Electronic Box output stream

Output stream description

ASCII output stream:

0 - "D03-032 SWV9.02 ESNE03-1120" H 1721163084.327130 T 25.00 f 7201.79 df 1.42 Fv 15 ph 90 V 0.001 D 1.000 I- 2 I+ 2 Q 0.9824078 fr 8701.3590000 df- 8701.8100000 df+ 8700.8950000 c1 0.190 c2 2.473 Tc 200.00 E 10

Stream Position	Item	Acronym	(Type)	Unit	Example	Remarks
1	Sample number	none	word	-	0 -	Has a hyphen after the number
2	Sensor Name,Software version and Electronic Box Serial Number	none	String	-	“D02-032 SWV9.02 ESNE03-1120”	Enclosed in quotes
3	Timestamp	H	float	UNIX	1721163084.327130	Timestamp in UNIX format
4	Temperature	T	float	°C	T 24.58	Sensor/Fluid temperature
5	Resonant frequency	f	float	Hz	f 8772.39	
6	Damping frequency	df	float	Hz	df 1.12	damping
7	VCO Frequency presetting	Fv	word	digit	Fv 659	Initialization of PLL [0 .. 1023]
8	Reference Phase setting	ph	byte	digit	ph 102	1 digit -> 1.42 ° [0 .. 255]
9	Viscosity	V	float	mPa.s	V 10.389	calculated
10	Density	D	float	g/cc	D 0.778	calculated
11	Excitation current -45° phase shift	I-	word	digit	I- 155	0 .. 1023
12	Excitation current -45° phase shift	I+	word	digit	I+ 157	0 .. 1023
13	df frequency quotient	Q	float	-	Q 0.9538461	Frequency quotient df- / df+
14	Frequency 0°	fr	float	Hz	fr 8175.3210000	Frequency measured at reference phase (0°)
15	Frequency -45°	df-	float	Hz	df- 0.5449219	Frequency measured at reference phase - 45°
16	Frequency +45°	df+	float	Hz	df+ 0.5712891	Frequency measured at reference phase + 45°
17	Channel 1	c1	float	mA	c1 0.190	Analog output channel 1
18	Channel 2	c2	float	mA	c2 2.473	Analog output channel 2
19	Coil Temperature	Tc	float	°C	Tc 200.00	Temperature of the coil
20	Error state	E	byte	-	E 12	First digit: E [**1**]2 Q within limits = 0 Q = 1.0 +/- 0.05 Q out of limits >= 1

						Second digit: E 1[**2**]Sensor locked in = 0 Sensor unlocked >= 1 1 = out of upper and lower freq limits (E_fup, E_flw). 2 = sensor freq. and exc. freq. are not equal
End	Carriage return, line feed	*CR LF*	byte	-	0x0D 0x0A	
Spacing	Separation of tokens	*Space*	byte	-	0x20	