



SMARTsat[®] B

Preliminary Technical Specification

- SMARTsat[®] SpO₂ technology
- Motion tolerance performance
- Very low power consumption
- Output of raw plethysmogram
- Full range of sensors available

Specifications

Measurement range	SpO ₂	0 - 100%
	Pulse rate	0 - 300 bpm
	Perfusion	0.1 - 30% (no motion)
Accuracy	SpO ₂	60 - 100% ± 2 A _{RMS} ¹ (no motion)
		60 - 100% ± 3 A _{RMS} (motion ² condition)
		60 - 100% ± 2 A _{RMS} (low perfusion)
	Pulse rate	20 - 240 bpm ± 3 bpm, >240 bpm ± 5 bpm (no motion) 20 - 240 bpm ± 5 bpm, >240 bpm unspecified (motion)

Power requirements

Input voltage	3.3 VDC (±0.1V)
Average power consumption	≤ 20mW
Maximum power consumption	≤ 25mW (50mW ³ , 85mW ⁴)

Environmental conditions

Operating temperature	-25°C to +60°C
Storage temperature	-40°C to +70°C
Relative humidity	15% - 95% (operation, non-condensing) 10% - 95% (storage, non-condensing)

Serial communication

Baud rate	9600 baud up to 230400 baud
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Applied Standards

SMARTsat B module	IEC 60601-1:2005 (3rd Ed); IEC 60601-1 (2nd Ed) , IEC 60601-1-2:2014 (4th Ed); IEC 60601-1-2 3rd, EN ISO 80601-2-61:2011; EN ISO 9919:2009 , ISO 14971:2007; IEC 60601-1-6:2010, IEC-60601-1-11:2010
SMARTsat sensors	ISO 10993-1:2009; ISO 10993-5:2009; ISO 10993-10:2010

Miscellaneous

Dimensions (L x W x H)	31.0mm x 14.0mm x 5.0mm
Typical applications	Sleep screening devices, home care and patient monitors...and more

¹ A_{RMS} ± 1 A_{RMS} represents approximately 68% of measurements. ² Motion: Tested with selected motion patterns Index II

³ High Resolution Pleth Mode (150Hz sampling rate) ⁴ High Resolution Pleth Mode (300Hz sampling rate)



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