

CMCP850 Series Portable Field Balancing Kits



Features:

- Two Accelerometers with Magnetic Bases
- Choice of Phase Reference Kit (Laser or Optical)
- 25' (7.6m) Cables
- Precision Electronics Balance Weight Scale
- Large Trial Weight Kit
- Custom Phase Probe Holders
- Packaged in a Rugged, Watertight, Hard Carrying Case

Product Overview

The CMCP850 Series Portable Field Balancing accessory kit contains all the accessories necessary to perform in-place field balancing of rotating machinery. The CMCP850 Kit includes accelerometers, magnetic bases, cables, adapters, trial weight kit, a precision electronic balance scale, and more, all packaged in a rugged, watertight, hard case that makes balancing easier and more accurate. A variety of adapters are included so that you can connect your analyzer to other sensor sources such as on-line systems and velocity probes. The CMCP850 is a complete kit and is compatible with either the SKF Microlog Series or Emerson/CSI 2130/2140 analyzers. The Universal Connector Kit features cables with industry standard BNC connectors which can interface with any balancing system. In short, all you need to add is a portable analyzer and you are ready to balance pumps, fans, motors, couplings, small turbines and more. Field balancing kits are available with either a battery powered optical or laser phase kits or analyzer powered Optical/Laser kit which can connect directly to your analyzers phase input.

Basic Kit Contents:

- 2x CMCP786A General Purpose 100mV/g Top Exit Accelerometer
- 2x CMCP-MB03 Medium Duty Curved Surface Magnetic Sensor Mounts
- 1x CMCP811 Trial Balancing Weight Kit
- 2x CMCP665 Series 2 Pin MS Accelerometer Cables with Analyzer Specific Connectors
- 1x Magnetic Base Holder with Adjustable Gooseneck
- 1x Roll of Reflective Tape
- 1x 600g (21.164oz.) Balance Weight Scale
- 1x Custom Vice Grips for Phase Probe Mounting
- 1x Hex Key Set for Trial Weights
- 1x Tape Measure
- 1x 6" (15.2cm) Stainless Steel Tape Measure
- 1x Protractor
- 1x Compass
- 1x Storage Clipboard
- 1x Polar Plot Tablets
- 1x Application Notes on Field Balancing
- 1x Watertight Hard Carrying Case
- 1x Choice of Phase Reference Kit (Below)

Phase Reference Kit Options:

CMCP850-01 Remote Optical Phase Reference Kit (Same as SKF CMSS 6155XK-U-CE)

- 1x Optical Sensor Interface Module with Universal Power Supply
- 1x Remote Optical Sensor with 8' (2.4m) Cable and Mounting Bracket
- 1x BNC to Analyzer Specific Phase Input Cable, 25' Long (7.6m)

CMCP850-02 Remote Laser Phase Reference Kit (Same as SKF CMSS 6195AX-K)

- 1x Battery Powered Laser Phase Reference Kit with Universal Power Supply (CMSS 6195AX-K)
- 1x BNC to Analyzer Specific Phase Input Cable, 25' Long (7.6m)

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contacto@smartcondition.mx
www.smartcondition.mx
Cel. (493) 106 9062
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CMCP850-03 Microlog Powered Laser Phase Reference Kit (Same as SKF CMAC 5030K)

- 1x Laser Tachometer Kit (Analyzer Powered)
- 1x M12 to Analyzer Specific Phase Input Cable, 25' Long (7.6m)
- 1x Magnetic Tripod for Laser Phase Sensor

Specifications

CMCP786A Accelerometer

Mounted Base Resonance:	22 kHz (nominal)
Sensitivity:	100mV/g $\pm 10\%$ Nominal 80Hz at 22°C
Frequency Response:	2 Hz to 10 kHz $\pm 5\%$ (120 cpm to 600k cpm) 1.5 Hz to 12 kHz $\pm 10\%$ (90 cpm to 720k cpm) 0.8 Hz to 15 kHz $\pm 3\text{dB}$ (48 cpm to 900k cpm)
Isolation:	Base Isolated
Measurement Range:	± 80 g
Transverse Sensitivity:	Less than 5%



CMCP-MB03 Magnetic Base

Material:	316 Stainless Steel
Magnet Type:	Curved Surface
Diameter:	1.5" (38.1mm)
Pull Strength:	80 Lbs (36.28kg)
Mounting Thread:	1/4"-28 UNF Female



CMCP850-01 Remote Optical Phase Reference Kit

Interface Module

Power source:	Rechargeable Nickel Metal Hydride
Battery Life:	40 hours
Output signals:	Selectable Non-Inverted and Inverted TTL
Bandwidth:	0 to 100 kHz
Operating temperature:	0 to 50 °C (30 to 120 °F)
Weight:	235 g (8.3 oz.)
Dimensions:	127 x 64 x 25 mm (5.0 x 2.5 x 1.0 in.)

Remote Optical Sensor

Speed Range:	1 to 250 000 r/min
Operating Envelope:	Up to 0,9 m (3 ft.) and 45°
Illumination Source:	Visible red LED, 5 V DC at 30 mA
On-Target Indicator:	Green LED on end cap
Material:	303 stainless steel
Cable Length:	8' (2.4m)
Operating temperature:	-10 to +70 °C (15 to 160 °F)



CMCP850-02 Remote Laser Phase Reference Kit

Laser:	Visible Red Laser Diode
Classification:	Class 3R
Beam Diameter:	4x7 mm (0.157 x 0.275 in.)
Laser Diode Life:	8 000 hours MTBF
Operating Range:	Up to 19,8 m (65 ft.)
RPM Range:	1 to 150 000 r/min
Minimum Trigger:	10 μ s
Power Requirement:	Internal rechargeable battery
Charger:	100 to 240 VAC
Output Signals:	Selectable Non-Inverted and Inverted TTL
Indicators:	On-target, laser on
Sensitivity Adjust:	Single knob on top panel
Weight:	300 g (10.6 oz.),
Mounting:	1/4"-20 UNC Female
Temperature:	Operating: -20 to +50 °C (-5 to +120 °F)
Humidity:	90% relative humidity, non-condensing



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CMCP850-03 Laser Phase Reference Kit

Material:	Stainless Steel
Laser type:	Class 2
Optical range:	100 to 2 000 mm (0.33 to 6.56 ft.)
Power:	1 mW maximum
Current consumption:	45 mA maximum
Connection:	4 Pin M12
Wavelength:	635 nm (25 in.)
Angle of incidence:	±80°
Speed range:	0.1 to 250 000 r/min
Power input:	5 VDC (Microlog Powered)
Operating temperature:	-10 to +40 °C (15 to 105 °F)
IP rating:	IP 67
Dimensions:	70 × 20 mm (2.76 × 0.79 in.)
Weight:	70 g



Ordering Guide

CMCP850	-XX	-X	Description
	-01		Battery Powered Optical Phase Reference Kit
	-02		Battery Powered Laser Phase Reference Kit
	-03		Microlog Powered Laser Phase Reference Kit
		-F	Fischer Connector Set for SKF Microlog GX or AX Series
		-T	M12 Connector Set for CSI 2130/2140 Series
		-U	Universal BNC Connector Set



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