

RS-DSP-001-01 / 01 Overview

Laser Displacement Sensor

Brand: ROGERSENSE

Model: RS-DSP-001-01

Document version: 1.0

Hardware / firmware revision: TBD



Product presentation. Delivered configuration: TBD.

Key functions

Parameter	Value / conditions	Rev.
Model variant	HG-C1050, NPN HG-C1050-P is PNP; HG-C1050L is a different model	1.0
Centre / measuring span	50 mm / +/-15 mm	1.0
Repeatability	30 um 24 V DC, +20 deg C, 10 ms response, white ceramic target at measurement centre	1.0

Delivery configuration

Configuration and delivery contents are confirmed in the integration project; no online sample offer.

Application scope

Reference specifications for project evaluation. Final delivery is subject to the agreed hardware, firmware, accessories and acceptance conditions. Presentation imagery does not define manufacturing geometry.

RS-DSP-001-01 / 02 Technical data

Documented values and operating conditions. Conflicting or unavailable values are marked TBD.

Parameter	Value / conditions	Rev.
Model variant	HG-C1050, NPN HG-C1050-P is PNP; HG-C1050L is a different model	1.0
Centre / measuring span	50 mm / +/-15 mm	1.0
Repeatability	30 μ m 24 V DC, +20 deg C, 10 ms response, white ceramic target at measurement centre	1.0
Linearity	+/-0.1% FS Same manufacturer standard measurement conditions	1.0
Supply	12-24 V DC +/-10%; ripple P-P <=10%	1.0
Control output	NPN open collector	1.0
Analog output	0-5 V or 4-20 mA, selectable Do not assume simultaneous analog outputs	1.0
Response time	1.5 / 5 / 10 ms selectable	1.0
Laser	Class 2 red laser; 655 nm; <=1 mW Follow original laser precautions	1.0
Environment / protection	-10 to +45 deg C; no condensation / icing; IP67	1.0
Control output current	NPN 50 mA max, source circuit	1.0
Cable reference	Diameter 4.1 mm; 2 m; 5-core with shield	1.0

RS-DSP-001-01 / 03 Electrical interface

Pin / terminal definitions

Parameter	Value / conditions	Rev.
Brown	+V: 12-24 V DC +/-10% HG-C1050 NPN, not PNP	1.0
Blue	0 V HG-C1050 NPN, not PNP	1.0
Black	NPN control output, max 50 mA HG-C1050 NPN, not PNP	1.0
Pink	External input HG-C1050 NPN, not PNP	1.0
Gray	Analog output HG-C1050 NPN, not PNP	1.0
Shield	Analog earth AGND HG-C1050 NPN, not PNP	1.0

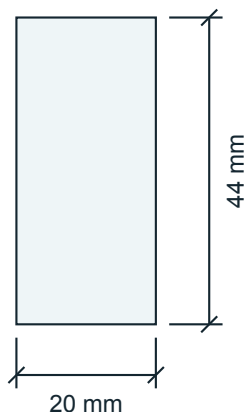
Electrical conditions

Item	Value / condition	Rev.
Pin viewing orientation	TBD unless identified in the approved wiring drawing	1.0
Harness / logic compatibility	TBD; confirm against the delivered hardware before wiring	1.0
EMC / isolation / load derating	TBD; component ratings do not establish system ratings	1.0

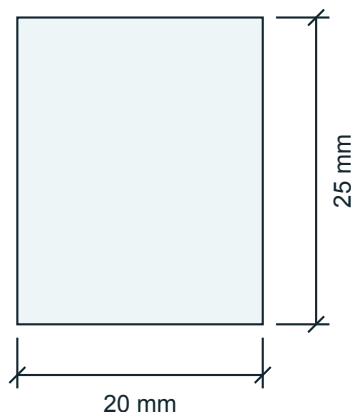
RS-DSP-001-01 / 04 Mechanical & installation

Dimensions / unit: mm

FRONT / NOMINAL ENVELOPE



TOP / NOMINAL ENVELOPE



Unit: mm. Not to scale. Holes / datum / unspecified tolerances: TBD.

Item	Value / condition	Rev.
Width x depth x height	20 x 25 x 44 mm	1.0
Mounting holes	2 x diameter 3.2 mm	1.0
Drawing mounting spacings	37 mm vertical; 18 mm horizontal, per original views	1.0
Measurement centre / angle	50 mm / 22.5 deg for HG-C1050(-P), non-L	1.0
Cable	Diameter 4.1 mm; 2 m	1.0

Installation control

Confirm mounting datum, clearance, connector access and the exact delivered revision. Drawing spans listed in the table require an approved drawing to establish orientation. Unspecified geometry and tolerances: TBD.

RS-DSP-001-01 / 05 Protocol & software

Native interfaces and protocol

Item	Value / condition	Rev.
Outputs	NPN switch output; analog 0-5 V or 4-20 mA, selectable	1.0
External input levels	Inactive +8 V to +V or open; active 0 to +1.2 V, NPN circuit	1.0
Response settings	1.5 / 5 / 10 ms selectable	1.0
Native digital / network protocol	TBD; not inferred from analog / switch output	1.0
Controller acquisition	ADC / current input and digital IO selection: TBD	1.0

ROGERSENSE integration services

MQTT connectivity, OTA firmware updates, gateways and cloud platform are available for delivery. Model-specific controllers, interfaces and adaptation are agreed per project. These services do not imply native MQTT or OTA support inside every sensor.

Platform: <https://iot.rogersense.com>

Item	Value / condition	Rev.
Gateway / firmware build	TBD	1.0
MQTT topic / payload / credentials	TBD	1.0
OTA signing / rollback / access control	TBD	1.0

RS-DSP-001-01 / 06 Delivery & verification

Configuration and acceptance record

Item	Value / condition	Rev.
Document version	1.0	1.0
Brand / model	ROGERSENSE / RS-DSP-001-01	1.0
Hardware / firmware revision	TBD	1.0
Serial number / calibration report	TBD	1.0
Approved mechanical drawing	TBD	1.0
Inspection / acceptance report	TBD	1.0
Packing / harness / accessories	TBD; confirm the ordered configuration	1.0
Certification / compliance evidence	TBD unless identified in the delivery agreement	1.0

Open items

Every TBD item and any conflicting supply, accuracy, dimensional or revision requirement must be resolved in the approved delivery configuration. Calibration conditions, wiring orientation, installation datum and application suitability require project verification.

After-sales

After-sales follows the existing ROGERSENSE policy and the approved order. <https://rogersense.com/returns>