www.sensy.com

5050 SUBSEA / SUBMERGED LOAD PINS

Design for underwater applications.

Model 5050

Features

- o Custom-made dimensioning
- o Sturdy design
- o Material: stainless steel
- o Protection class: IP68
- o Easy to install
- o Depth: up to -7500 m / -24 606 ft (750 bars / 11 000 psi) - deeper on request
- o Cable length: 6 m (other lengths available on request)

Most popular options

Dual Wheatstone bridge | SIL / PL ready | Amplified output | Ex d | Ex i | -50°C...+180°C

Application(s)

SENSY's load cells 5050 are perfectly designed for the following applications:

- Shipbuilding / Monitoring system / Tank test / Oil exploration,
- Working at sea / Seabed mooring / ROV subsea tethers,
- Force testing / weighing inside pressure vessels.

Capacities

from 0.5 to 2000 t

Specifications	SL - FORCE	SL - HOIST	
Combined error (non-linearity + hysteresis)	0.25 - 1**	0.5 - 2**	% F.S.*
Repeatability error	<± 0.25	<± 0.25	% F.S.*
Creep error over 30 min.	<± 0.3	<± 0.3	% F.S.*
Zero shift after loading	<± 0.5	<± 0.5	% F.S.*
Reference temperature	23	23	°C
Compensated temperature range	-10...+45	-10...+45	°C
Service temperature range	-25...+70	-25...+70	°C
Storage temperature range	-50...+85	-50...+85	°C
Temperature coefficient of the sensitivity	<± 0.2	<± 0.2	% F.S.*/10°C
Temperature coefficient of zero signal	<± 0.2	<± 0.2	% F.S.*/10°C
Zero balance	± 0.02	± 0.02	mV/V
Nominal sensitivity	± 1.5	± 1	mV/V
Input resistance	350 ± 2	350 ± 2	ohm(s)
Output resistance	350 ± 2	350 ± 2	ohm(s)
Insulation resistance (50 V)	> 5000	> 5000	Mohm(s)
Reference excitation voltage	10	10	VDC
Permissible nominal range of excitation voltage	3...12	3...12	VDC
Safe load limit	150	200	% F.S.*
Breaking load	> 300	> 500	% F.S.*
Permissible dynamic loading	50	75	% F.S.*
Static lateral force limit	100	150	% F.S.*

* F.S. : Full Scale.
** Typical range of accuracy, depending on design and dimensions.
Specifications subject to change without notice..

RoHS Compliant | sira | ISO 9001 certified

rev. : 27/04/2022

5050 > TECHNICAL SPECIFICATIONS

Load pins range

5000 (1 to 2000 t)
CUSTOM-MADE LOAD PIN

5050 (1 to 2000 t)
SUBSEA LOAD PIN

5300 (0.5 to 125 t)
STANDARD LOAD PIN

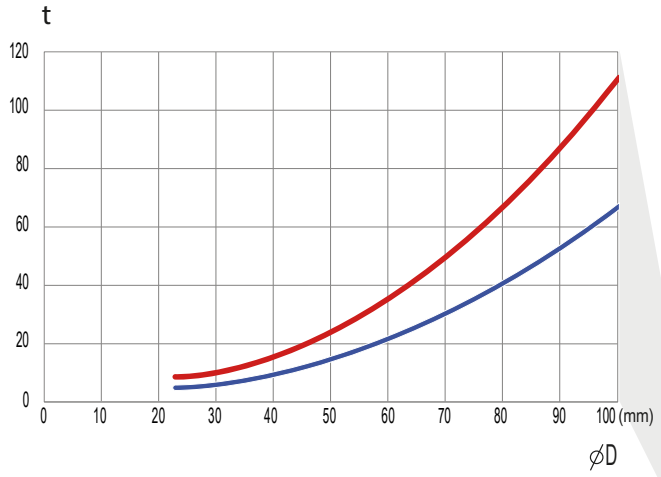
5600 (0.5 to 14 t)
ECONOMICAL LOAD PIN

TOOLS

CONFIGURATOR
https://www.sensy.com/en/load-pins-configurator/subsea-load-pin

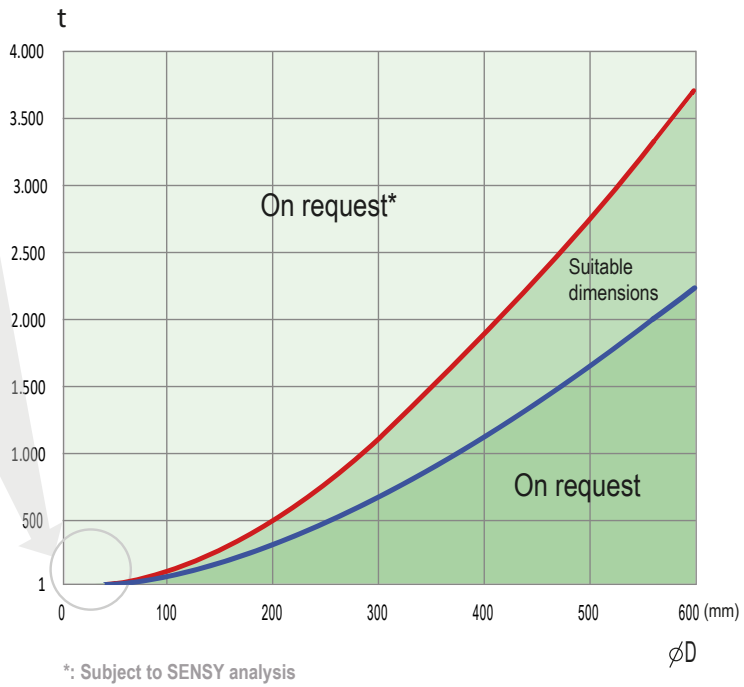
LOAD PIN DESIGN
https://www.sensy.com/en/load-pins-configurator/load-pin-design

Load-diameter relationship



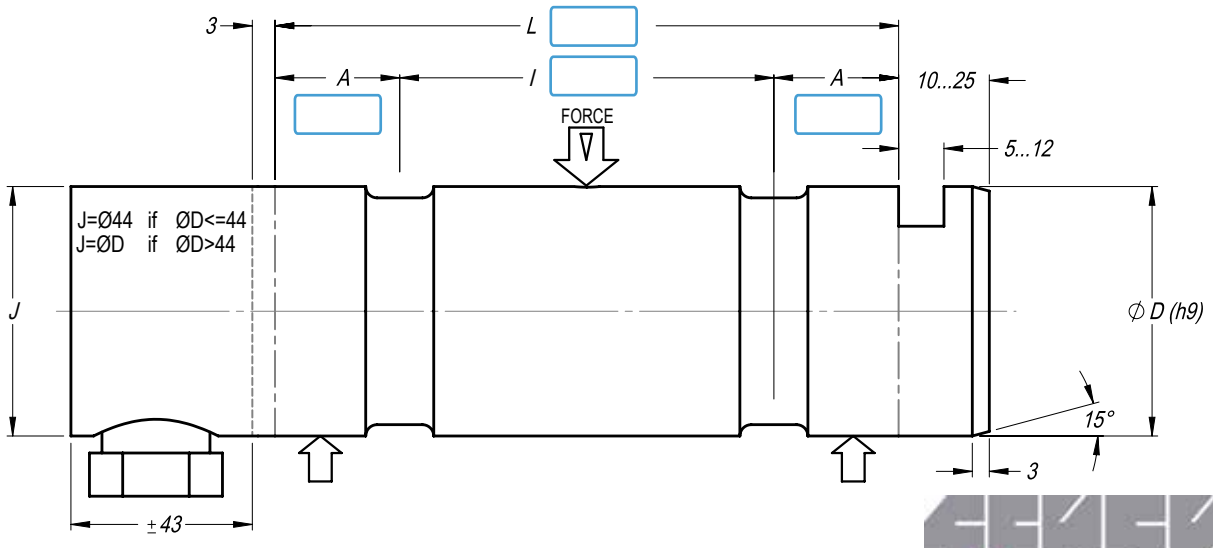
CAPACITY

DIAMETER ØD



*: Subject to SENSY analysis

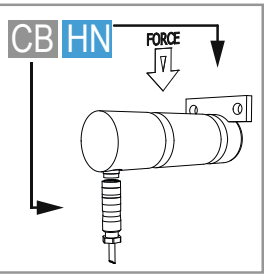
Mechanical dimensions



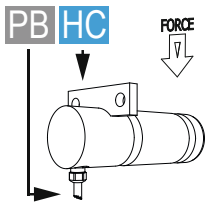
5050 > OPTIONS

Configuration

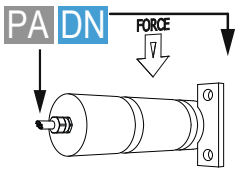
Example:
C: Connector
B: Cable entry: 180°
H: Fixing plate: 0°
N: Position code



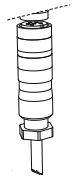
Example:
P: Cable gland
B: Cable entry: 180°
H: Fixing plate: 0°
C: Position code

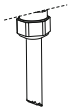


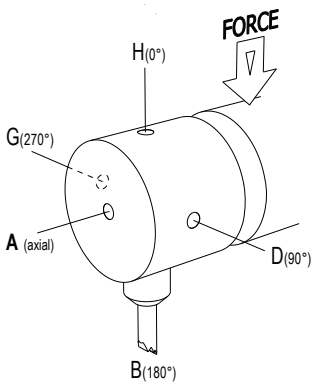
Example:
P: Cable gland
A: Cable entry : axial
D: Fixing plate: 90°
N: Position code



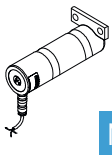
Cable entry	Connector	Cable gland

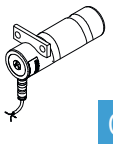


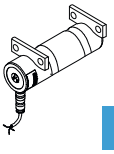


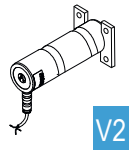


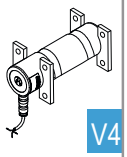
Fixing plate nr.	if ØD <= 100 1		if ØD > 100 2	4

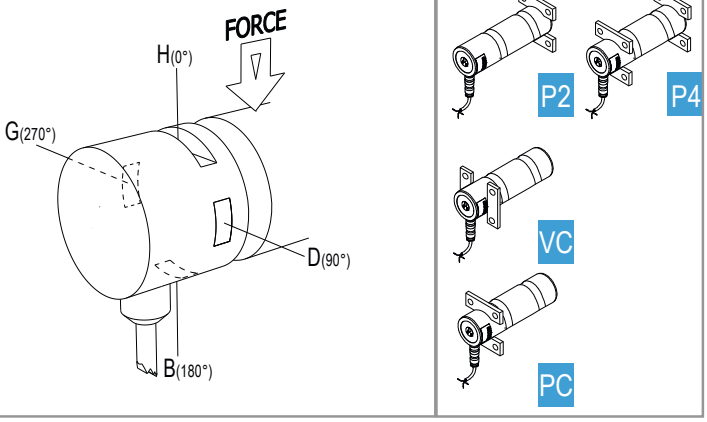












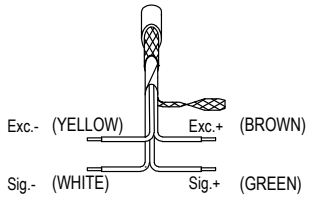
Options

Type of application	FORCE (BL* > 300 %)	static / dynamic	HOISTING (BL* > 500 %)		LIFT (BL* > 1000 %)		
Environment	NORMAL	INDUSTRIAL	NUCLEAR	AERONAUTICS	Other:		
	SUBSEA	Immersion depth:	Immersion time:				
Output signal	mV/V	4-20 mA 2 wires / 3 wires	0-10 V (force)	1-5 V (hoisting)	RS-485	WIRELESS	Other:
Service temperature range	Standard temperature range -20°C 70°C; -50°C +200°C; Temperature range available (option)						
Dual bridge circuit	NO	YES	Redundancy; Safety SIL / PL; Biaxial load pin, directions X and Y				
Cable lenght (m)	6	12	20	50	100	Other:	
Intrinsically safe	Not applicable	ATEX	IECEX/ ATEX	CSA (US/Canada)	Triple certification		

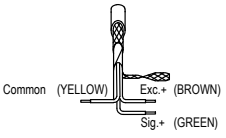
* BL = Breaking load

Wiring

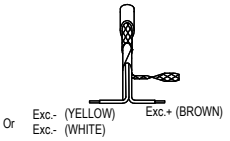
Std. cable (mV/V)



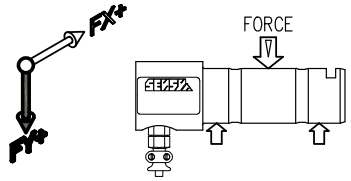
4-20 mA (3 wires)



4-20 mA (2 wires)



Load direction



5050 > EXAMPLES

5050-CHHN-50 t

5050-CHxx-20 t

5050-SIL

5050-15 MN

5050-75 t

5050-CHHN-50 t

5050-30-kN

5050-75 t

5050-4.5 MN

5050-60 t