

T.5

hex 22

stainless steel

CAN bus technology

Digital Pressure Transmitter with CANopen / CAN J1939 Interface

Hex 22



CAN J1939

CANopen

- Type 0630: CANopen protocol according to CiA DS-301, Device profile according to CiA DS-404
- Type 0631: CAN J1939 protocol according to SAE J1939
- Robust stainless steel construction with high reliability, even in very rough environments
- Completely welded measuring cell made of stainless steel 1.4542 / AISI 630 ensures excellent media compatibility ¹⁾
- Measuring ranges from 0 - 1 bar to 0 - 600 bar

¹⁾ excludes pressure range from 0 - 1 bar consisting of completely welded oil-filled measuring cell made of stainless steel 1.4404 / AISI 316L.

Digital Pressure Transmitter with CANopen / CAN J1939 Interface

Technical details

	0630	0631
Output protocol:	CANopen DIN EN 50325-4 ¹⁾²⁾	SAE J1939 ¹⁾
Supply voltage U_B :	10 V - 32 VDC	10 V - 32 VDC
Idle power consumption:	< 30 mA	< 30 mA
CAN Interface:	acc. to DIN ISO 11898-2 CAN 2.0 A	acc. to DIN ISO 11898-2 CAN 2.0 B

0630 / 0631														
Pressure ranges in bar														
Standard pressure ranges p_{nom} :	0 - 1	0 - 2.5	0 - 4	0 - 6	0 - 10	0 - 16	0 - 25	0 - 40	0 - 60	0 - 100	0 - 160	0 - 250	0 - 400	0 - 600
Overpressure protection p_U ³⁾ :	2	6	10	20	20	40	100	100	200	200	400	750	750	840
Burst pressure ³⁾ :	5	9	15	30	30	60	150	150	300	300	600	1,000	1,000	1,050
Pressure ranges in PSI														
Standard pressure ranges p_{nom} :	0 - 15	0 - 150	0 - 200	0 - 300	0 - 600	0 - 1,000	0 - 1,500	0 - 2,500	0 - 3,000	0 - 6,000	0 - 8,700			
Overpressure protection p_U ³⁾ :	30	300	580	580	1,450	2,900	2,900	5,800	5,800	10,870	12,180			
Burst pressure ³⁾ :	75	450	870	870	2,175	4,350	4,350	8,700	8,700	14,500	15,230			
Technical parameters														
Mechanical life expectancy:	10,000,000 pulsations at rise rates to 1,000 bar/s at p_{nom}													
Permitted pressure change rate:	≤ 1,000 bar/s													
Accuracy:	±0.5 % of full scale (FS) at room temperature ⁴⁾ , ±0.25 % BFSL													
Long-term stability:	< ±0.1 % of full scale (FS) per year													
Repeatability ⁵⁾ :	±0.1 % of full scale (FS)													
Temperature error ⁵⁾ :	1.0 % of full scale (FS)													
Compensated temperature range:	-20 °C ... +85 °C													
Temperature range ambient:	-40 °C ... +105 °C													
Temperature range media:	-40 °C ... +125 °C													
Wetted parts material	Housing:	Stainless steel 1.4301 / AISI 304 (0 - 1 bar to 0 - 400 bar) Stainless steel 1.4542 / AISI 630 (0 - 600 bar)												
	Measuring cell:	Stainless steel 1.4404 / AISI 316L (0 - 1 bar) Stainless steel 1.4542 / AISI 630 (0 - 2.5 bar to 0 - 600 bar)												
Insulation resistance:	100 MΩ (50 VDC)													
Response time 10 - 90 %:	< 1 ms													
Vibration resistance:	20 g acc. to IEC 68-2-6 and IEC 68-2-36													
Shock resistance:	1000 g acc. to IEC 68-2-32													
Protection class:	IP67 (IP00 without mating plug)													
Electromagnetic compatibility:	EN 61326-2-3													
Weight	90 g													

¹⁾ Further information and the standard setting can be found in the Technical Documentation CANopen (1-6-30-628-058) and CAN J1939 (1-6-30-628-059) on our homepage at: <https://www.suco.de/en/downloads>.

²⁾ The EDS (Electronic Data Sheet) of our CANopen device can be downloaded from our homepage at: <https://www.suco.de/en/downloads>.

³⁾ Static pressure. Dynamic value is 30% to 50% lower. Values refer to the hydraulic/pneumatic part of the pressure transmitter.

⁴⁾ Including non-linearity, hysteresis, repeatability, zero error and full scale (FS) according to IEC 61298-2.

⁵⁾ Within the compensated temperature range. For pressure ranges < 3 bar: 1.5 % of fullscale (FS)



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0630 / 0631

Electrical connectors and threads



**M12 DIN EN 61076 - 2-101 A
CiA-DR303-1**

Pin	0630 / 0631
1	nc
2	U_{V+}
3	Gnd
4	CAN-High
5	CAN-Low
IP67	
$x \sim 60$ mm	
$d \sim \varnothing 22$ mm	
Connection code: 032	

**G1/4 - DIN EN ISO 1179-2
(DIN 3852-E)**

Sealing ring
G1/4 DIN EN ISO 1179-2 (DIN 3852-11) form E

Thread code: 41

NPT 1/4

14.5
NPT 1/4

Thread code: 09



0630 / 0631

Article matrix for digital pressure transmitters

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	Type	Pressure range bar / PSI	Pressure connection	Pressure unit	Electrical connection
	↓	↓	↓	↓	↓
CANopen, CAN 2.0 A	0630				
CAN J1939, CAN 2.0 B	0631				

Pressure range in bar ^{1) 2)}

0 - 1.0 bar	100
0 - 2.5 bar	250
0 - 4.0 bar	400
0 - 6.0 bar	600
0 - 10 bar	101
0 - 16 bar	161
0 - 25 bar	251
0 - 40 bar	401
0 - 60 bar	601
0 - 100 bar	102
0 - 160 bar	162
0 - 250 bar	252
0 - 400 bar	402
0 - 600 bar	602

Pressure range in PSI ^{1) 2)}

0 - 15 PSI	151
0 - 150 PSI	152
0 - 200 PSI	202
0 - 300 PSI	302
0 - 600 PSI	602
0 - 1,000 PSI	103
0 - 1,500 PSI	153
0 - 2,500 PSI	253
0 - 3,000 PSI	303
0 - 6,000 PSI	603
0 - 8,700 PSI	873

Pressure connection

G 1/4 - DIN 3852, form E, male thread	41
NPT 1/4	09

Pressure unit

bar	B
PSI	P

Electrical connection

M12x1 - DIN EN 61076-2-101 A, CiA-DR303-1	032
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Article no.	063X	XXX	/	XXX	XX	X	032
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¹⁾ The proprietary PGN and SPN of the respective pressure range can be found in the Technical Documentation CAN J1939 (1-6-30-628-059) on our homepage at: <https://www.suco.de/en/downloads>.

²⁾ The respective overpressure and burst pressure values of the individual pressure ranges (in bar and PSI) can be found in the „Technical data“ on page 161.

³⁾ The pressure unit (bar or PSI) must correspond to the selected pressure range (in bar or PSI).

CAN J1939

CANopen

