



Sureté des Procédés Industriels

GS/GSX Electronic Pressure Switch



■ Fonction

GS and GSX are 4 to 20mA programmable transmitters which can be use as electronic pressure switches for 1 or 2 thresholds monitoring or as a pressure indicator for the standard version of the product.

■ Technical data

Sensing element

Relative model (GSR, GSXR)

Absolute model (GSA, GSXA)

Max. pressure

Power supply

Output signal

Load

Max global error

Temperature drift

Resolution

Reading rate

Response time

current range

Substituted values

Thick enamelled strain gauge on ceramic

-1 to 400 bar (9 ranges available)

0 to 50 bar abs. (6 ranges available)

Refer table backside

12 to 40 Vdc

4/20 mA + HART Protocol, 2 wires

$R(\Omega) = (U_{supply} - 12V) / 22mA$

≤ 0.5% FS (acc. to IEC 61298-2)

<100 ppm/K

16 bit

10 measurements per second

20 ms

3.8 to 20.5 mA

≈ 3,6 mA (sensor short circuit)

≈ 21 mA (gauge breaking)

M12 connection (others on request)

Electrical connection

■ Display

Display

7 segments, 5 digits with LCD

Height = 29 mm, red

Mirror-inverted representation possible

Decimal point

3 positions available or absent

Accuracy

±0.2% of span ±1digit

Temperature drift (according VDMA 24574-1 up to 24574-4)

<100 ppm/K

Programming

With sensitive touch keys

Display

Measuring value, unit of measurement, control menu

■ Limit contact(s)

Type (as a standard)

2x PNP or NPN (30 VDC, 200 mA)

1x PNP or NPN (30 VDC, 1000 mA)

Setting

With sensitive touch keys

Settable values

Switch point(s) and hysteresis

Switching delay from 0 to 999.9s

Failsafe function

Adjustable

Galvanic insulation

Switching output // measuring amplifier

■ Mechanical data

Display

Polycarbonate (Makrolon)

330° rotatable

Housing

PBT GF30 (GSR, GSA)

Option :

Stainless steel (GSXR, GSXA)

Process connection

316L stainless steel

½" BSPM as standard (others : refer backside)

Wetted parts

316L st.st. + ceramic + FKM (others : refer backside)

Protection

IP 65 (when electrical connector is plugged)

Ambient T°

-20 to 80°C

Storage T°

-20 to 85°C

■ Options

On request, the transmitter can be calibrated on customer range according to above limits. In that case the contact output will be inactive.

REGR25E

Setting of a specific range and displaying

REGR25F

REGR25D + alarm setting

GSM12-3/5/8

Straight connector 3/5/8 pins

GFM12-3/5/8-90

90° connector 3/5/8 pins

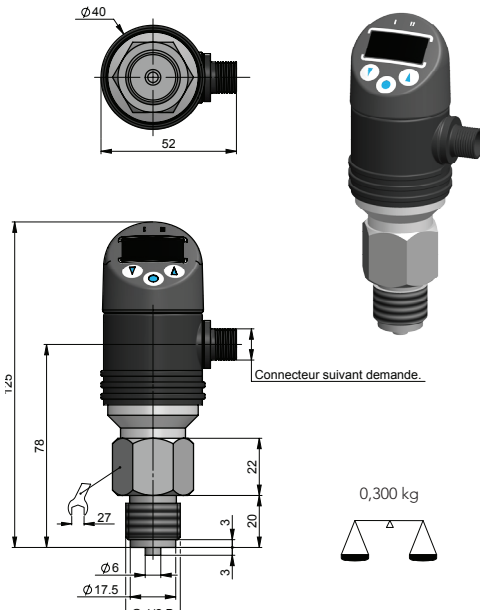
■ Programming

Programming

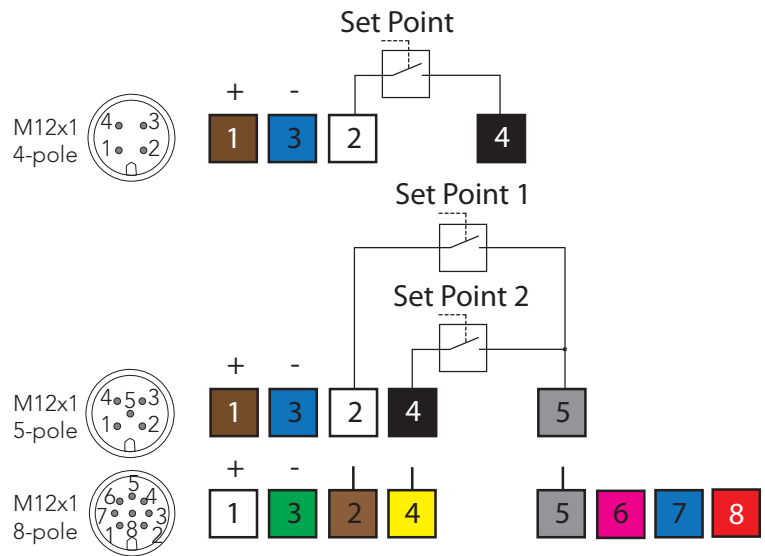
Sensitive touch keys by Hart @ protocol

FC-GS-GSX-EN12-04-2017
Subject to modifications due to technical advances / Soucieux d'améliorer nos produits, nous nous réservons le droit de réviser sans préavis les caractéristiques de nos produits

■ Dimensions (mm)

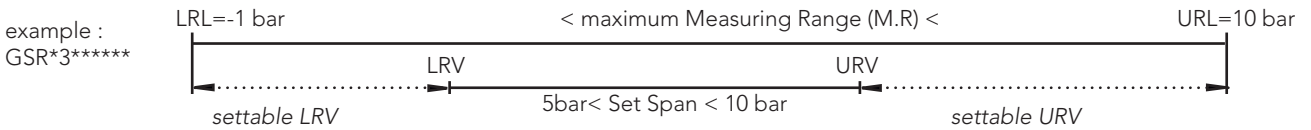


■ Wiring



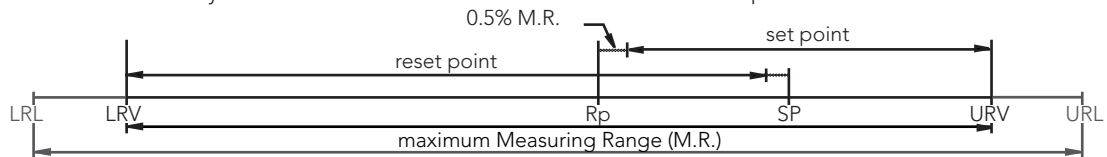
■ Range and overpressure table

Range limits are corresponding to the lower programmable value (LRV) and the higher programmable value (URV) which can be set. Practically, span limits (between LRV and URV) will have to respect a minimum and a maximum proportion according to above table



Models	0	1	2	3	4	5	6	7	8	
relative pressure (GSR/GSXR) Range limits (bar)	-0.5..1	-0.5..2	-1..5	-1..10	-1..20	-1..50	-1..100	-1..200	-1..400	
absolute pressure (GSA/GSXA) Range limits (bar abs.)	0..1	0..2	0..5	0..10	0..20	0..50	-	-	-	
settable Span limits (bar)	minimum	0.5	1	2	5	10	20	50	100	200
	maximum	1,5	2,5	6	11	21	51	101	201	401
Overrange limit (bar)	1.5	3	7.5	15	30	75	150	300	600	

The set point and the reset point which can be programmed by the display, must be included between the Lower Range Value and the Upper Range Value. The minimum hysteresis will have to be at least 0.5% value of the set span.



■ Codifications

Type	Model	Connection	Process connection	O' ring	Version	Features
relative model	0	0 M12 4-pole	0 1/2" BSPM	0 FKM	A	00 2 PNP, 30VDC, 200mA
GSR0 PBT housing	1	1 M12 5-pole	1 1/2" NPTM	1 BunaN		01 1 PNP, 30VDC, 200mA
GSXR St.St. housing	2	2 M12 8-pole	2 1/4" BSPM	2 E.P.		02 without
absolute model	3			5 F.F.K.M.		03 2 NPN, 30VDC, 200mA
GSA0 PBT housing	4					04 1 NPN, 30VDC, 200mA
GSXA St.St. housing	5					05 2 PNP, 30VDC, 1000mA
	6		S diaphragm seal mounting	Mineral oil		06 1 PNP, 30VDC, 1000mA
	7			Silicone oil		07 2 NPN, 30VDC, 1000mA
	8			Polymeric oil		08 1 NPN, 30VDC, 1000mA

■ refer to above table

● not available for 2x PNP or 2x NPN outputs