Product datasheet
ClampOn Simulator SIM.DS2N.xxx0.A20

1	**General**		
1.1	Model name	ClampOn Simulator	
1.2	Service description	Simulator for various ClampOn subsea products	1
1.3	Model number	SIM.DS2N.SR00.A20 (single RS-485) SIM.DS2N.SC20.A20 (single CANbus) SIM.DS2N.DC20.A20 (dual CANbus)	
1.4	Serial number	SIM-YY-MM-XXXXX	2
2	**Physical**		3
2.1	Dimensions (L × W × H)	171 mm × 172 mm × 85 mm [6.7 in × 6.8 in × 3.3 in]	
2.2	Enclosure material	Aluminum (black powder coated)	
2.3	Weight	1.5 kg [3.3 lb]	4
2.4	Equipment marking	Polyester label Client tag plate where applicable	
2.5	Form factor	Tabletop	
3	**Environmental**		
3.1	Maximum altitude (for usage)	2 000 m [6 562 ft]	
3.2	Location	Use in indoor locations only	
3.3	Ingress protection	IP40 according to IEC 60529	
3.4	Operating temperature	−5 °C to +40 °C [+23 °F to +104 °F]	
3.5	Storage and transportation temperature	−18 °C to +50 °C [0 °F to +122 °F]	
3.6	Storage and transportation humidity	30 % to 70 % non-condensing	
3.7	Shock/vibration	Qualified (Q1 and Q2) in accordance with ISO 13628-6:2006 and API 17F:2017	
4	**Operation**		
4.1	Rated voltage range, U_{dc}	18 V to 30 V, U_{nom} = 24 V (reverse polarity and transient protection)	5
4.2	Power consumption, at U_{nom}	RS-485: 1.1 W SIIS level 2: 1.5 W	5
4.3	Electronics platform/generation	ClampOn DSP II (with CAN gateway II where applicable)	
4.4	Electronics channel configuration	Single or dual. Dual channel configuration only available on CANbus interface	
4.5	Manner of operation	Fixed step output, and depending on configured application type: RAW values, sand rate, PIG counter, vibration values, calculated flow temperature	6
4.6	Design life	30 years	
4.7	Power on indicator (per channel)	Green LED	
5	**Signal**		
5.1	Physical layer/signal types	RS-485 or SIIS level 2 (low-speed fault-tolerant CANbus per ISO 11898-3)	
5.2	Communication protocol (half duplex)	RS-485: Modbus RTU according to Modicon PI-MBUS-300 SIIS level 2: CANopen according to CiA 443 profile 3.0.1	
5.3	Communication bit rate	RS-485: 1.2 kbps to 115.2 kbps (19.2 kbps factory default) SIIS level 2: 50 kbps or 125 kbps (50 kbps factory default)	
6	**Installation**		
6.1	Mounting	Freestanding for tabletop	
6.2	Terminal block conductor range	0.14 mm² to 1.5 mm² [AWG 26 to AWG 16] conductor cross section, depending on conductor type (solid/stranded) and with/without ferrule	

7 Compliance

7.1	CE marking in conformance with	2011/65/EU (RoHS) and 2014/30/EU (EMC)
7.2	RCM marking in conformance with	Radiocommunications Act 1992
7.3	UKCA marking in conformance with	UK SI 2012/3032 (RoHS) and UK SI 2016/1091 (EMC)
7.3	EMC generic standards applied	IEC/EN 61000-6-2, IEC/EN 61000-6-4 and IEC 60533
	Conducted emissions	CISPR 16-2-1
	Radiated emissions	CISPR 16-2-3
	ESD immunity	IEC/EN 61000-4-2
	Radiated RF disturbance immunity	IEC/EN 61000-4-3
	Electric fast transient/burst immunity	IEC/EN 61000-4-4
	Surge immunity	IEC/EN 61000-4-5
	Conducted RF disturbance immunity	IEC/EN 61000-4-6
	Power supply failures immunity	IEC/EN 61000-4-11
	Voltage / frequency variations immunity	IEC/EN 61000-4-11
	Conducted LF disturbance immunity	IEC/EN 61000-4-16

Notes

1. The simulator is factory configured for application types such as (but not limited to) *Particle Monitor*, *PIG Detector*, *Vibration Monitor*, *Flow Temperature Monitor*.
2. Serial number breakdown: SIM (simulator), YY (year of manufacture), MM (month of manufacture), XXXXX (unique electronics ID).
3. The simulator comes delivered in a shock resistant Pelicase 1450 for storage and transportation.
4. Mass listed is with dual SIIS level 2 electronics. For other configurations minor adjustments to mass will apply.
5. Average inrush current is <120 % of maximum rated steady state current for 500 ms.
6. Signal step sequence and hold times depends on application simulated. See user manuals 62-320-00263 (Modbus RTU) and 62-320-00109 (CANopen) for details.