

Magnetic proximity sensors

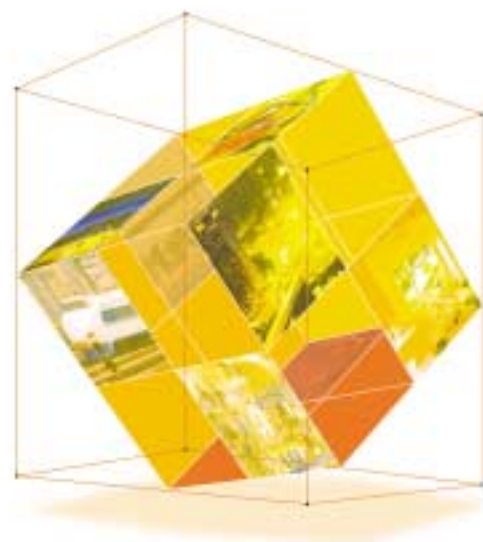
We are the experts ! !!!

If you look for a sensor for position, passage, presence, level or speed, we must have it in our range of magnetic sensors.

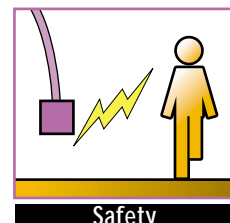
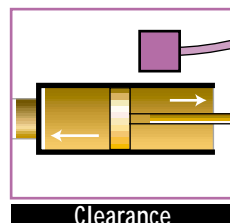
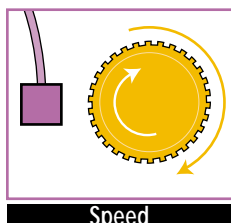
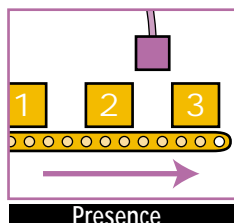
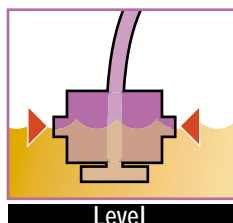
We can even design the ideal product for your applications !

At celduc® relais, we are eager to offer the best products for your application, thanks to our 30-year experience in the key technologies that we use in our products :

- Reed switch, a dry contact in a sealed glass bulb providing insulation at the same time. A simple, reliable and low cost solution.
- Electronic cell, based on either magneto-resistance or Hall effect, necessary for higher performance, particularly in frequency .



Scope



Industry

Counting
Cylinder positions
Machine safety
Advertising panel

Home

Burglar alarm
Camera shutter control window position (blinds)
Lifts
Alarms
Big and small household goods

Aircraft, space and army

Fuel/oil level.
camera shutter control

Specific applications

ATEX (explosive atmospheres)

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Contact type :

NO -> Normaly Open

NC -> Normaly Closed

Other lengths of cable or wire possible for significant quantities



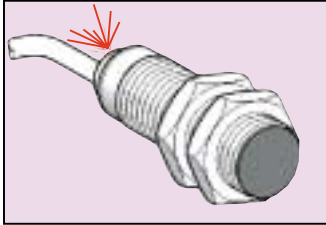
All our technical data-sheets are available in our website :
www.celduc.com

ELECTRONICAL SENSORS

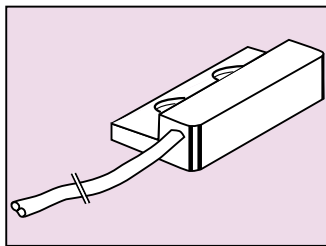


celduc[®] relais offers two ranges of electronical sensors :

- > HALL effect sensors.
- > Gear Tooth Sensor.



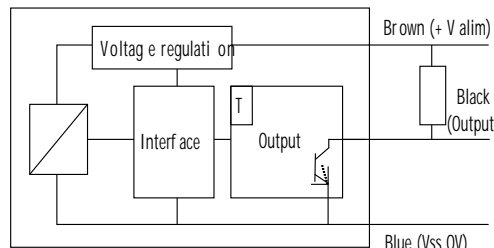
PTE
(for front detection)



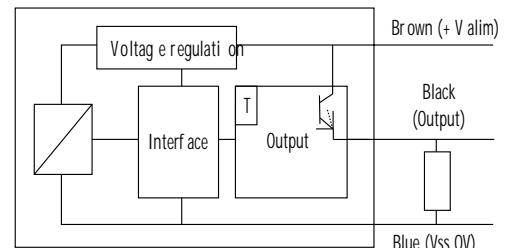
PLE
(for side detection)

Technical characteristics :

- 5-24VDC or 6-48VDC power supply with internal voltage clamping and reverse voltage protection.
- Low side or High side output.
- 25mA or 0.4A output current with overload short-circuit protection and thermal shutdown.
- Adjustable Internal delay (option on request).
- High Speed Operation > 10kHz.
- Insensible to shocks and vibrations.
- Designed in conformity with IEC/EN60947-5-2



NPN

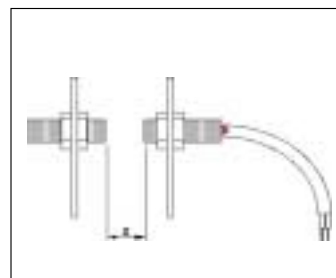


PNP

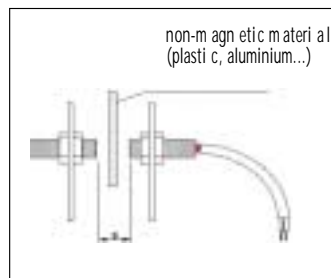
PRODUCT REFERENCE	Contact type	Connection type	Cable length	Closing distance	Max switching voltage	Max switching current	Dimensions L x l x h	Associated coded magnet
PLE13320*	Hall effect NPN	Cable	2 m	8 mm	5-24VDC	25mA	32x15x6,8	P6250000
PLE14320**	Hall effect NPN	Cable	2 m	8 mm	5-24VDC	25mA	32x15x6,8	
PTE11320	Hall effect PNP	Cable	2 m	19 mm	6-48VDC	0,4A	M12x33	PT810000
PTE11321	Hall effect NPN	Cable	2 m	19 mm	6-48VDC	0,4A	M12x33	
PTE21320	Gear tooth PNP	Cable	2 m	1,5 mm	6-48VDC	0,4A	M12x33	
PTE21321	Gear tooth NPN	Cable	2 m	1,5 mm	6-48VDC	0,4A	M12x33	

* Front detection

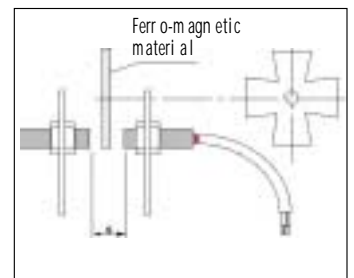
** Side detection



Direct detection



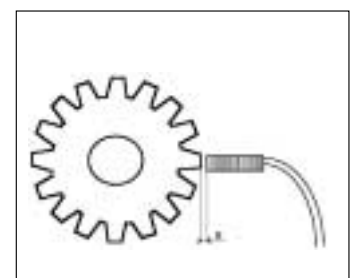
Detection through non-magnetic material



Detection of ferro-magnetic (counting,...)

Applications :

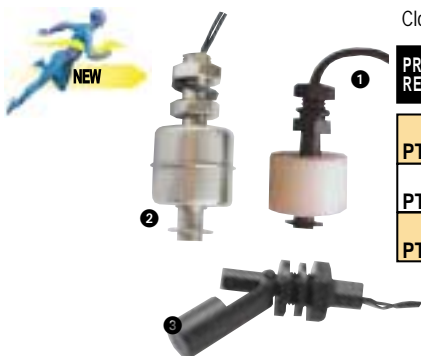
- Industry
- Lift
- Speed sensors
- Household electronical appliances
- Tractors
- ...



Gear tooth sensor

LEVEL SENSORS - PTF RANGE

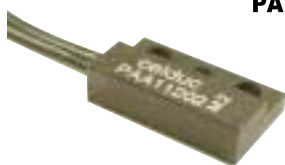
Closed : float at the top - Open : float at the bottom
 Closed : float at the bottom - Open : float at the top



PRODUCT REFERENCE	Contact type	Connection type	Cable length	Material Housing	Float	Max. switching power	Max. switching voltage	Max. switching current	Dimensions mm	Fig n°
PTF01070	1NO	2 wires	70 mm	PA66 Plastic	Polypro	10VA	100VDC	0,5A	ø25 x 42	1
PTFA2015	1NO	2 wires	1,5 m	stainless steel	stainless steel	10VA	200VDC	0,4A	ø28 x 60	2
PTFA3015	1NO	2 wires	1,5 m	PE Plastic	PE Plastic	10VA	200VDC	0,4A	ø28 x 90	3

SCREW SENSORS

PA



PRODUCT REFERENCE	Contact type	Connection type	Cable length	Closing distance*	Max. switching power	Max. switching voltage	Max. switching current	Dimensions mm
PAA10060**	1NO	2 wires	680 mm	16 mm	12VA	100VDC	0,4A	23x14x6
PAA11202	1NO	2 wires	275 mm	16 mm	12VA	100VDC	0,4A	
PAA11205	1NO	2 wires	500 mm	16 mm	12VA	100VDC	0,4A	
PAC10010	reversing switch	3 wires + HE14 connector	70 mm	12 mm ***	NF 3VA NO 8VA	100VDC	0,25A	

* With P6250000 magnet.

** Faston terminals.

*** With U4200000 magnet.

PL



PRODUCT REFERENCE	Contact type	Connection type	Cable length	Closing distance**	Max. switching power	Max. switching voltage	Max. switching current	Dimensions mm
PLA10130	1NO	cable	13 mm	12 mm	12VA	250VDC	0,25A	32x15x6,8
PLA11208	1NO	cable	800 mm	16 mm	12VA	250VDC	0,4A	
PLA12430	1NO	cable	3 m	12 mm	12VA	250VDC	0,4A	
PLA13701	1NO	cable	100 mm	10 mm	12VA	250VDC	0,4A	
PLA13715	1NO	cable	1,5 m	10 mm	12VA	250VDC	0,4A	
PLA13725	1NO	cable	2,5 m	10 mm	12VA	250VDC	0,4A	
PLA13750	1NO	cable	5 m	10 mm	12VA	250VDC	0,4A	
PLA13780	1NO	cable	8 m	10 mm	12VA	250VDC	0,4A	

PLM

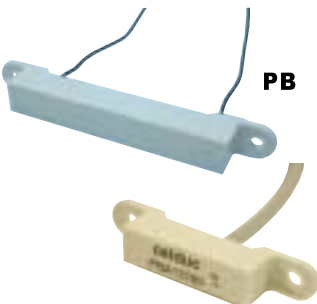


PRODUCT REFERENCE	Contact type	Connection type	Cable length	Closing distance**	Max. switching power	Max. switching voltage	Max. switching current	Dimensions mm
PLB10060	1NC	cable	3 m	12 mm	12VA	250VDC	0,4A	32x15x6,8
PLB13730	1NC	cable	3 m	10 mm	12VA	250VDC	0,4A	
PLB16701	1NC	cable	100 mm	10 mm	12VA	250VDC	0,4A	
PLC10030	reversing	cable	3 m	12 mm	NC 3VA/NO 8VA	100VDC	0,25A	32x15x6,8
PLC10040	reversing	cable	1,5 m	14 mm	NC 3VA/NO 8VA	100VDC	0,25A	
PLC13701	reversing	3 cables	100 mm	10 mm	NC 3VA/NO 8VA	100VDC	0,25A	
PLMA0130**	1NO	1 shielded cable	3 m	50 mm	50W	250VAC	0,5A	Aluminium 88x38x12

* With P6250000 magnet.

** sensor + magnet .

PB



PRODUCT REFERENCE	Contact type	Connection type	Cable length	Closing distance**	Max. switching power	Max. switching voltage	Max. switching current	Dimensions mm
PB158S00	1NO	2 wires	80 mm	4 mm	100VA	250VAC	3A	86x8,5x12,5
PB195T00	1NO	2 wires	80 mm	7 mm	50VA	250VAC	1A	
PB285T00	1NC	2 wires	80 mm	6 mm	50VA	250VAC	1A	
PB367G00	1NC	2 wires	180 mm	6 mm	16VA	250VDC	0,5A	51x8,5x11,5
PB390G00	1NO	2 wires	80 mm	13 mm	16VA	250VDC	0,5A	
PBA10010	1NO+loop	cable	8 m	13 mm	12VA	250VDC	0,4A	
PBA13725	1NO	cable	2,5 m	13 mm	12VA	250VDC	0,4A	
PBA13740	1NO	cable	4 m	13 mm	12VA	250VDC	0,4A	
PBA13780	1NO	cable	8 m	13 mm	12VA	250VDC	0,4A	

* With associated magnet: P4160000 except for PB367G00 sensor P4159000 magnet.

SENSORS for layout on PCB

PH



PRODUCT REFERENCE	Contact type	Closing distance**	Max. switching power	Max. switching voltage	Max. switching current	Dimensions mm
PHA01200	1NO	18 mm	12VA	100VDC	0,4A	23x4,2x3,6
PHA11200	1NO	17 mm	12VA	100VDC	0,4A	
PHC10010	reversing switch	17 mm	NC 3VA/NO 8VA	100VDC	0,25A	
PHC13700	reversing switch	11 mm	NC 3VA/NO 8VA	100VDC	0,25A	

* With P6250000 magnet.

PMG RANGE



PRODUCT REFERENCE	Contact type	Connection type	Cable length	Closing distance	Max. switching power	Max. switching voltage	Max. switching current	Specifications	Dimensions mm
PMG90010	1NO	cable	10m	(1) 10 mm	10VA	250VDC	0,4A	plastic tube	Ø 12x32
PMG92291	1NO	2 wires	200 mm	(2) 12 mm	12VA	100Vcc	0,4A	plastic tube	Ø 18,5x32,5
PMG92334	2NO	cable + RJ11	4,5 mm	11 mm	10VA	250VDC	0,4A	clips	33x21x9,5
PMG12830	2NO	cable	3 m	(3) 16 mm	12VA	100Vcc	0,4A	PSA enclosure	51x16x7

(1) With UR102540 magnet. (2) With PMG92280 magnet. (3) With P6250000 magnet.

Sensors with high level of switching



PRODUCT REFERENCE	Contact type	Connection type	Cable length	Closing distance*	Max. switching power	Max. switching voltage	Max. switching current	Dimensions mm
PSA60010	1NO	2 wires	300 mm	12 mm	800W	24-440VAC	3A	51x16x7
PSA60015	1NO	cable	1,5 m	12 mm	800W	24-440VAC	3A	
PSA60020	1NO	2 wires	3 m	12 mm	800W	6-440VAC	3A	

* With P6250000 magnet.

Tubular SENSOR



PRODUCT REFERENCE	Contact type	Connection type	Cable length	Closing distance	Max. switching power	Max. switching voltage	Max. switching current	Dimensions mm
PTA10440	1NO	2 wires + coses	500 mm		12VA	100VDC	0,4A	plastic tube Ø 6x30
PTA11235	1NO	cable	3,5 m	15 mm	12VA	100VDC	0,4A	
PTA12401	1NO	2 wires	100 mm	14 mm	12VA	100VDC	0,4A	
PTA13701	1NO	2 wires	100 mm	10 mm	12VA	100VDC	0,4A	
PTA13715	1NO	2 wires	1,5 m	10 mm	12VA	100VDC	0,4A	
PTA13730	1NO	cable	3 m	10 mm	12VA	100VDC	0,4A	
PTB13702	1NC	2 wires	200 mm	10 mm	3VA	100VDC	0,25A	
PTC12301	reversing switch	3 wires	100 mm	14 mm	NC 3VA/NO 8VA	100VDC	0,25A	
PTC13730	reversing switch	cable	3 m	10 mm	NC 3VA/NO 8VA	100VDC	0,25A	
PTA50010	1NO	2 wires	100 mm	14 mm	10VA	100VDC	0,4A	
PTI11220	1NO	cable	2 m	8 mm	10VA	100VDC	0,4A	plastic tube Ø 6x25,4
PTI21220	1 NO + Led	Cable	2 m	17 mm	10VA	100VDC	0,3A	threaded plastic tube M8 X 31
PTPA0100*	1NO	connector	-	12 mm	10VA	200VDC	0,5A	threaded plastic tube M12 X 33
PTPA0230*	1NO	2 wires	3 m	30 mm	10VA	200VDC	-	plastic tube Ø 11 X 28
PTA90010	1NO	cable	10 m	16 mm	12VA	100VDC	0,4A	plastic tube Ø 23 X 27
PTA90020	1NO+LED	cable	10m	15 mm	0,3VA	24VDC	0,01A	Threaded brass tube M10
PTA90130	1NO	cable	3 m	16 mm	12VA	100VDC	0,4A	

* Sensor + magnet.

All the closing distances are given with the magnet associated and in non-magnetic environment.

CONTROL MAGNETS

-> Coated magnets.

-> Bare magnets



PRODUCT REFERENCE	Adapted to sensor	Bare magnet dimension	Dimensions mm
P3150000	PA, PH, PL, PT	Ø 3x15mm	32x15x6,8
P6250000		Ø 6x25mm	32x15x6,8
P4200000		Ø 4x20mm	32x15x6,8
P4159000	PB	Ø 3x15mm	51x8,5x11,5
P4160000		Ø 5x25mm	51x8,5x11,5
PA320000	PA	Ø 3x20mm	23x14x6
PMG92290	PMG92291	Ø 6x25mm	Ø 18,5x28



PRODUCT REFERENCE	Mati re	Dimensions mm
U2710000	Alnico	Ø 2,7x10
U3150000		Ø 3x15
U4200000		Ø 4x20
U6250000		Ø 6x25
U8300000		Ø 8x30
U8350000		Ø 8x35
UF181538	Ferrite	18x15x3,8
UF127738		12x7,7x3,8
UF777760		7,7x7,7x6
UF207760	NdFeBo	20,5x7,7x6
UR102540		Ø 10x4
UR304000	NdFeBo	Ø 3x4
UR502000		Ø 5x2
UR508000	rare earth	Ø 5x8
UR604010		Ø 6x4
UR801000		NdFeBo

SAFETY SENSORS



-> The PXS or PSS type products are sensors designed to control the opening of protective devices, machine casings and access doors. Associated with their respective coded magnet and a controller module, they are capable of monitoring 1 or more "O" contacts (break, closed with a magnet) and/or 1 or more "C" contacts (make, closed with a magnet). They meet the "CE" directives and European regulations relating to machine conformity as per the standards EN60204 - EN1088 - En 954 and be covered by the categories 1 to 4 of these standards according to the associated module (CETIM certificate).

Safety functions performed thanks to :

- **Tamper-proof:** the sensor, associated with its coded magnet, reduces the possibility of tampering ; a standard magnet cannot actuate the sensor .
- **Redundancy:** the components are redundant. If part of the sensor fails, the redundant circuit continues to operate.
- **Unbalance:** associated with a controller module which checks the unbalance of the signals from the sensor, the first fault is signalled if the switches are not actuated in the right order

Magnetic safety sensors represent an alternative to mechanical position switches in the following cases :

- Mechanical clearance required to overcome alignment or vibration problems,
- Compulsory complete sealing: industrial, food and mechanical environments,
- Longer lifetime and reliability.

-> Different switch combinations (with or without display) mean that all the recommendations of the EN 954-1 standard can be achieved. All our switches include fusible resistor type protection and the use of flame retardant materials in the event of short-circuit.

Please, contact us for all specific cases. We can advise users and examine the most suitable solution.



Reference	Contacts	Led option	Cable lenght (m)	Current limiting resistor	Switching power
PXS10350	2 O + 1 C	no	5	-	3VA - 100VDC - 100mA
PXS59010	0 + C	no	10	10 Ω	3VA - 100VDC - 100mA
PXS59150	0 + C	yes	5	10 Ω	3VA - 100VDC - 100mA
PXS70150	2 O + 1 C	yes	5	10 Ω	3VA - 100VDC - 100mA
PXS79010*	2 O	no	10	10 Ω	3VA - 100VDC - 100mA
PXS79020*	2 O	no	2	10 Ω	3VA - 100VDC - 100mA
PXS79110*	2 O	yes	10	10 Ω	3VA - 100VDC - 100mA
PXS79120*	2 O	yes	2	10 Ω	3VA - 100VDC - 100mA
PXS79150*	2 O	yes	5	10 Ω	3VA - 100VDC - 100mA
PSS59050	0 + C	no	5	10 Ω	3VA - 100VDC - 100mA
PSS59150	0 + C	yes	5	10 Ω	3VA - 100VDC - 100mA
PSS79050	2 O	no	5	10 Ω	3VA - 100VDC - 100mA
PSS79150	2 O	yes	5	10 Ω	3VA - 100VDC - 100mA
PSA60010	1 O solid state	no	0,35	-	500 VA - 24 to 440VAC - 0,01 à 3A
PSA60020	1 O solid state	no	3	-	500 VA - 6 to 440VAC - 0,01 à 3A

Magnet reference	Contact type
P2000100	Magnet for PXS
P3000100	Magnet for PSS
P6250000	Magnet for PSA

* In the PXS range, the 2C + O sensors are also available.

Contact type

- O -> Normally open and closed with magnet
- C -> Normally closed and open with magnet

DOOR SENSORS FOR LIFTS

PRODUCT REFERENCE	Contact type	Connection type	Cable length	Closing distance	Max. switching power	Max. switching voltage	Max. switching current	Dimensions mm
PMG12802	Bistable	Cable	2 m	7<D<25*	60VA	230VDC	0,3A	80x20x20
PMG12921	1NO	Cable	7 m	27mm**	100VA	230VDC	3A	M14x75
PMG12930	Bistable	Cable	7,3 m	7<D<40**	60VA	230VDC	0,3A	80x30x30
PMG13051	1 NC	Cable	6,5 m	27mm**	30VA	230VDC	0,5A	M14x75
PMG13110	1 NO	Cable	7 m	9,5mm***	30VA	230VDC	1A	80x20x15

* With UF252060 magnet
 ** With UP302010 magnet
 ***With ø 22x11 magnet

SPECIAL CUSTOMER PRODUCTS

There are numerous special customer applications in all sectors of activity. Consult us.

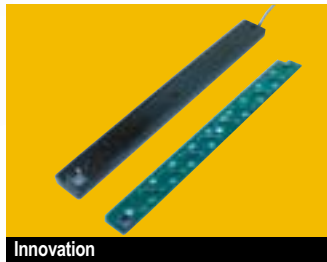
celduc®

Expertise in specific sensors



Electronic sensors

Speed sensor integrated into ball bearing : speed counter, kilometers, etc.



Innovation

- Potentiometric scale (levels)
- Postal sorting (filling racks)



Sensors for the home

Position sensors with dry or impendent sheet contacts : washing machine, iron...
 Opening and closing sensor for doors and windows (alarm, energy saving, lighting...)



Various sensors

- Reed Technology
- 2 and 3-wire magnetoresistance
- Short-circuit self protection
- Electronic sensors
- Hall effect sensors
- Temperature
- White products



Automotive

- Level sensors : water, brake fluid for ABS system, presence of water in diesel
- Position sensors : control, closing of doors, sun roof...
- Safety sensors : burglars, Airbag... For various engines.



ATEX (Atmosph res Explosives)