

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



Ex d

Ex i



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..

## 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

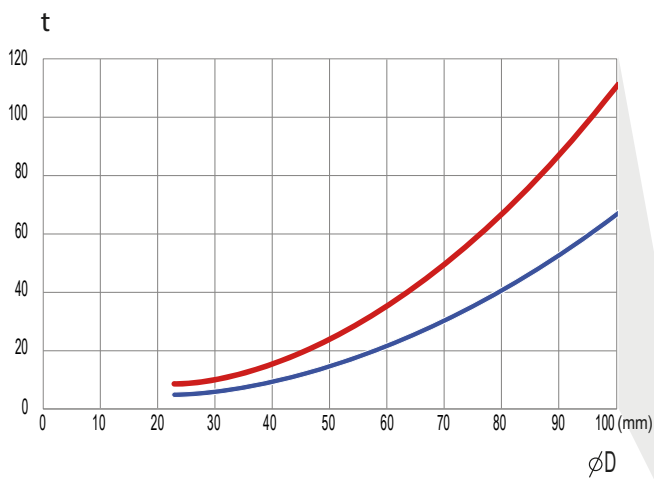
#### CONFIGURATOR

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

#### LOAD PIN DESIGN

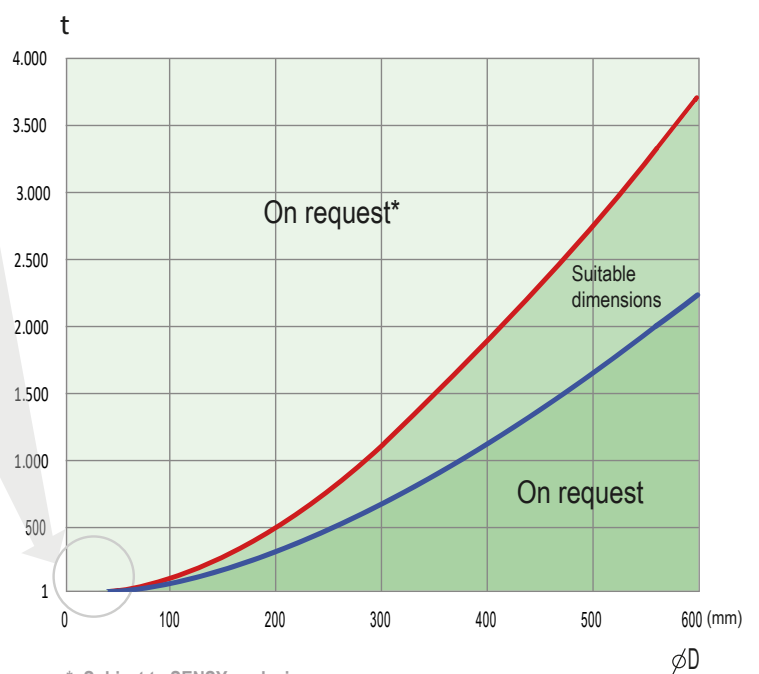
<https://www.sensy.com/en/load-pins-configurator/load-pin-design>

### Load-diameter relationship

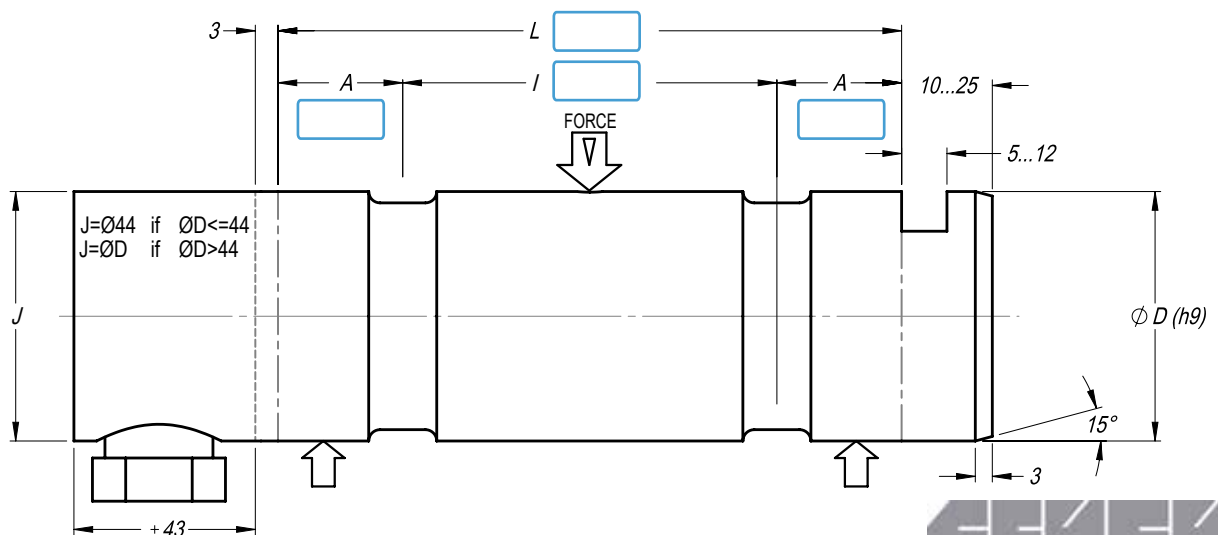


CAPACITY

DIAMETER ØD

### Mechanical dimensions



## 5050 > OPTIONS

### Configuration

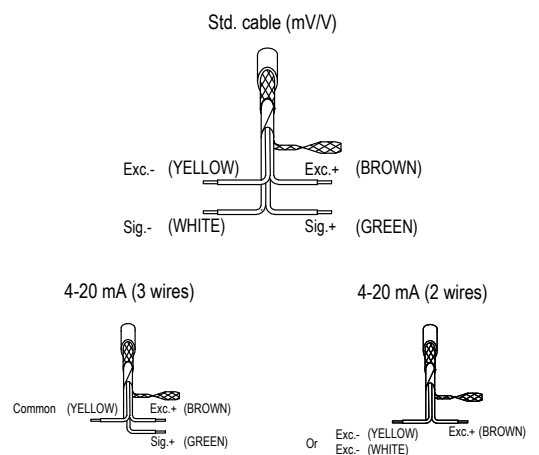
<p><b>Example:</b></p> <p><b>CB HN</b></p> <p><b>C:</b> Connector <b>B:</b> Cable entry: 180°</p> <p><b>H:</b> Fixing plate: 0° <b>N:</b> Position code</p>	<p><b>Example:</b></p> <p><b>PB HC</b></p> <p><b>P:</b> Cable gland <b>B:</b> Cable entry: 180°</p> <p><b>H:</b> Fixing plate: 0° <b>C:</b> Position code</p>	<p><b>Example:</b></p> <p><b>PA DN</b></p> <p><b>P:</b> Cable gland <b>A:</b> Cable entry: axial</p> <p><b>D:</b> Fixing plate: 90° <b>N:</b> Position code</p>
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Cable entry	Connector	Cable gland	if ØD ≤ 100		if ØD > 100	
			Fixing plate nr. 1	2	4	4

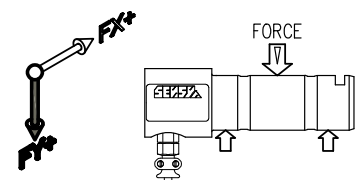
### Options

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	<p>Standard temperature range</p> <p>-20°C ←————→ 70°C</p> <p>←————→ +200°C</p> <p>Temperature range available (option)</p>						
Dual bridge circuit	NO		YES				
			Redundancy Safety SIL / PL				
			Biaxial load pin, directions X and Y				
Cable length (m)	6	12	20	50	100	Other: .....	
Intrinsically safe	Not applicable	ATEX	IECEX/ ATEX	CSA (US/Canada)		Triple certification	

### Wiring



### Load direction



\* BL = Breaking load

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



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