A-CAN-DG-V2-

Analog to CAN Converter
8 Analog + 2 Digital Inputs
SN: Software version:

Texys sensors are designed for data recording. If the user wants to include this sensor in a close loop system or active control, he must assume all responsibility.

Analog Inputs	Range	0-5 or ±10[1]	Volts
	16 bits Resolution	0.076 or 0.305	mV/bit
	Pull-up	internal	
	Accuracy	0.5 (-40 / 125°C)	% FS
	Max input impedance	10	kΩ
	Sampling (per channel)	500	Hz
Anti-Aliasing Filter (optional) [2]	type	Low pass, Linear phase 5th-Order	
	Cut of frequency	Programmable from 15 to 250Hz	
	[1] For ±10V input range, filter option is not available. [2] If filter option is used: → the speed inputs are disabled. → pin 11 and 12 must not be connected. → frame Tx3 not sent.		
Digital Inputs [2]	Square wave level	0 to 5	V
		or NPN open collector	
	Pull up to 5V	1	MΩ
	Freq. max[3]	8	kHz
	Tops	1 to 100	Tops/rev
	[3] Check max frequency for digital inputs as below: Ex1: 8000rpm with 48 tops/rev → 8000/60x48 = 6.4KHz. Ex2: 360km/h with 2m wheel circumference and 100 tops/rev → 360/3.6 /2 x100 = 5 KHz.		
Wheel Speed [2]	Range	0 to 500	km/h
		0 to 500	mph
	Circumference	300 to 5000	rev. (mm)
	Wheel tops/rev.	1 to 100	Top/rev
	Resolution	0.01	kmh/bit
		0.01	mph/bit
Engine Revs	Range	0 to 20000	rpm
	Engine tops/rev.	1 to 100	Top/rev
	Resolution	1	rpm/bit
Wheel Speed and Engine Revs calculation		200	Hz max
Sensor supply Output		Protected supply 6 to 16V (0.5A max)	
		5V 100mA @85°C	
CAN bus 2.0 A or B		120Ω : □yes □no	
Baud rate		125k to 1Mbps	
Parameters		identifiers, baudrate, frequency, digital and analog inputs parameters.	
Output Frequency		1Hz to 500Hz**, request mode.	
Output Data		16 bits per channel	
Output format		16bits or mV	
Supply Voltage		6 to 16	V
Typical Supply Current		35	mA
Dimensions		48x30x33	mm
Material		Aluminum	
Weight		45	g
Protection		IP67	
Vibration test		20Gpp 5'	
Operating Temp		-40 to +125	°C
Storage Temp		-40 to +125	°C

**500Hz: Only with baudrate 1Mbps
Wheel Speed and Engine Revs are not available at this frequency.

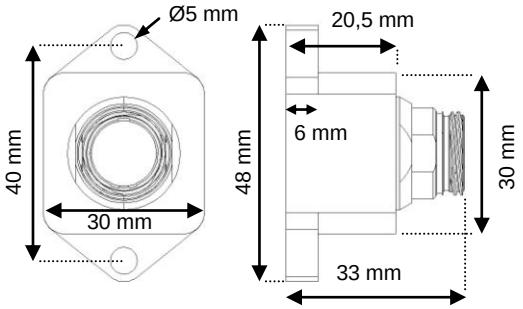
Setup parameters		
CAN	2.0A 2.0B	-
Baudrate		bps
Frequency		Hz
Rx trig ID		Hex
Tx1 ID		Hex
Tx2 ID		Hex
Tx3 ID [2]		Hex
Output format	16bits mV	-
Cut off frequency [1]		Hz
Speed Unit [2]	km/h mph	-
Wheel circumference [2]		mm
Wheel tops / rev [2]		tops / rev
Engine tops/rev [2]		tops / rev

Function / Color	Description	Pin	color
Supply	Supply (6 to 16 V)	1	Red
	GND*	2	Black
Analog Inputs	Channel 1	3	White
	Channel 2	4	
	Channel 3	5	
	Channel 4	6	
	Channel 5	7	
	Channel 6	8	
	Channel 7	9	
	Channel 8	10	
Digital Inputs	Wheel Speed	11	Orange
	Engine Speed	12	
CAN	CAN HIGH	13	Yellow
	CAN LOW	14	Blue
manufacturer reserved	do not connect	15	Green
Sensor supply	Protected supply 6 to 16V (0.5A max)	16	Red
	5V	17	Red
	GND*	18	Black
	GND*	19	Black

* Ground pins are internally connected

Standard version:

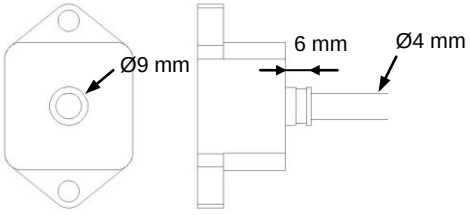
Connector: LEMO HES.2M.319.XLDP
Mating connector: LEMO FGS.2M.319.XLM



☐ Cable option:

Cable: 19 AWG 28 RW-200-E-3/16

Cable length : .....mm



Data output:

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
#1 0x03F0	ANA 1		ANA 2		ANA 3		ANA 4	
#2 0x03F4	ANA 5		ANA 6		ANA 7		ANA 8	
#3 0x03F8	Wheel speed		Engine Revs		-		-	

Changing parameters

The device parameters can be modified using the CAN protocol Texys.

CAN parameters:

N°	Parameter	Raw values	values	Comments	
0x00	Baudrate & A or B (11 or 29bits ID)	0x00	CAN2.0A 1Mbps	default	
		0x01	CAN2.0A 500 Kbps		
		0x02	CAN2.0A 250 Kbps		
		0x03	CAN2.0A 125 Kbps		
		0x10	CAN2.0B 1Mbps		
		0x11	CAN2.0B 500 Kbps		
		0x12	CAN2.0B 250 Kbps		
		0x13	CAN2.0B 125 Kbps		
0x01	Emission frequency	0x00	Rx frame trig	Request mode - 100Hz max.	
		0x01	1 Hz		
		0x02	5 Hz		
		0x03	10 Hz	default	
		0x04	50 Hz		
		0x05	100 Hz		
		0x06	200 Hz		
		0x07	500 Hz**	Only with baudrate 1Mbps. Speeds not available for this speed.	
0x02	Rx frame ID	if CAN2.0A: 0 to 0x7F0 if CAN2.0B: 0 to 0xFFFF		MSB	Default
0x03				LSB	0x07F0
0x04	Tx1 frame ID	if CAN2.0A: 0 to 0x7F0 if CAN2.0B: 0 to 0xFFFF		MSB	Default
0x05				LSB	0x03F0
0x06	Tx2 frame ID	if CAN2.0A: 0 to 0x7F0 if CAN2.0B: 0 to 0xFFFF		MSB	Default
0x07				LSB	0x03F4
0x08	Tx3 frame ID	if CAN2.0A: 0 to 0x7F0 if CAN2.0B: 0 to 0xFFFF		MSB	Default
0x09				LSB	0x03F8

Digital Input parameters [2]:

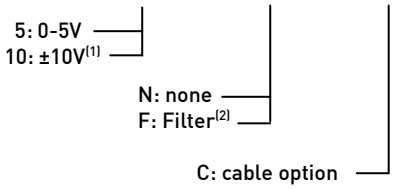
0x0A	Speed Unit	0	0.01 mph/bit		Default 1
		1	0.01 kmh/bit		
0x0B	Wheel circumference	300 to 5000	mm	MSB	Default 2000
0x0C				LSB	
0x0D	Wheel tops / rev	1 to 100			Default 1
0x0E	Engine tops / rev	1 to 100			

Analog Input parameters:

0x0F	Output format	0	16bits		Default 1
		1	mV		
0x10	cut off frequency [1]	15 to 250	Hz		Default 250

Ordering reference

A-CAN-DG-V2 – *input range – AA filter – option*



[1] For ±10V input range, AA filter option is not available.
[2] If filter option is used:
→ the speed inputs are disabled.
→ pin 11 and 12 must not be connected.
→ frame Tx3 not sent.

Ex: A-CAN-DG-V2-5-N → 0-5V, no filter.

For complete information, contact us at info@texense.com