

CRI-P-340



- differential pressure transmitter for process industry
- differential pressure: from 0...60 mbar up to 0...20 bar
- output signals: 2-wire: 4...20 mA
- HART® communication
- stainless steel sensor
- accuracy 0.1 % / 0.075 % span
- static over pressure 400 bar
- two chamber aluminium die cast case
- output signal: linear or square root extraction
- optional: integrated display and operating



The intelligent CRI-P-340 transmitter is designed for measurement of differential pressure in industrial processes of all production branches. It has an excellent long-term stability.

With the use of the square root output signal can be the steam and gas flow in orifice plates and speed probes measured.

PREFERRED AREAS OF USE ARE



Oil and gas industry



Chemical and petrochemical industry



Energy Industry



Food and beverage



Paper Industry

TECHNICAL DATA

Sensor type	B	C	D	E
Differential pressure range dp	60 mbar	400 mbar	2.5 bar	20 bar
Setting limits (offset and span in this range freely adjustable)	-60 ... 60 mbar	-400 ... 400 mbar	-2.5 ... 2.5 bar	-20 ... 20 bar
Lowest permissible span	2 mbar	4 mbar	25 mbar	200 mbar
Permissible static pressure optional	160 bar	160 bar 400 bar	160 bar 400 bar	160 bar 400 bar
Rangeability TD (with respect to the differential pressure range dp)	30:1	100:1	100:1	100:1

Output signal / Supply	
Standard	2-wire: 4 ... 20 mA with HART®-communication V_S = 12 ... 28 V_{DC}
Performance	
Accuracy	1. accuracy 0,1 % turn-down (span) 10:1: ± 0,1 % span turn-down (span) > 10:1: ± [0,01 × turn-down] % span 2. accuracy 0,075 % turn-down (span) 10:1: ± 0,075 % span turn-down (span) > 10:1: ± [0,0075 × turn-down] % span note: turn-down = nominal pressure range / adjustable range
Influence supply	0.001 % span / 10 V
Influence static pressure	type B: ± [0.06 mbar + 0.075 % of the adjusted range] / 160 bar type C: ± [0.2 mbar + 0.05 % of the adjusted range] / 160 bar type D: ± [1.25 mbar + 0.05 % of the adjusted range] / 160 bar type E: ± [10 mbar + 0.05 % of the adjusted range] / 160 bar
Influence installation position	max. 400 Pa (can be compensated by zero-point correction)
Long term stability	type B: ± (0.2 % × differential pressure range dp) / year at reference conditions type C - E: ± (0.1 % × differential pressure range dp) / year at reference conditions
Permissible load	without LC-display: R _{max} = [(V _S - 12 V) / 0.023 A] with LC-display: R _{max} = [(V _S - 15 V) / 0.023 A] HART®-communication: R = 230 ... 600
Response time	type B: approx. 0.4 sec type C: approx. 0.2 sec type D: approx. 0.2 sec type E: approx. 0.1 sec
Damping	electronic: 0.1 ... 60 sec plus response time



Thermal effects (Offset and Span)	
Temperature range -20 ... +65°C	type B: $\pm [0.30 \times \text{turn-down} + 0.20]$ % of the adjusted range type C - E: $\pm [0.20 \times \text{turn-down} + 0.10]$ % of the adjusted range
Temperature range -40 ... -20°C and +65 ... +100°C	type B: $\pm [0.30 \times \text{turn-down} + 0.20]$ % of the adjusted range type C - E: $\pm [0.20 \times \text{turn-down} + 0.10]$ % of the adjusted range
Permissible temperatures	
Environment/storage	without display: -40 ... 85 °C with display: -20 ... 65 °C (85°C without function)
Media wetted parts	silicone oil: -40 ... 100 °C (information: +125 °C short time, max. 30 min.) fluorolube oil: -40 ... 100 °C (information: +125 °C short time, max. 30 min.)
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 (25 ... 2000 Hz) according to DIN EN 60068-2-6
Shock	100 g / 1 msec according to DIN EN 60068-2-27
Materials	
Pressure port	stainless steel 1.4401 (316)
Housing	aluminium die cast, powder-coated
Viewing glass	laminated safety glass
Seals (media wetted)	FKM / EPDM
Diaphragm	standard: stainless steel 1.4435 (316 L) option: Hastelloy® C-276 (2.4819)
Media wetted parts	pressure port, seals, diaphragm
Filling fluids	silicon oil
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-segment bargraph; accuracy $0.1\% \pm 1$ digit
Ingress protection	IP 67
Installation position	any
Weight	min. 3500 g
Current consumption	approx. 21 mA
Operational life	> 100 x 10 ⁶ cycles
CE-conformity	EMC Directive: 2014/30/EU
Connections	
Electrical connection	terminal clamps in clamping chamber with cable gland M20x1.5 (for cable- \varnothing 5 up to 14 mm)
For mechanical connection	internal threads 7/16-20 UNF (connecting screws are not part of delivery)

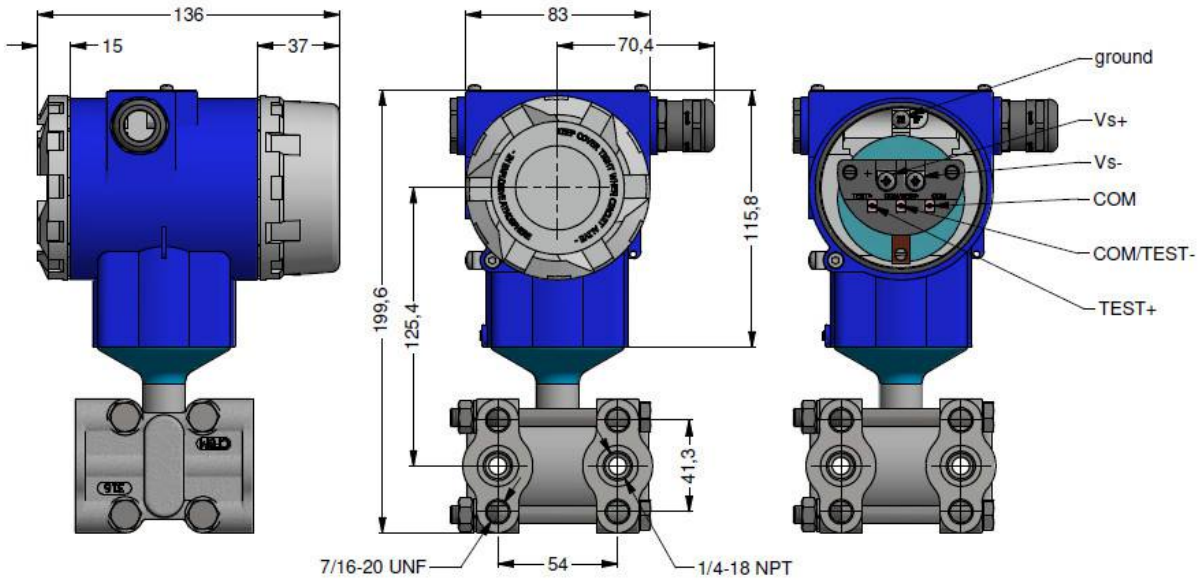
HART® is a registered trade mark of HART Communication Foundation; Hastelloy® is a brand name of Haynes International Inc. Windows® is a registered trade mark of Microsoft Corporation

ELECTRICAL CONNECTION

Wiring diagram	
Pin configuration	
Electrical connection	terminal clamps (clamp section 2.5 mm ²)
Supply + (Vs+)	+
Supply - (Vs-)	-
Test +	TEST+
COM / Test -	COM/TEST-
COM	COM
Ground	\perp



DIMENSION DRAWINGS



* without display and operating module marked dimensions decrease by 22 mm
 2 aluminium die cast case is horizontally rotatable

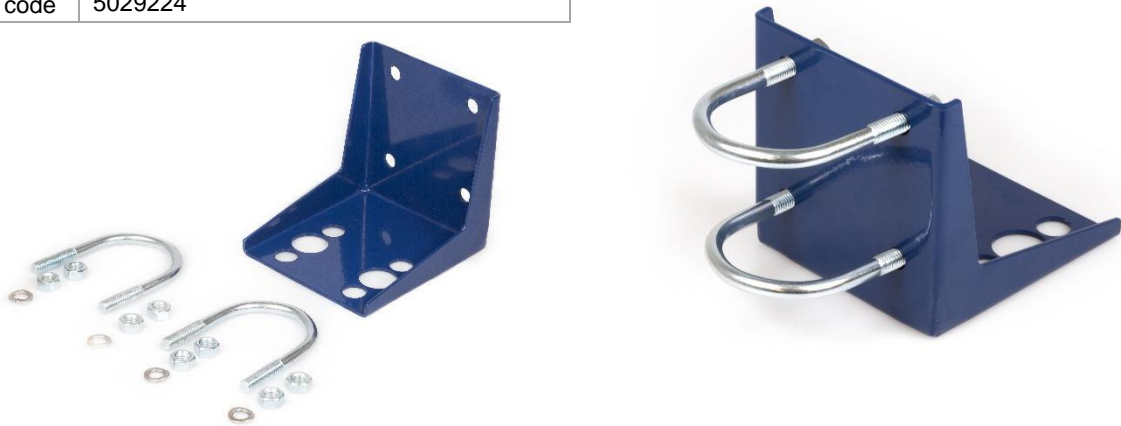
ACCESSORIES

Process connection (not part of delivery)

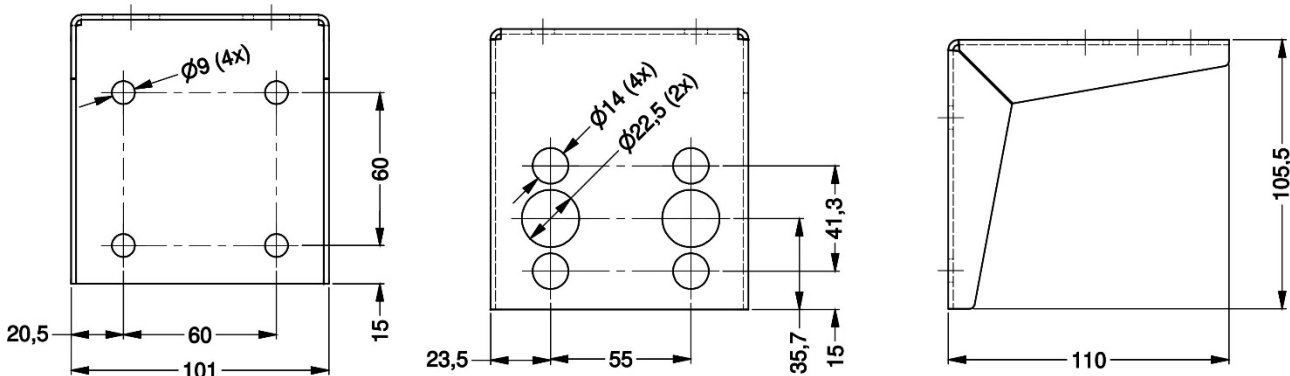
Objednací typ	Ordering code
blinding plug (external thread) 1/4" – 18 NPT	5002322
blinding plug with venting (external thread) 1/4" – 18 NPT	1003217
screw 7/16" UNF X 1 3/4" A2 (4 pcs needed), the screw is only used to connect the valve set	1004639

Universal holder

Weight	550 g
Material	black steel
Ordering code	5029224



Dimensions (in mm)



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

CIS 150-RS232



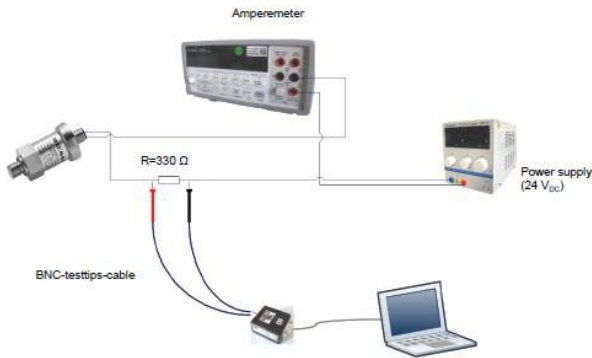
CIS 150-USB



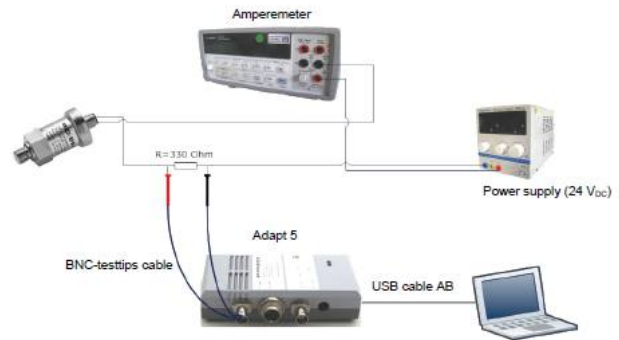
Package contents	<p>Programming software "Config 3.0" on CD operating manual</p> <p>CIS 150-RS232: HART® modem (MH-02 Manufacturer: JSP NOVÁ PAKA) connecting cable BNC-Testtip (for measuring device) 9-pin connecting cable RS232 (for PC)</p> <p>CIS 150-USB: Adapt 5 connecting cable BNC-Testtip (for measuring 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

Windows® is a registered trade mark of Microsoft Corporation



