

Dipl.-Ing. H. Horstmann GmbH



Humboldtstraße 2
42579 Heiligenhaus
www.horstmanngmbh.com

Instructions for Use

SMART CONTROLLER



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INTRODUCTION

The SMART CONTROLLER is a wireless module intended to be integrated into other devices for monitoring overhead lines used for energy distribution. It transmits and receives wireless RF signals in the 2.4-2.5GHz band from Faulted Circuit Indicators decodes and relays them to the host device.

This document covers features, specifications, regulatory information and recommendations for integration into a host device.

REGULATORY INFORMATION FOR THE UNITED STATES OF AMERICA

Compliance Statements

Warning	Installation, connection and commissioning of the SMART CONTROLLER must be carried out exclusively by a skilled/qualified electrician observing the applicable safety rules and regulations.
Attention	This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation
Warning	Changes or modifications to the SMART CONTROLLER not expressly approved by Dipl.-Ing. H. Horstmann GmbH could void the user's authority to operate the equipment.

The Smart Controller is approved under Part 15 of the FCC rules as a Modular Transmitter. The following statements provide information for the system integrator that integrates the SMART CONTROLLER into his own device.

Attention	If the SMART CONTROLLER's FCC identification number is not visible when the module is installed inside another device, the product into which the SMART CONTROLLER is integrated must show a label, according to FCC requirements (§15.212), with the FCC ID assigned to the SMART CONTROLLER:
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Contains FCC ID: YQVHHH002

Attention	The following statement must be included into the information for the end user:
	This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation

REGULATORY INFORMATION FOR CANADA

The SMART CONTROLLER is approved under Industry Canada documents as a Modular Transmitter.

The following statements provide information for the system integrator that integrates the SMART CONTROLLER into his own device.

Attention If the SMART CONTROLLER's identification number is not visible when the module is installed inside another device, the product into which the SMART CONTROLLER is integrated must show a label, according to with the following statement:

Contains IC: 9199A-HHH002

Attention The following statement must be included into the information for the end user:

Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation

This device has been designed to operate with the antennas listed below, and having a maximum gain of 2.5 dB. Antennas not included in this list or having a gain greater than 2.5 dB are strictly prohibited for use with this device. The required antenna impedance is 50 ohms.

Antenna: Laird Technologies Mini-Nanoblade

SMART CONTROLLER SPECIFICATION

Electrical data:

Radiated Frequency: 2.4 – 2.5 GHz

Radiated Power: 0dBm

Energy Supply 5V DC +/- 10 % /
60 mA max.

Operating temperature: -40 °C... +85 °C

Mechanical data:

Size 94 mm x 50 mm x 15 mm

Weight 50 g

PRODUCT PHOTO & LABEL INFORMATION

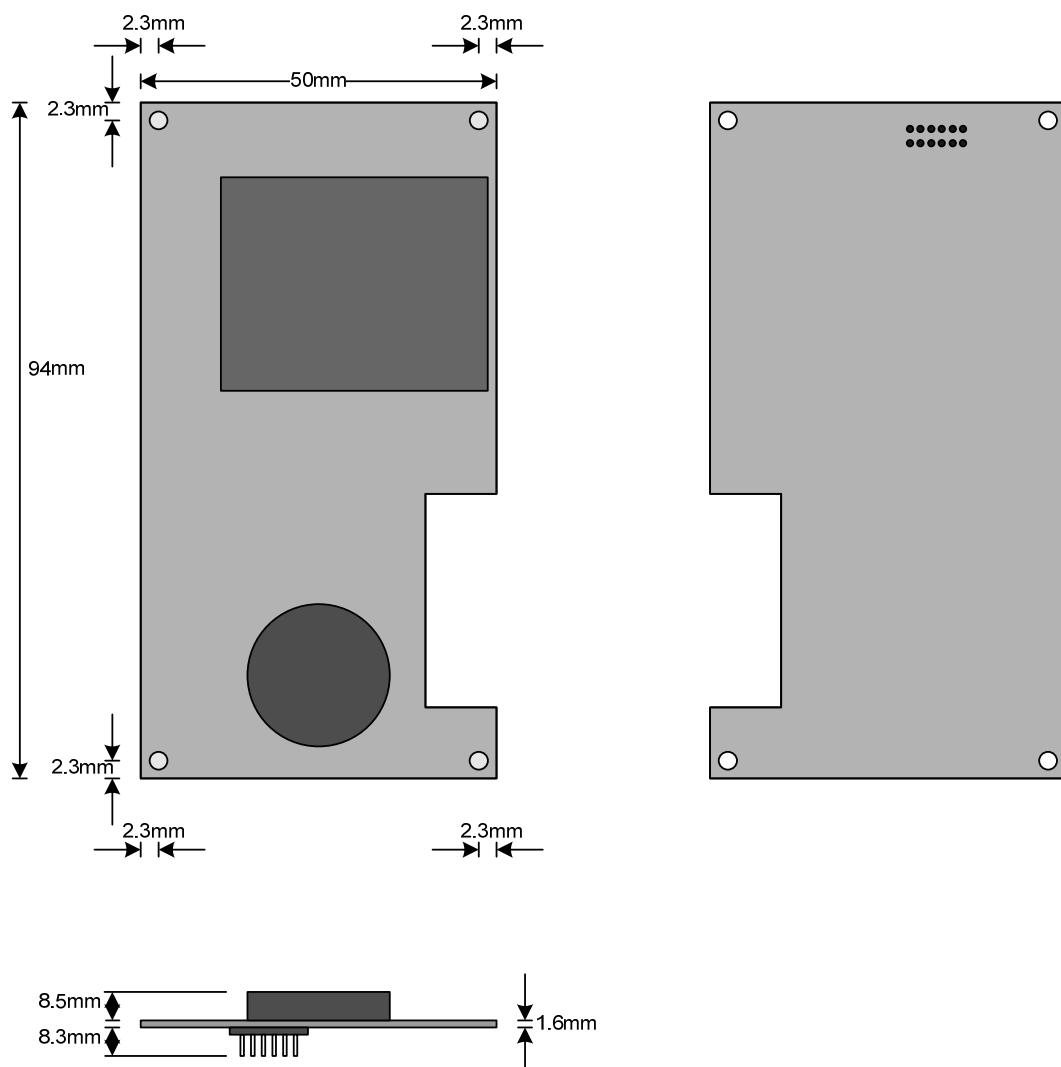


Label containing:

- Product name
- Horstmann part number
- FCC ID
- IC ID
- Horstmann company logo and CE mark

INTEGRATION INFORMATION

The module dimensions are shown below:



The module should be fixed to the host device using 4 screws (diameter 3mm).

There are no restrictions with respect to ground planes in the underneath or above the SMART CONTROLLER.

The connector to the SMART CONTROLLER is a standard 2 x 6 Pin 2.0 mm SMT Male Header.

Signal Description

Signal	Pin	I/O	Remark
GND	4, 10	-	Ground
VCC	5, 7	-	5 V DC
RESET	11	Input	Active Low, 100K internal pull up
TXD	6	Output	serial data to Host
RXD	8	Input	serial data from Host
NC	1, 2, 3, 9, 12	-	not connected