JUNO BSX TECHNICAL DATA SHEET EN

The Juno iX BSX is an industrial operating hours counter and on/off monitor with connectivity options via mioty®, LoRaWAN® , or cellular (e.g., NB-IoT). It reliably records operating hours and supports the optimization of maintenance cycles by analyzing vibrations or the magnetic field in real time. Thanks to its robust construction and IP69k protection, the Juno iX BSX is ideal for demanding environments and can withstand dust, water, and high pressures.

VERSIONS

ITEM CODE	FEATURES
S-JUNO-IX-LOEU-BSX-BM	INDUSTRIAL JUNO IP69k operating hours counter with magnetic field sensor LoRaWAN®
S-JUNO-IX-MIOTY-BSX-BM	INDUSTRIAL JUNO IP69k Operating hours counter with magnetic field sensor mioty®
S-JUNO-IX-NBM1-BSX-BM	INDUSTRIAL JUNO IP69k Operating hours counter with magnetic field sensor Cellular
S-JUNO-IX-LOEU-BSX-BM-TH	INDUSTRIAL JUNO IP67 Operating hours counter and TH sensor, temperature and relative humidity with magnetic field sensor LoRaWAN® **– only available on request and MOQ -**
S-JUNO-IX-MIOTY-BSX-BM-TH	INDUSTRIAL JUNO IP67 Operating hours counter and TH sensor, temperature and relative humidity with magnetic field sensor mioty® **– only available on request and MOQ -**
S-JUNO-IX-NBM1-BSX-BM-TH	INDUSTRIAL JUNO IP67 operating hours counter and TH sensor, temperature and relative humidity with magnetic field sensor Cellular **– only available on request and MOQ -**
S-JUNO-IX-LOEU-BSX	INDUSTRIAL JUNO IP69k operating hours counter and TH sensor, temperature and relative humidity with magnetic field sensor LoRaWAN®
S-JUNO-IX-MIOTY-BSX	INDUSTRIAL JUNO IP69k Operating hours counter with vibration and magnetic field sensor mioty®
S-JUNO-IX-NBM1-BSX	INDUSTRIAL JUNO IP69k operating hours counter with vibration and magnetic field sensor Cellular
S-JUNO-IX-LOEU-BSX-TH	INDUSTRIAL JUNO IP67 Operating hours counter with vibration and magnetic field sensor LoRaWAN® **– only available on request and MOQ**

S-JUNO-IX-MIOTY-BSX-TH	INDUSTRIAL JUNO IP67 operating hours counter with vibration and magnetic field sensor mioty® **– only available on request and MOQ -**
S-JUNO-IX-NBM1-BSX-TH	INDUSTRIAL JUNO IP67 operating hours counter with vibration and magnetic field sensor Cellular **– only available on request and with MOQ -**

GENERAL FEATURES

FEATURE	VALUE	UNIT
Dimensions lxwxh	86x86x25	mm
Weight	<200	g
Operating temperature	-25 to +75 (please inquire about extended temperature range. Temperature range is limited by the maximum operating temperature of the primary cells)	°C
Maximum operating temperature Device	85	°C
Storage temperature (recommended)	15 to +30	°C
Relative humidity during operation	5 to 99	%RH
IP rating	IP69k (TH version IP67)	
IK rating	TBD	
Sensors	Magnetic field sensor, ADVANCED acceleration sensor, temperature, relative humidity (optional), activity sensor	
Traffic light function	No	
Acoustic alarm function	Yes, buzzer	
Provisioning	NFC/BLE	
Material	PBT GF20	
NFC/BLE antenna	Integrated	
RF antenna	Integrated	
Accelerometer	Yes	
Batteries	Primary cell, replaceable, AA	
Primary cell type	LoRaWAN, mioty: • 2 x 3.6V LiSOCl2 (SAFT LS14500 recommended) Cellular: • 2 x 3V LiMnO2 spiral AA cell • 2 x 3.6V LiSOCl2 spiral AA cell	
Housing color	S-JUNO-IX-XXXX silk gray	

CONNECTIVITY AND RF SPECIFICATION

FEATURE	VALUE	UNIT
RF standards		MHz
Frequency LoRaWAN®/mioty® EU	86	MHz
Frequency Mobile communications	Band 8, 20 (900 MHz, 800 MHz)	dBm
Transmission power LoRaWAN®/mioty® EU	14	dBm
Transmission power NB-IoT	23	dBm
LoRa® MAC layer version	1.0.4	

MAGNETIC FIELD SENSOR

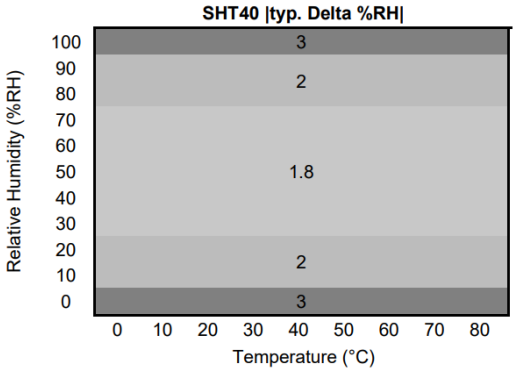
FEATURE	VALUE	UNIT
Axes	3	
Measuring range	+/-2000	µT
Resolution	0.1	µT
Noise	450	nT RMS

VIBRATION SENSOR

FEATURE	VALUE	UNIT
Measuring range (FS)	+-2/+-4/+-8/+-16	g
Bandwidth	Up to 6.3	kHz
ODR	26667	kHz
Sensitivity	0.061 (±2 g), 0.122 (±4 g), 0.244 (±8 g), 0.488 (±16 g)	g
Zero g offset	+- 60	g

SENSOR SPECIFICATIONS TEMPERATURE

FEATURE	VALUE	UNIT
Measuring range	-40 to +125	°C
Drift (long-term)	<0.03	°C/year
Accuracy	+/-0.2	°C
Resolution	0.1	°C
Repeatability	0.2	°C



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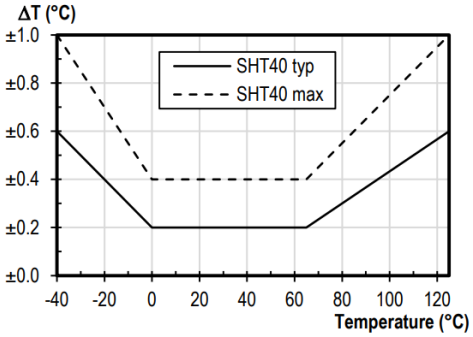
SENSOR SPECIFICATION RELATIVE HUMIDITY

FEATURE	VALUE	UNIT
Measuring range	0 to +100	%RH
Drift (long-term)	<0.25	%RH/year
Accuracy	+/-1.8	%RH
Resolution	1	%RH
Repeatability	0.25	%RH



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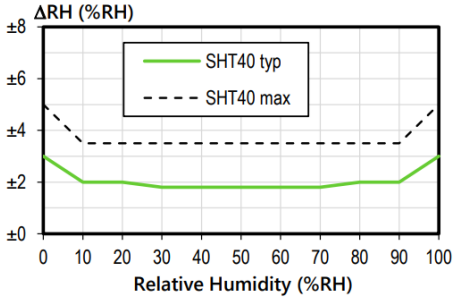

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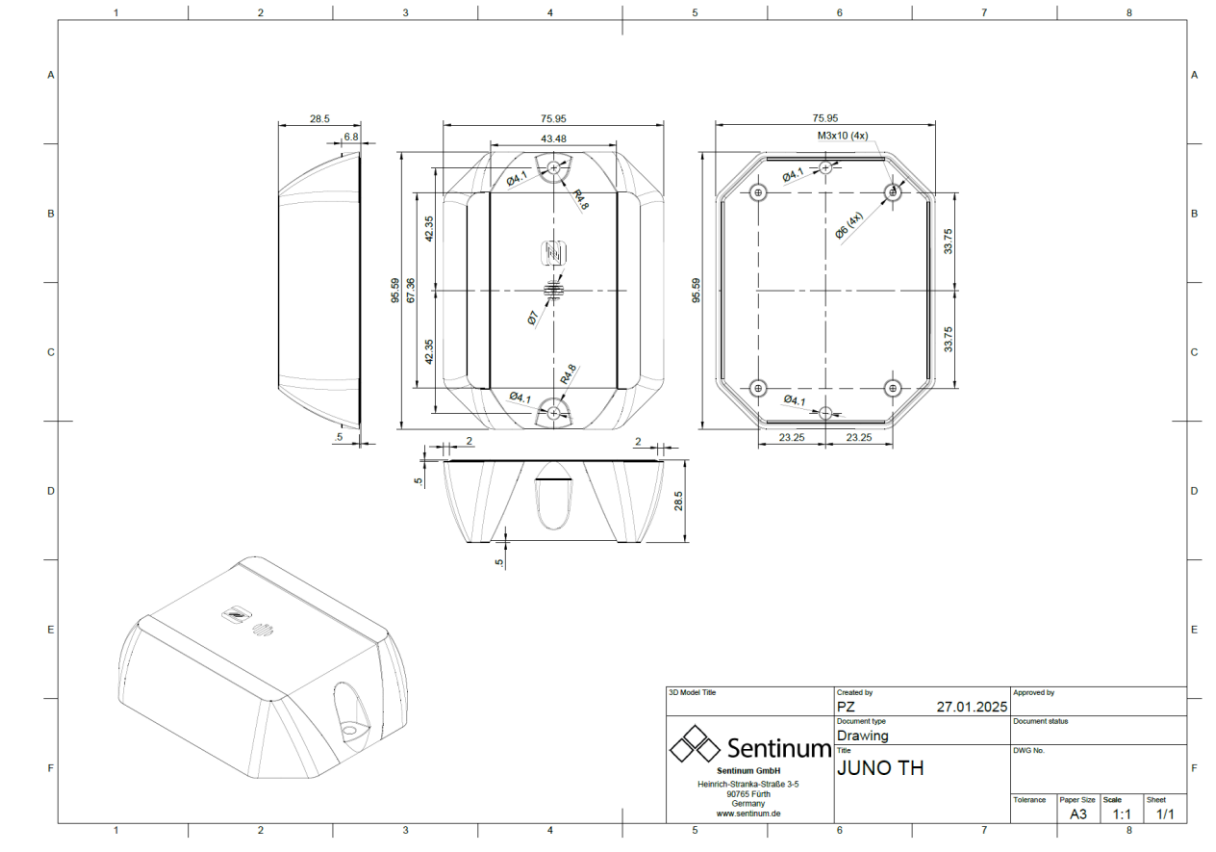
More accurate temperature sensors available on request.

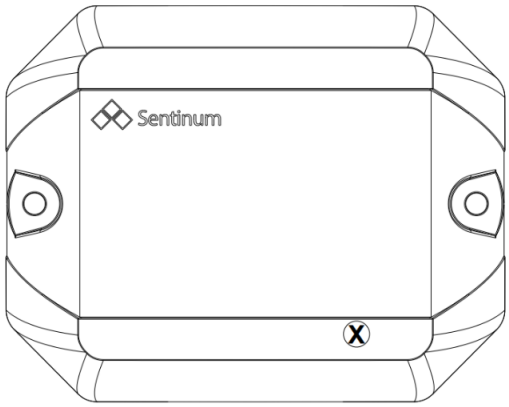
SENSOR SPECIFICATION TEMPERATURE ACCELERATION SENSOR

FEATURE	VALUE	UNIT
Measuring range	-40 to +85	°C
Accuracy	+/- 0.8	°C

TECHNICAL DRAWING



POSITION OF MAGNETIC SWITCH



ORIENTATION OF THE AXES ACCELERATION SENSOR