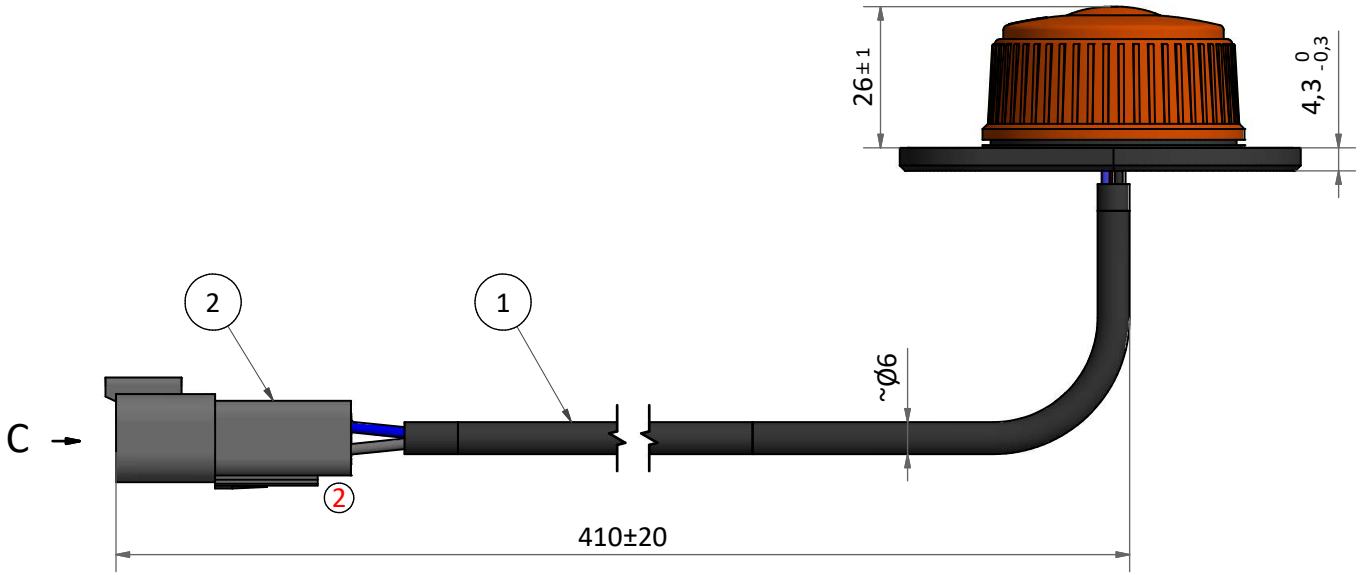
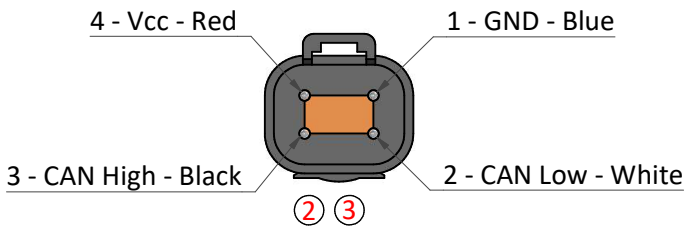
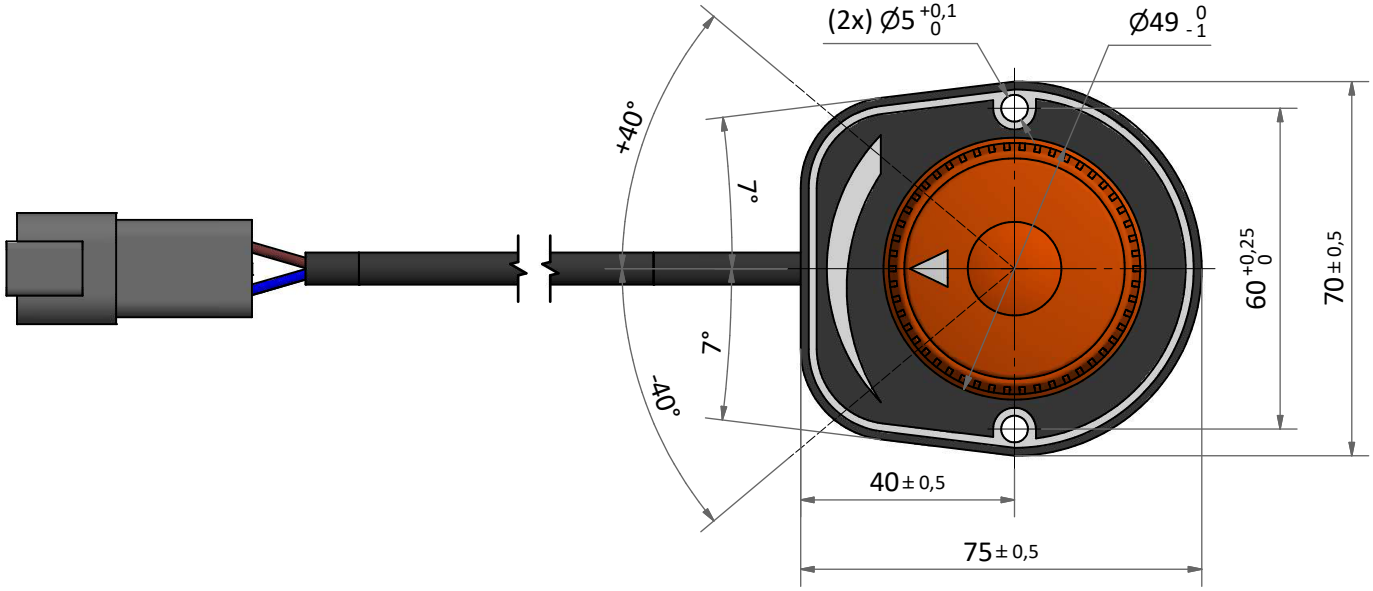
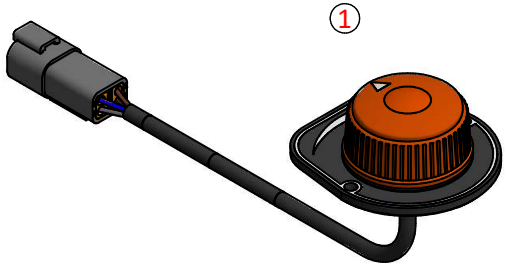




C (1 : 0.75)





Ref.	Description	Operating temperature
1	HT 105° Cable	-30 / +105
2	4 Pins Deustch DT04-4P Connector	-55 / +125

ELEN industrial vehicles sensors

Rev.	Date	Sign.	Review Description
1	21/11/2019	H.T.	Orange knob was black
2	08/01/2020	G.M.	Changed Cable Type
3	26/03/2021	G.M.	Updated Pin Colours

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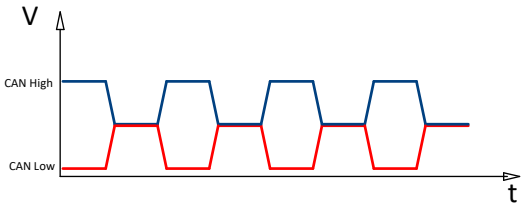
Part Number: AA356000

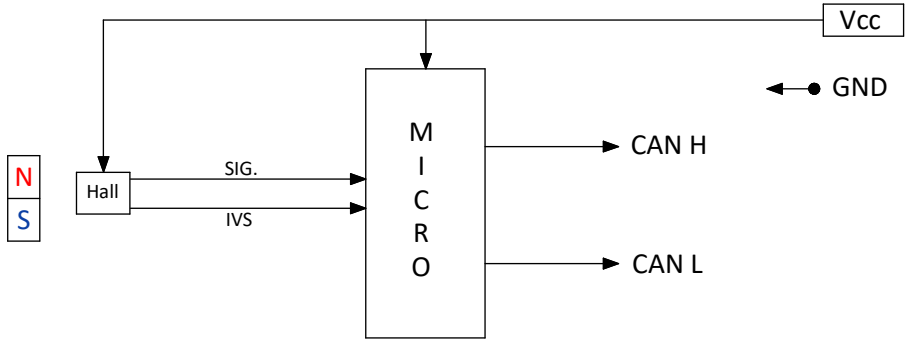
Description: Praxis accelerator knob with CAN BUS signal

Designed	13/11/2019	Hamidreza T.	Scale : 1 : 1 (A3 format)
Checked	13/11/2019	Roberto La Capruccia	Dimensions without tolerance indication: ISO 2768 - m
Approved	13/11/2019	Roberto La Capruccia	Units mm

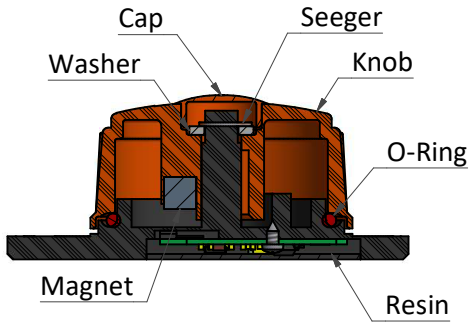
Output Signal



Functional Scheme



Section View



Technical Specifications

	Specific	Value	Standard Reference
Electrical	Power Supply (Vcc)	12V Min ÷ 24V Max	PDV Rev. 3 - P. 5.1;
	Output Current	20 mA Max	PDV Rev. 3 - P. 5.5;
	Supply Current (No Load)	30 mA Max	PDV Rev. 3 - P. 5.2;
	Overload Protection	24 mA For 1h	PDV Rev. 3 - P. 5.6;
	Overvoltage Protection	Max +29V for 1h	PDV Rev. 3 - P. 5.7;
	Temperature Operating Voltage	24V @80°C	PDV Rev. 3 - P. 5.8;
	Signal Output	CAN J1939 Default Baudrate 250 kb/s Default message cadence 50ms	-
	Reverse Polarity Protection	-24V For 1h	PDV Rev. 3 - P. 5.3;
	Shortcircuit Protection	To Ground For 5' ; To Supply For 5'	PDV Rev. 3 - P. 5.4;
	Insulation Resistance	1000MΩ@500V	PDV Rev. 3 - P. 5.10;
	Dielectric Rigidity	750V@50Hz For 60s	PDV Rev. 3 - P. 5.11;
	ESD Protection	±8kV Contact; ±15kV Air	EN 61000-4-2;
	Linearity	±1%	-
	Response Time	3 msec	-
	Resolution	12 bit	-
	Maximum Load Recommended Output	220 Ohm	-
Environmental	Operating Temperature	-30°C ÷ +85°C	IEC 60068-2-14; IEC60068-2-1; IEC60068-2-2; IEC60068-2-30;
	Storage Temperature	-40°C ÷ +80°C	IEC 60068-2-14; IEC60068-2-1; IEC60068-2-2; IEC60068-2-30;
	Degree Of Protection	IP67	IEC 60529

	Vibrations Resistance - Random	f=10Hz@PSD=1.44g2/Hz;
		f=100Hz@PSD=3.85 g2/Hz,
		f=1000Hz@PSD=3.85g2/Hz,
		f=2000Hz@PSD=0.96g2/Hz;
		3 Axes - 24h for Axis
			IEC 60068-2-64;
			ENS 0310 Rev J;

	Vibrations Resistance - Sine	(5÷12.87)Hz@Displacement=±15mm, (12.87÷200)Hz@dis≤±15mm@5g, 1Octave/min, 20 Sweep Cycles	IEC 60068-2-6;ISO 15998;
	EMC Compatibility - Magnetic Field Imm.	15Hz ÷ 150 kHz	ISO11452-8:2007;
	EMC Compatibility - BCI	BCI Class "A" - 100mA; (1÷400)MHz	ISO11452-4;
Mech.	Body Material	Nylon 6.6 GF	-
	Tightening Torque	7 Nm	-

ELEN srl reserves the right to modify the informations contained in this document. The parameters listed may vary depending on the customer's application and must be validated and confirmed by technical document approvals. ELEN srl doesn't assume any liability for inappropriate use of the product or for applications out of specifications.

Protocol Description

Throttle		
Name	EEC2_APP (TBD)	-
Cycle Time	50 ms	-
Identifier	0C F0 03 8B (TBD)	-
Lenght	8	Byte

Throttle Message Structure			
BYTE 1	STATUS_EEC2	High Nibble	Low Nibble
		Always 1111	Bit 4..3 KickDown State: 00b KickDown Passive 01b KickDown Active
		Always 1111	Bit 2..1 IVS State: 00b Not Idling 01b Idling 10b Error 11b Not Available
BYTE 2	POSITION	0...250 Position by step 0,4% of stroke. 254 Notifies fault	-
BYTE 3	DIAGNOSTIC	TBD	-
BYTE 4..7	FREE		
BYTE 8	MESSAGE COUNTER/CHECKSUM	High Nibble	Low Nibble
		Rolling Counter	Checksum
		SAE J1939/71 Reference 4207	SAE J1939/71 Reference 4206

Preliminary