



PRODUCT DATA SHEET

2-Ch PCH Prox Box, type CHB 1144



Main features:

- Two independent Proximity Drivers
- LEDs indicate channel status/Out of Range
- Both negative and positive AC/BIAS outputs
- Both negative and positive power supply
- Buffered outputs, also from screw terminals
- Supports CTC proximity probes and special calibrations

Supported proximity probes:

At order the type of probe must be informed and validated. For now we support as follows:

DP1009 FFv (by CTC)	5 mm tip, 5 m cable
DP1009 FFv (by CTC)	5 mm tip, 7 m cable
DP1001 (by CTC)	8 mm tip, 5 m cable
DP1001 (by CTC)	8 mm tip, 9 m cable
DP1007 (by CTC)	11mm tip, 5 m cable
DP1007 (by CTC)	11mm tip, 9 m cable

More probes can be supported upon request. Individual sensitivity should be validated prior to installation.

Two independent systems in one housing:

Two individual proximity probe drivers are installed in the same DIN rail housing. They each have their own -24 V power supply and can additionally or alternatively be powered by a common positive 24 V power supply or by the DIN rail bus from the PCH 1420.

The PCH Prox Box, type CHB 1144 is a 2-Channel Proximity Driver solution. Two individual proximity drivers offer fully redundant measurements for thrust bearings, X/Y readings or trigger/rotational speeds in one compact cabinet.

Outputs are in negative voltage (-2 to -18 V) as well as in positive voltage simultaneously. Traditional 4 and 8 V/mm is supported for various steel types and special calibrations are possible.

Specifications for up to 2 proximity probe inputs:

Type	2 oscillator demodulators
Linear output range	-2 to -18 V & +2 to +18 V
Frequency range	0 to 5 kHz
Typical GAP range	0.4-2.4/0.4-4.4 mm ±10%
Max. output range	≈-21 V (with -24 VDC)
Min. load	10 kΩ (with -24 VDC)
Connector for probe	12-32"
Output, probe error	-0.1 to -0.5 VDC
Output, out of range	-0.1 to -0.5 VDC
Buffered outputs	BNCs, screw terminals
Output signals	4 V/mm or 8 V/mm + GAP
Tolerance (ISF)	±10%
Status LEDs	2 green/yellow/red
DC (GAP) Settling time	>180 sec
DIN rail bus	Yes

LEDs:

Each channel is monitored for Out of Range/Sensor Error and the LED in the front will indicate the status as green, yellow or red.

DIN rail bus:

The CHB 1144 can be powered by +24 VDC when mounted on the DIN rail bus connector together with a PCH 1420 Vibration Monitor. Up to three CHB 1144 Prox Boxes can be mounted on the same DIN rail bus.



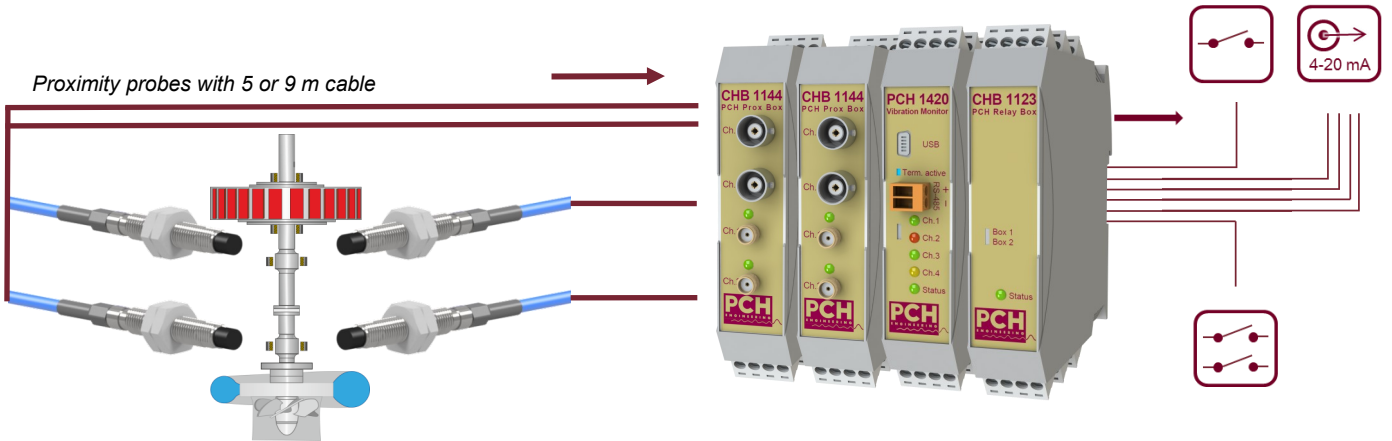
Conditions of standard calibration test (8 V/mm)

Test target metal	42CrMo4 (DIN 1.7225)
Thickness, test target	>5 mm



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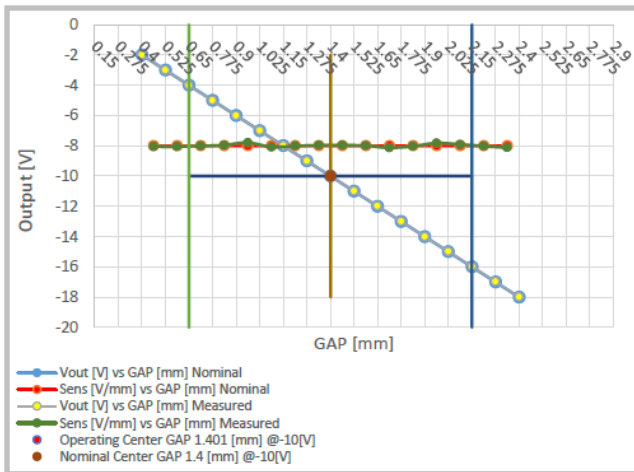
2-Ch Proximity Driver, type CHB 1144



Operating distance.....-10 V, approx. 1.4 mm
Temperature.....22 °C (±2 % °C)
Humidity.....45 % RH (±5 % RH)
Certificate.....Individual calibration certificate follows each driver/channel.

Other calibrations can be offered against sample materials, as well as probes can optionally be validated if delivered by PCH Engineering A/S.

Calibration example per channel:



Terminal overview:

PCH Prox Box
 Type: CHB 1144/CHF xxxx

Ch.1+Ch.2 are calibrated for:
 Probe yyyyy with z meter of cable
 on steel DIN / EN: 1.7225
 (AISI 4140, 42CrMo4)

+24V (Power)	○ 1
GND (Power)	○ 2
NC	○ 3
NC	○ 4

Signal Ch2 (-)	○ 16	Buff. Out Ch2 (-)	○ 20	Signal Ch2 (+)	○ 24
-24V	○ 15	GND	○ 19	GND	○ 23
GND	○ 14	GND	○ 18	GND	○ 22
Signal Ch1 (-)	○ 13	Buff. Out Ch1 (-)	○ 17	Signal Ch1 (+)	○ 21

Terminals for 2-Ch PCH Prox Box

Electrical:

Powered by -24 VDC from API670 vibration monitor power source or by separate +24 VDC.
 Power consumption.....max 1.2 W

Buffered outputs from the BNC connectors and from the terminals 17+20 are protected. GND is shared. Positive outputs are only available if +24V is supplied.

Operating temperature:

-20 °C to + 60 °C (storage: -40 °C to 85 °C)

Housing:

DIN rail enclosure IP20 with screw terminals
 Dimensions:.....H:109,W:22.5,D:114.5 mm

Installation Field wiring

0.2 to 1.5 mm² 3-conductor shielded triax cable. Max. length of 300 metres between driver box and vibration monitor

Buffered output

max 5 meters

PCH Engineering A/S reserves the right to changes without notice.