# SCOUT220-IS and SCOUT240-IS Portable Data Collectors

#### Datasheet

Bently Nevada Machinery Condition Monitoring

109M0226 Rev. Y





## **Description**

SCOUT220IS and SCOUT240IS are intrinsically safe portable data analyzer solutions designed to monitor machinery conditions in hazardous environments. Both are rated ATEX Zone 1 / Zone 21 (for gases and non-conductive dust) and CSA Class 1 / Div 1. These small form-factor, rugged devices take vibration recordings and upload the collected data for detailed analysis in System 1.

This is a two-part solution. The SCOUT data acquisition module uses Bluetooth to communicate with a wireless, industrial handheld device running the S1 Collector app.

Vibration recordings are viewed and stored on the **handheld device**. We offer these devices with hazardous area ratings up to Zone 1/21 & Div 1. The handheld runs the Android OS, so you can also use it like any smartphone or tablet to take pictures and video, send text messages, check email, make phone calls, track your location, create SOS alerts, and run other enterprise apps.

The high performance **data acquisition module** provides long battery life, yet is light & rugged. It hangs out-of-the-way on a shoulder strap, allowing you to focus on your job and move safely between machines. The SCOUT220IS can sample two sensor channels simultaneously, while the SCOUT240IS supports up to four channels. Both also support tachometer or Keyphasor triggering. These data acquisition modules provides up to ten hours of continuous use, while supporting an  $F_{max}$  up to 80 kHz and 12,800 lines of spectral resolution. Both models are rated IECEx/ATEX Zone 0 / 20 (for gases and non-conductive dust) and CSA Class 1 / Div 1.

The **System 1 software**, paired with SCOUT220IS and SCOUT240IS, enables you to track all of your machinery using a single enterprise monitoring system. Use System 1 to prepare routes, analyze data, detect long-term trends, and set and detect alarms. Then transfer the routes between System 1 and your SCOUT device using WiFi, file transfer, cellular network, or a USB cable.





#### **Hardware Features**

- Battery life of 10 hours allows the data collector to run all day.
- Five year warranty.
- Rugged, water, and dust resistant (IP-65), drop-tested, with intrinsically safe variants.
- Easy to carry: lightweight handheld unit, shoulder strap for data collector, keepers for sensors.
- Safety breakaways on both shoulder strap and sensor cables.
- Upgradable industrial handheld smartphone or tablet.
- Handheld Push-to-Talk(PTT) button is configured to start measurements (where available).

#### **Software Features**

- Seamless on-and off-route data collection.
- Route overview and easy route navigation.
- Up to four channel simultaneous recordings (including on-route).
- SCOUT240 supports Triaxial sensors.
- Fast sensor settling and data collection.
- Patented 6Pack time-saving measurement type.
- Synchronous sampling, peak demod, and bump test.
- Coast-down, run-up, and interval capture support.
- Custom note and numeric data entry.
- Up to 12,800 lines of spectral resolution, 80 kHz F<sub>max</sub>.
- Rotor Balancing, dual plane, reports transferred to System 1.
- Data quality warnings and easy-tounderstand alarm annunciation.
- Supports operator driven reliability (ODR).
- Supports accelerometer, velocity, displacement, and voltage-output sensors of AC and DC coupling types.



The SCOUT portable connects via Bluetooth to the handheld, which you can then sync with System 1.



# **Data Collector Specifications**

# Sensors

Sensor input Simultaneous sampling  Compatible SCOUT240IS: 4 channels.  Compatible Sensor types  Accelerometer, velocity, displacement, and voltage.  AC coupled range  DC coupled ranges  Connectors  2 x LEMO connectors for CHI & CH2+ 1 X LEMO connector for Tach/Keyphasor SCOUT240IS includes a CH 2.4 breakout cable.  Analog to digital conversion  Consor excitation current  Censor excitation current  Censor detection  Courted Scout 2 channels.  Scout 2 channels.  Scout 2 channels.  Sensor is Courted in the sensor output swing (± 80 g).  DC coupled output swing (± 80 g).  O to 20 V, -10 to 10 V, -20 to 0 output swing (± 80 g).  Connectors output swing (± 80 g).  Connectors output swing (± 80 g).  Connectors output swing (± 80 g).  O to 20 V, -10 to 10 V, -20 to 0 output swing (± 80 g).  Connectors output swing (± 80 g).  O to 20 V, -10 to 10 V, -20 to 0 output swing (± 80 g).  Connectors output swing (± 80 g).  Conn		
displacement, and voltage.  AC coupled range  16 V peak-peak. Allows for ± 8 V sensor output swing (± 80 g).  DC coupled ranges  2 x LEMO connectors for CH1 & CH2+ 1 X LEMO connector for Tach/Keyphasor SCOUT240IS includes a CH 2.4 breakout cable.  Analog to digital conversion  O mA or 2.2 mA (configurable), 24 V maximum current  2.2 mA powers IEPE/ICP-type sensors  Measures sensor bias voltage. Warns if short circuit or not	Simultaneous	
Allows for ± 8 V sensor output swing (± 80 g).  DC coupled ranges  2 x LEMO connectors for CHI & CH2+ 1 X LEMO connector for Tach/Keyphasor SCOUT240IS includes a CH 2.4 breakout cable.  Analog to digital conversion  O mA or 2.2 mA (configurable), 24 V maximum current  2.2 mA powers IEPE/ICP-type sensors  Measures sensor bias voltage. Warns if short circuit or not	•	
ranges  V  2 x LEMO connectors for CHI & CH2+ 1 X LEMO connector for Tach/Keyphasor SCOUT240IS includes a CH 2.4 breakout cable.  Analog to digital conversion  O mA or 2.2 mA (configurable), 24 V maximum current  2.2 mA powers IEPE/ICP-type sensors  Measures sensor bias voltage. Warns if short circuit or not	•	Allows for ± 8 V sensor
Connectors  & CH2+ 1 X LEMO connector for Tach/Keyphasor SCOUT240IS includes a CH 2.4 breakout cable.  Analog to digital conversion  O mA or 2.2 mA (configurable), 24 V maximum current  2.2 mA powers IEPE/ICP-type sensors  Measures sensor bias voltage. Warns if short circuit or not	•	
digital conversion  24-bit ADC  0 mA or 2.2 mA (configurable), 24 V maximum  2.2 mA powers IEPE/ICP-type sensors  Measures sensor bias voltage. Warns if short circuit or not	Connectors	& CH2+ 1 X LEMO connector for Tach/Keyphasor SCOUT240IS includes a CH
Sensor excitation current  2.2 mA powers IEPE/ICP-type sensors  Measures sensor bias voltage. Warns if short circuit or not	digital	24-bit ADC
2.2 The powers tere/tor-type sensors  Measures sensor bias voltage.  detection  Warns if short circuit or not	excitation	(configurable), 24 V
Sensor voltage. detection Warns if short circuit or not		
		voltage. Warns if short circuit or not

## Tachometer

	Battery-powered, handheld
Optional IS	laser sensor.
Zone 0 rated laser Tach	Triggers when beam on reflective tape range 10 cm to 2 m.
	Speed 6 to 250 krpm.
Optional	Laser sensor powered by Portable Data Collectors.
Zone 2 rated laser Tach	Triggers when beam on reflective tape range 10 cm to 2 m. Speed 6 to 250 krpm.
Other sensor types supported	Contact, TTL Pulse, Keyphasor
Power supply to sensor	5 V, 40 mA Rated for Zone 2, 22 and Division 2 only.
Input Impedance & max values	100 KΩ ± 28 V max
Waveform display	± 20 V range
Threshold	± 20 V range ± 0.4 V accuracy
Auto- threshold mode	Signal ≥ 3 V pk-pk Machine speed ≥ 60 rpm (1 Hz) Settles within < 15 s
Hysteresis	0.2 V to 2.5 V user configurable
Speed range	Minimum: 3 rpm (0.05 Hz) Maximum: 1,200,000 rpm (20 kHz)
Signal pulse width	10 µs minimum 2% duty cycle (for auto-threshold)
Accuracy	± (0.1% + 1 cpm) for speeds up to 5 kHz (300 kcpm). ± (0.3%) for speeds above 5
	Optional Zone 2 rated laser Tach  Other sensor types supported  Power supply to sensor  Input Impedance & max values  Waveform display  Threshold  Auto- threshold mode  Hysteresis  Speed range  Signal pulse width



Parameter Indication		Fmin possible range	0 to F <sub>max.</sub> Instrument zeroes all spectral			
Dynamic signal range	> 95 dB typical at 400 line resolution		lines below F <sub>min</sub> .			
Harmonic distortion	Less than -70 dB typical. Other distortions and noise are lower.	Resolution (Spectral lines)		400; 800; 1,600; 3,200; 6,400; 12,800 lines  Channels		
Units	g or m/s <sup>2</sup> in/s or mm/s mil or mm or µm peak, or peak-peak, or RMS	-	1 2 3 or 4	6,400 3,200 N/A	12,800 6,400 3,200	
Magnitude & cursors	Overall value: RMS, derived pk, derived pk-pk Dual cursors Digital readouts on chart	Frequency scale	Hz, CPM, C	Orders. ale with zo	oming.	
Base accuracy	For AC signal: ± 1% of readings For DC level: ± 1% of full scale (1% is approximately 0.1 dB)	Amplitude scale	displacen	ion, veloci nent. to scaling.	ty,	
High frequency	≤ 0.1 dB > 100 Hz to 10 kHz ≤ 3 dB > 10 kHz to 40 kHz	Window shapes	Hanning,	Rectangul	ar	
attenuation	Attenuation tolerances are in addition to base accuracy.  ≤ 0.1 dB 10 Hz to < 100 Hz	Overlap	87.5) % De	5, 37.5, 50, 6 ependent of ber of lines	on Fmax	
AC coupling attenuation	≤ 3 dB 1 Hz to < 10Hz	Number of		6, 32, 64, 12		
≤ 0.1 dB 10 Hz to < 100 Hz ≤ 1.5 dB 1 Hz to < 10 Hz.		averages	Increases sampling time proportionally			
Attenuation due to Integration Integration (acceleration to velocity). Double the values for	Averaging types	Linear, exp	oonential,	peak hold		
Integration	double integration (acceleration to displacement).	Demodulation bandwidths	125 Hz to 1 kHz to 20 l Peak dem	nod: 500Hz	d up to 16 -40kHz, 1-	
Spectrum [	Display		<u>'</u>	40kHz, 5-4		
Fmax ranges	25; 50; 100; 125; 150; 200; 300; 400; 500; 600; 800; 1,000; 1,200; 1,600; 2,000; 2,500; 3,000; 4,000; 5,000; 6,000;	6Pack	Up to 40 kHz & 3,200 lines (1 channel). Up to 20 kHz & 1,600 lines (2-3 channels).			
8,000; 10,000; 15,000; 20,000; 30,000; 40,000; 60,000; 80,000 Hz or equivalen. CPM values or orders-based from			each of la	and wave w-frequer y, demodu	ncy, high-	
	1X to 999X.					



## **Waveform Display**

Number of
samples

1,024; 2,048; 4,096; 8,192; 16,384; 32,768

Channels	220 max samples	240 max samples
1	16,384	32,768
2	8,192	16,384
3 or 4	N/A	8,192

Time scale 10 ms to 256 seconds or orders based from 1 to 999 revs

# **Balancing**

Planes	2 planes, 2 sensors			
Speed Range	3 to 12,000 RPM			
Measurement Type	Acceleration, Velocity, Displacement			
Weight modes	Angle 0° to 360° Fixed Positions			
Remove Trial Weights	Yes/No Automatic recalculation			
Storage	Balance jobs stored on handheld and transferable to System 1			

## Communication

Bluetooth	BT 4.0 Classic	

# **Battery and Charger**

Battery type	Custom Lithium Ion pack, 7.4 , 4000 mAh.
	Not user accessible but factory replaceable.
Operating Time	10 hours typical on-route data collection

Charger type	Internal charging, automatic control.
	External power pack 12 V DC, 3 A output.
Charge rate	2 A nominal 3 hours for complete charge.

#### Mechanical

Size	5.1" W x 5.1" L x 1.4" H	
	(130 mm W x 130 mm L x 35 mm H	
Weight	1.5 lb ≈ 680g	

# **Environmental Limits**

Operating temperature	-4°F to 140°F (-20 to 60°C) 122°F (50°C) max when used in Ex hazardous areas
Ambient temperature for charging battery	32°F to 77°F (0°C to 25°C)
Storage temperature & humidity	-4°F to 140°F (-20°C to 60°C), 95%relative humidity If storage exceeds one month: up to 95°F (35°C), 85% relative humidity.
Ruggedness drop & sealing	Drop spec MIL-STD-810F- 516.5-IV 26 drops at 4' (1.2 m) onto concrete



# **Handheld Specifications Summary**



A handheld devices is not included in the SCOUT kit. To order a device, add it as an accessory item, or obtain an appropriately rated device directly from the supplier.



For self-supplied handheld devices, we cannot guarantee SCOUT200 compatibility with every make/model or version of Android. Contact BN TechSupport for a list of tested models, or to request a test.

	Smart Ex 02 DZ2	Smart Ex 02 DZ1	Tab Ex 02 DZ2	Tab Ex 02 DZ1	IS930.1	
Device Image						
Display & Touch	5", Gorilla g touch & v		8" 1280x800, 480 nit, glove touch & wet mode		8" 1920x1200, glove touch	
Wireless & GPS	4G/LTE dual SIM, WiFi 2.4 & 5 GHz, BT 4.2, NFC, GPS		WiFi 2.4 & 5 GHz, BT 4.2, NFC, GPS		WiFi 2.4 & 5 GHz, BT 5, NFC, GPS	
Cameras	12 MP rear,	5 MP front	8 MP rear, 5 MP front		13 MP rear, 5 MP front	
os	Android 9		Android 9		Android 10	
СРИ	Qualcomm Snapdragon 450		· •	7, 1.6 GHz a-Core	Qualcomm Snapdragon SDM660 Octa-Core	
Memory	3 GB RAM, 32 GB ROM up to 128 GB microSD		3 GB RAM, 16 GB ROM up to 256 GB microSD		64 GB internal memory, up to 128 GB microSD	
Battery	Replaceable Li-lon 4400 mAh			V, 4,450 mAh, up 11 hrs	Li-Ion 8400 mAh	
Size & Weight	163 x 82 x 22 mm, 380 g		128 x 215 x 10 mm, 575 g	162 x 256 x 33 mm, 1250 g	237 x 156 x 22 mm, 890 g	
Ruggedness	IP68, MIL-9 -20 to	,	IP68, 1.2m drop, -20°C to +55°C	IP65, -20°C to +50°C	IP68, −20 to +60°C	



	Smart Ex 02 DZ2	Smart Ex 02 DZ1	Tab Ex 02 DZ2	Tab Ex 02 DZ1	IS930.1
Warranty	3 ye	ars	3 )	years	3 years
IECEX ATEX	Zone 2/22 Ex ic IIC T4 Gc IP64 Ex ic IIIC T120°C Dc	Zone 1/21 Ex ib IIC T4 Gb IP64 Ex ib IIIC T120°C Db	Zone 2/22 Ex ic IIC T5 Gc Ex ic IIIB T100°C Dc	Zone 1/21 Ex ia IIC T5 Gb Ex ia IIIC T100°C Db	Zone 1/21, Ex ib IIC T4 Gb, Ex ib IIIC T135°C Db
CSA	Class I,II,III Div 2, Groups A G, T4	Class I,II,III Div 1, Groups A G, T4	Class I Div 2, Groups A D, T5	Class I,II Div 1, Groups A G, T5	Class I,II,III Div 1, Groups AG, T4
Complete Specs, Accessories	www.ecor	n-ex.com	www.eco	om-ex.com	www.isafe-mobile.com
SCOUT200 Compatibility	models, so support U Tethering. them from using comms with Syste Available methods: WiFi, File m comms. To use USI order WWAN verifrom		models, so support USE Tethering. T them from using comms with System Available comethods: WiFi, File mocomms. To use USB order WWAN vers	his prevents  USB Direct  1 l.  comms  ode, Remote  Tethering,  ion direct	



Numerous accessories are available for these handhelds, direct from each handheld manufacturer (e.g. charging stations, belt-clips for the smartphones, and cases for the tablets). You can find the accessories pages on the handheld manufacturers websites.



# **Compliance and Certifications**



This section applies only to the Data Collector, not the handheld device.

This device complies with part 15 of the FCC Rules, Class A device. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- 2. This device must accept any interference received, including interference that may cause undesired operation.



Changes or modifications not expressly approved by Bently Nevada could void the user's authority to operate the equipment.



This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.



For the detailed listing of country and product specific approvals, refer to the *Approvals Quick Reference Guide* (108M1756) available from Bently.com.

RED/EMC	EN 61000-6-2
KLD/LING	EN 61000-6-4
	EN 300 328
	EN 301 489-1
	EN 301 489-17
	EN 61326-1
	2014/53/EU 2014/30/EU

ATEX/IECEX	II 1 (1) GD II 3 (3) GD
	Ex ia [ia] IIC T4 Ga Ex ic [ic] IIC T4 Gc Ex ia [ia Ga] IIIB T135°C Da Ex ic [ic Gc] IIIB T135°C Dc
CSA/NRTL/C	Class   Division   Groups ABCD Class   Division   2 Groups ABCD Class   Division   Groups FG Class   Division   2 Groups FG
	Class I Zone 0, Ex/AEx ia [ia] IIC T4 Ga Class I Zone 2, Ex/AEx ic [ic] IIC T4 Gc Zone 20, Ex/AEx ia [ia Ga] IIIB T135°C Da Zone 22, Ex/AEx ic [ic Gc] IIIB T135°C Dc
	T4 @ Ta = -20°C to +50°C
	The installation must comply with the SCOUT200 Hazardous Location Installation Control Drawing (document 111M0029).
ROHS	2011/65/EU

The above ratings include the following areas:

- Intrinsically safe Zone 0, 20 and Division 1
- Lower level protection of Zone 2, 22 and Division 2

Only the following restricted sensor types are certified for intrinsically safe use:

- SCOUT-powered sensors such as ICP/IEPE accelerometers
- Self-powered tachometers such as battery-powered handheld laser tachometers

You can use other types of sensors such as buffered outputs from instrumentation racks only in lower rated Zone 2, Division 2 areas. Refer to SCOUT200 Hazardous Location Installation Control Drawing (document 111M0029) for details.





For the optional dust certification (Class II Groups F and G, and Zones 20 and 22), special dust-certified sensors are required. If this is required, inform your Bently Nevada sales professional so that the correct sensor can be substituted.



The overall hazardous system rating is defined by the minimum rating of the data collector, industrial handheld, and accessories.

# **Cyber Security**

The SCOUT220IS and SCOUT240IS solutions include an industrial handheld device that runs the Android operating system and uses USB, cellular, Bluetooth and Wi-Fi for communication. These solutions have features that reduce but do not eliminate cyber security risks.

We strongly recommend implementing additional cyber security protections such as:

- Controlling user access
- Scanning for viruses
- Applying timely updates
- Using mobile device management software



The recommended measures are at your discretion and responsibility. Some residual risk may remain.

For details, see the SCOUT200\_Series Cyber Security Hardening Guideline (document 131M1304) at BNTechSupport.com.

#### **App Updates**

The Bently Nevada development team periodically updates the SI Collector App with new features and enhancements. Built into the app is the new firmware to also automatically update the SCOUT200 data collector. These updates are free to all SCOUT200 owners who have a current Maintenance and Support agreement (M&S) for their System I software.

The updates can be obtained from any of these locations:

- Bently Nevada Tech Support Portal, Download Center > Service Packs.
- Flexnet Licensing Portal > System 1 > System 1 Collector App.
- 3. Google Playstore > Search "S1 Collector"



# **Ordering Information**



For the detailed listing of country and product specific approvals, refer to the *Approvals Quick Reference Guide* (108M1756) available from Bently.com.

#### SCOUT220IS-AA

#### **A: Data Collector Approval Options**

05 Multi Approvals (CSA, IECEx, ATEX)



The SCOUT220-IS basic kit does NOT include a handheld device, nor a System 1 software license. They are ordered separately under Optional Accessories below.

Part Number	Description	Qty
	S1 Collector app	1
	SCOUT220IS Data Collector	
108M4044	AC power adapter	1
PLUS0230	Category A power plug (USA / Canada)	1
PLSA0241	Category D power plug (South Africa / India)	1
PLAU0228	Category M power plug (Australia / New Zealand / China)	1
PLHK0245	Category G power plug (Hong Kong / UK)	1
PLEU0229	Category C Power plug (Europe)	1
AM3100T2- Z0 or 200350*	Accelerometer, top exit	1

Part Number	Description	Qty
AS3100S2- Z0 or 200350*	Accelerometer, side exit	1
151M8244-01	Accelerometer cable, coiled, safety breakaway	2
113M5585	Accelerometer magnetic base	2
109M2385- 012	BNC to silver-LEMO cable. Connects rack buffered outputs to CH1/CH2 inputs.	2
110M8172- 012	BNC to black-LEMO cable. Connects rack buffered Keyphasor to Tach input.	1
109M2384- 01	Anti-static neck strap with Sensor Keeper	1
112M4551	Hard carrying case	1
109М1269	SCOUT200 Series User Guide	1
109M1270-01	SCOUT200 Series Quick Start Guide	1
Bently_ Manuals DVD	Contains the SCOUT220IS and SCOUT240IS Product Datasheet (109M0226), the SCOUT200 Series Quick Start Guide (109M1270), and the SCOUT200 Series User Guide (document 109M1269).	1

<sup>\*</sup> Kit items with multiple part numbers listed have limited regional availability due to certification requirements.



Metrology certification can be requested when an order is placed, however this service is charged. Standard test data can be requested for free, but is not evidence of calibration.

To request a periodic metrology calibration, contact **Bently Nevada Tech Suppport**.



#### SCOUT240IS-AA

## A: Data Collector Approval Options

05 Multi Approvals (CSA, IECEx, ATEX)



The SCOUT240IS basic kit does NOT include a handheld device, nor a System 1 software license. They are ordered separately under Optional Accessories below.

Part Number	Description	Qty
	S1 Collector app	1
	SCOUT240IS Data Collector	1
108M4044	AC power adapter	1
PLUS0230	Category A power plug (USA / Canada)	1
PLSA0241	Category D power plug (South Africa / India)	
PLAU0228	Category M power plug (Australia / New Zealand / China)	
PLHK0245	Category G power plug (Hong Kong / UK)	1
PLEU0229	Category C Power plug (Europe)	1
AM3100T2- Z0 or 200350*	Accelerometer, top exit	3
AS3100S2- Z0 or 200350*	Accelerometer, side exit	1
151M8244-01	Accelerometer cable, coiled, safety breakaway	4

Part Number	Description	Qty
113M5585	Accelerometer magnetic base	4
109M2385- 012	BNC to silver-LEMO cable. Connects rack buffered outputs to CH1/CH2 inputs.	2
110M8172- 012	BNC to black-LEMO cable. Connects rack buffered Keyphasor to Tach input.	1
113M9350	Channel 2-4 breakout cable	1
109M2384- 01	Anti-static neck strap with Sensor Keeper	1
112M4551	Hard carrying case	1
109M1269	SCOUT200 Series User Guide	1
109M1270-01	SCOUT200 Series Quick Start Guide	1
Bently_ Manuals DVD	Contains the SCOUT220IS and SCOUT240IS Product Datasheet (109M0226), the SCOUT200 Series Quick Start Guide (109M1270), and the SCOUT200 Series User Guide (109M1269)	1

<sup>\*</sup> Kit items with multiple part numbers listed have limited regional availability due to certification requirements.



Metrology certification can be requested when an order is placed, however this service is charged. Standard test data can be requested for free, but is not evidence of calibration.

To request a periodic metrology calibration, contact **Bently Nevada Tech Suppport**.



## **Optional Accessories**

Hand Held Devices		
146M8212-01	Smart-Ex 02 DZ2 (North America & Europe)	
146M8216-01	Smart-Ex 02 DZ1 (North America & Europe)	
145M3278-01	Tab-Ex 02 DZ2 North America	
146M8220-01	Tab-Ex 02 DZ2 Europe	
151M7906-01	Tab-Ex 02 DZI North America	
151M7907-01	Tab-Ex 02 DZ1 Europe	
157M5734-01	iSafe IS930.1 North America	
158M0806-01	iSafe IS930.1 Europe	



To obtain a handheld device suitable for a location not listed above, contact a handheld device distributor within the destination country.

	Other Accessories
3071/01	System 1 software and license
109M2387	Handheld, battery-powered laser tach for IS zone 0. Order cable separately.
109м2389	1.2-meter cable for laser Tach 109M2387
108M4069	Laser Tach powered by SCOUT220-IS and SCOUT240-IS, for Zone 2.  Order cable separately.
CBL50216	5-meter cable for laser Tach 108M4069.

Other Accessories		
122M9408	Monarch Compact Smart Laser Sensor (CSLS). Higher powered (3 mW) but larger size (2.6" x 2.4" x 2") and no Zone rating. Order cable separately.	
125M2099- 01	Cable for CSLS laser, 1.5 m	
113M5529-01	Reflective tape One roll, 60 cm (23.7 in)	
VBMR0222	Pair of safety rings for attaching strap to data collector	
138M7749	Accelerometer cable, 4 ft, straight, safety breakaway	
AP3500T2- ZI	Accelerometer, top exit , 500 mV/g, 10 g pk, 0.2 Hz - 2.3 kHz, Div 1 & Zone 1 rated	
AP3500S2- Z1	Accelerometer, side exit , 500 mV/g, 10 g pk, 0.2 Hz - 3.7 kHz, Div 1 & Zone 1 rated	

## **Accessory Kits**

## Balancing Kit - 161M0958

Part Number	Description	Qty
113M5529-01	Reflective tape One roll, 60 cm	1
LASA0315	Laser Tach Kit Zone 2 rated	1
CBL50216	Laser cable Five meters	1
MAGA0063	Laser magnetic stand	1
159M9583*	Sensor extension cable, 5 m	2
CBBL0026	Carrying case for the kit	1

<sup>\*</sup> Depending on availability, this cable may be substituted with the CB5G0024 and CB5R0025 cables and two 161M2913 adapters.



#### Zone 2 Laser Tach Kit - LASA0315

Part Number	Description	Qty
108M4064	Laser Tacho Holder	1
108M4066	Circlips - 20Mm Stainless	1
108M4067	Arp115 Oring	2
108M4069	Laser Tach Zone 2 rated	1

#### **Triax Sensor Kits**



Triaxial sensor kits are certified for hazardous area use in limited regions (NAM, EU, etc). Other regions may need to source locally. Contact TechSupport for suggested manufacturer part numbers.

#### 157M0806-01 (Zone 2, Class 1 Div 2)

Part Number	Description
156м6189	Triaxial sensor, 100 mV/g ± 20%, 0.5 Hz 5 kHz, 8 µg/√Hz noise @ 10Hz
157M0852-01	Cable for SCOUT200 to triax 156M6189, 1.5 m, straight, safety breakaway
156M6204	Magnet, 2 pole, 38 mm diameter, 32 mm high, 25 kg pull, ¼-28 female thread

#### 157M0809-01 (Zone 0, CSA, IECEx, ATEX)

Part Number	Description
155M3055	Triaxial sensor, 100 mV/g ± 10%, 0.6 Hz 10 kHz, 27 µg/√Hz noise @ 10 Hz
156M6180	Cable for SCOUT200 to triax 155M3055, 1.5 m, straight, safety breakaway
154M1355	Magnet, 2 pole, 35 mm diameter, 22 mm high, 23 kg pull, ¼-28 female thread, triax alignment notch

# Language Specific Warning Labels

110М9913	Magnet base label
110М9914	Sensor keeper side label
110М9915	Sensor keeper front label
111M7144	Hard carrying case label



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