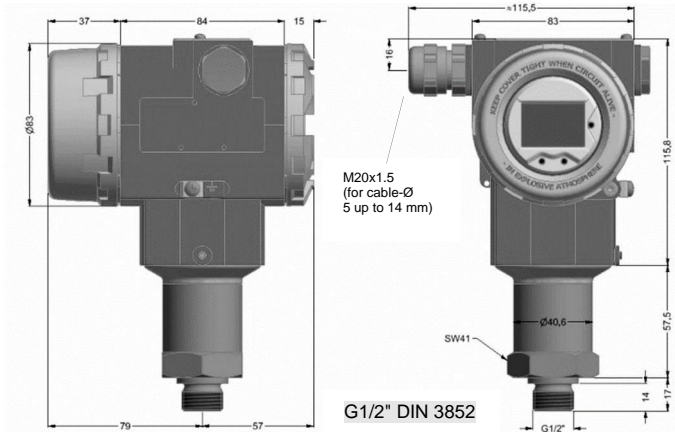
ELECTRICAL CONNECTION

Wiring diagram		
Pin configuration		
Electrical connections	aluminium die cast case: terminal clamps (clamp section: 2.5 mm ²)	stainless steel field housing: terminal clamps (clamp section: 1.5 mm ²)
Supply +	IN+	IN+
Supply -	IN-	IN-
Test	Test	-
Shield	⏏	⏏

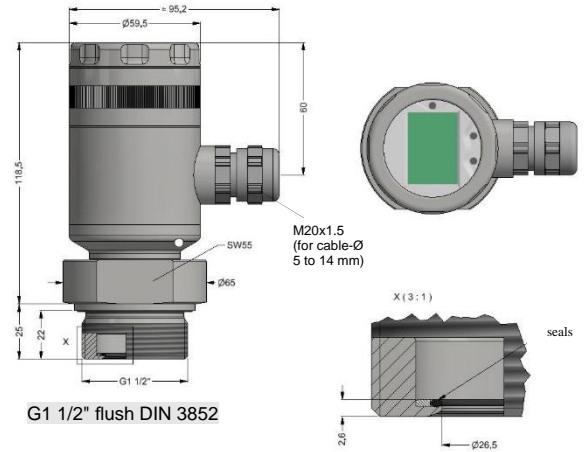


DIMENSION DRAWINGS

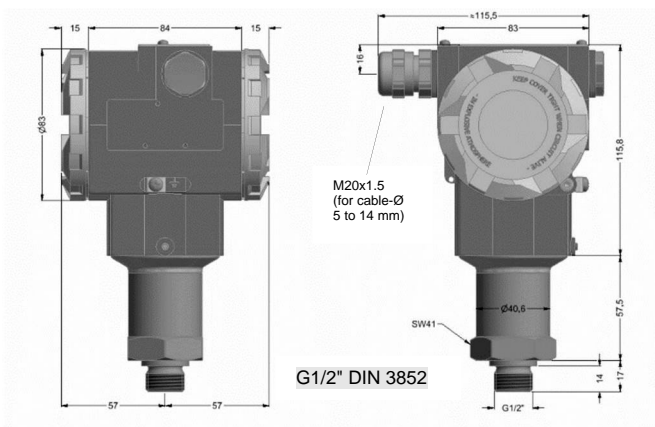
aluminium die cast case⁴ with display



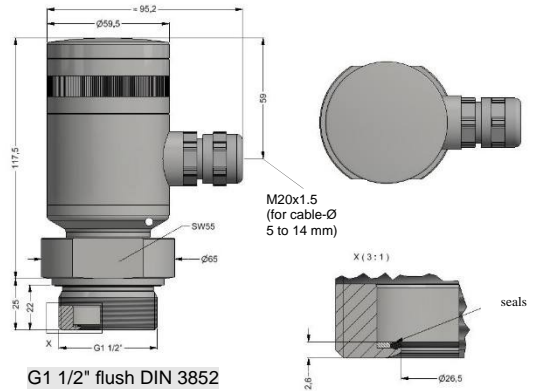
stainless steel field housing with display



aluminium die cast case⁴ without display

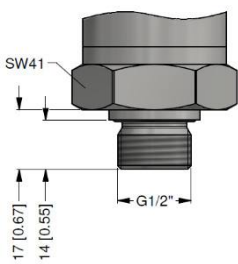


stainless steel field housing without display

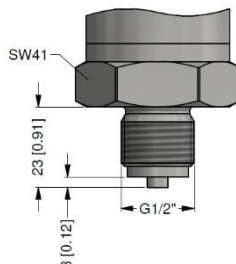


⁴ aluminium die cast case is horizontally rotatable as standard

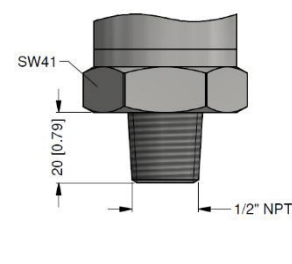
Standard pressure ports



G1/2" DIN 3852



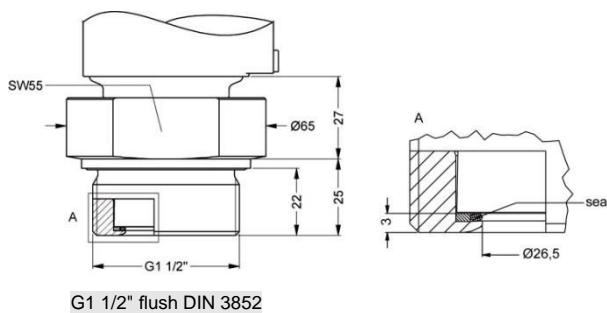
G1/2" EN 837



1/2" NPT

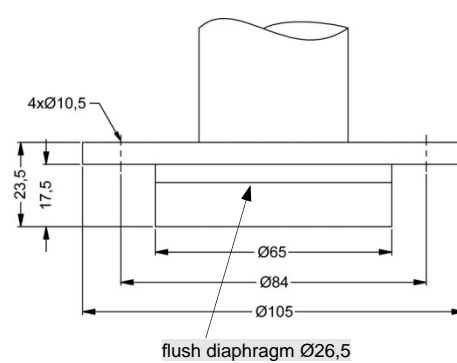
Process connections

Inch thread



G1 1/2" flush DIN 3852

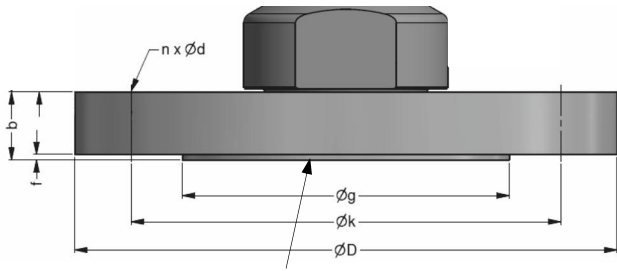
DRD⁶



⁶ mounting flange is included in the delivery (already pre-assembled)



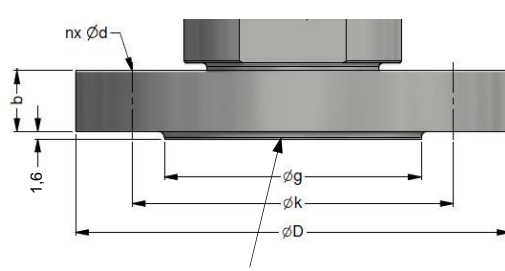
Flange (DIN 2501)



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

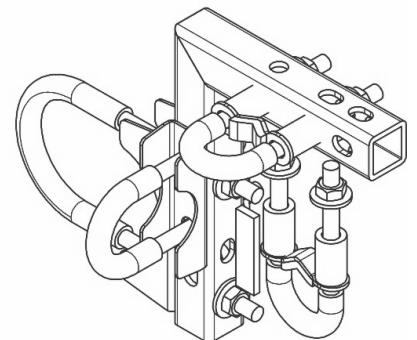
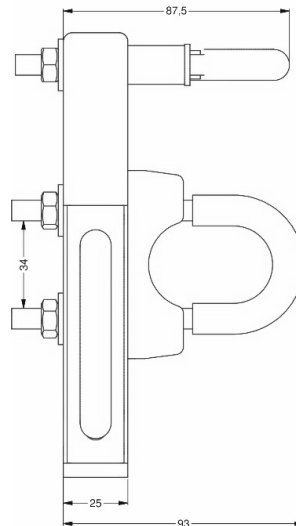
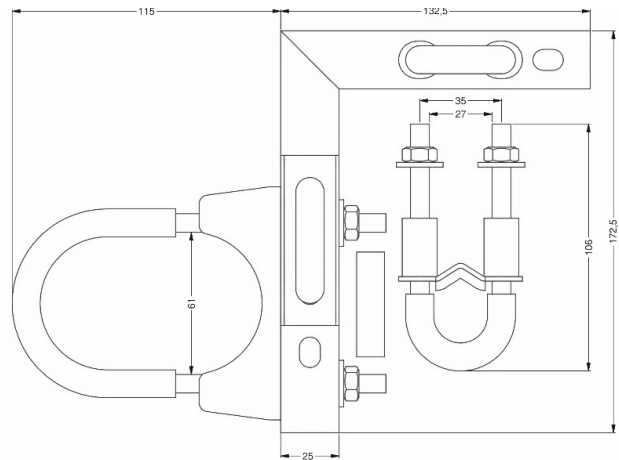
Ordering type	Ordering code
plug thread M20x1.5	1001871
cable gland thread M20x1,5	1001460

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



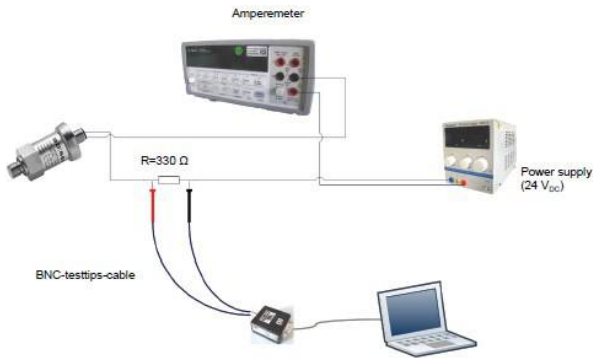
CIS 150-USB



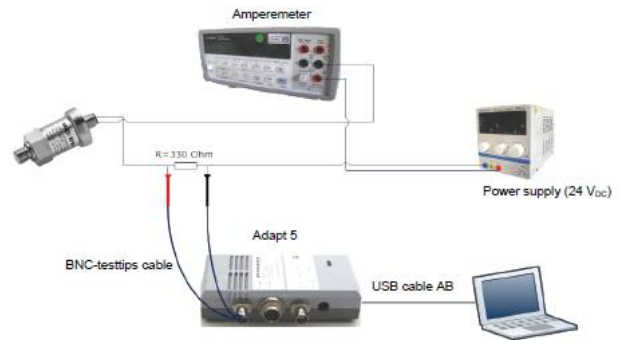
Package contents	<p>Programming software "Config 3.0" on CD operating manual</p> <p>CIS 150-RS232: HART® modem (MH-02 Manufacturer: JSP NOVÁ PAKA) connecting cable BNC-Testtip (for measuring device) 9-pin connecting cable RS232 (for PC)</p> <p>CIS 150-USB: Adapt 5 connecting cable BNC-Testtip (for measuring device) USB connecting cable – Type A to Type B – (for PC)</p>
System requirement	<p>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</p>
<p>Please read the operating manual carefully before installing and starting up the programming kit.</p>	

Wiring diagrams

CIS 150-RS232:



CIS 150-USB interface:



Ordering codes

Version:	Ordering code:
HART(R) modem with RS232 connection cable for PC	CIS 150-RS232
Adapt 5 with USB connection cable for PC	CIS 150-USB

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