

## **ICB series - Inductive proximity sensors**

# **Sensors**

# ICB series

## ICB series - 3 and 4-wire DC

Inductive proximity sensors provide a reliable and cost effective solution for many applications in machinery and automation equipment. These robust sensors detect metal objects without physical contact, giving a wear-free solution in harsh environments.

Inductive sensors are not influenced by dust, oil, water, or vibrations. Operating at high switching frequencies, they feature high resolution, excellent repeatability and precision, and exceptional resistance to shocks.

What sets the ICB series apart is their onboard microprocessor that takes them into the world of digital technology, merging the benefits of sensing and data transmission.

Furthermore, compared to today's sensor technology, our innovative hot melt potting make these sensors the state-of-the-art sensor of choice.



## Eco-friendly sensing

ICB series represents a complete family of high performance inductive sensors, built to the highest-quality standards and resulting from over 50 years' experience at Carlo Gavazzi in designing and producing proximity sensors.

### The new range includes:

- M12, M18 and M30 long or short barrel housings
- Sensing range from 2 mm up to 40 mm
- 3-wire and 4-wire DC

### All sensors come with:

- Rugged nickel plated brass construction
- Excellent LED output state visibility
- Short circuit, reverse polarity and transients protection

### Several installation possibilities:

- Flush and non-flush versions
- NPN or PNP, NO or NC output
- 2-meter oil resistant PVC cable or M12 disconnect plug

### Approvals:

- All ICB sensors bear the cULus certification and CE mark
- The ICB 3-wire DC series are cCSAus certified for Hazardous Location

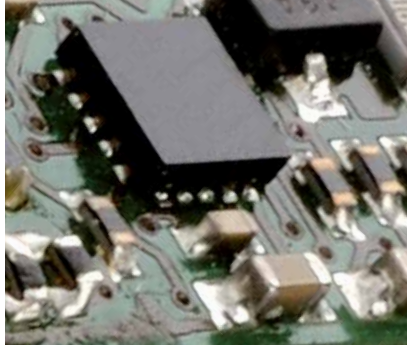
## Main features

### A new generation of microprocessor

All the ICB series sensors feature a new generation of microprocessor, that allows final calibration of the sensor at the end of the assembly process and provides:

- Temperature stability over the whole temperature range
- Increased EMC robustness
- Greater reliability and repeatability
- High precision and minimum deviation

- Possibility of customization such as programmable outputs and switching frequencies



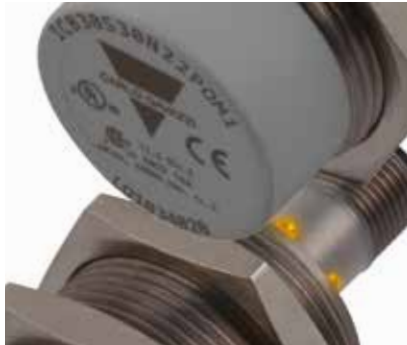
### Assured traceability and best application control

The traceability is guaranteed by the permanently legible laser engraved part number and serial number on the plastic cap of the sensor.

The LED in the new ICB series sensors is clearly visible from any direction both in the cable and in the plug-disconnect versions.

In addition to the indication of the switching state, with the ICB sensors we have introduced a new function for the

LED. When it blinks with a frequency of 2Hz the LED indicates a short-circuit or overload condition, thus simplifying troubleshooting.



### Environmentally friendly potting material

In ICB12 and ICB18 families the potting material provides an ecofriendly design and high performance.

This thermoplastic hotmelt filling is made from recycled corn by-product and allows:

- Reduced impact on the environment
- Higher resistance to mechanical stress and vibrations
- No risk of breaking electronic components

- Increased reliability and improved stability

- Longer sensor lifetime



# ICB series

## Inductive proximity sensors

### Market applications

#### Machine tool

CNC machines repeat precise sequences and are able to produce the most complex pieces.

Tool changing machines for example automatically change the specific tool. A drill machine has a variety of drill bits to make holes of several sizes.

Inductive sensors are used to check the tool position when changing the tool or to verify the component moved to the correct location.

ICB series represents a **suitable solution** thanks to:

- The improved performance with vibrations and shocks
- Reliable connection system between the cable and the barrel
- Very high resolution and quick response time

#### Achieved benefits:

- Optimized and fast setup
- Reliable and cost effective solution



#### Agriculture

Inductive sensors are mainly used for non contact detection of the position of a part on the machine or equipment itself.

Thanks to its excellent quality and to the complete product range, ICB series is particularly suitable for the agricultural and earth-moving sectors.

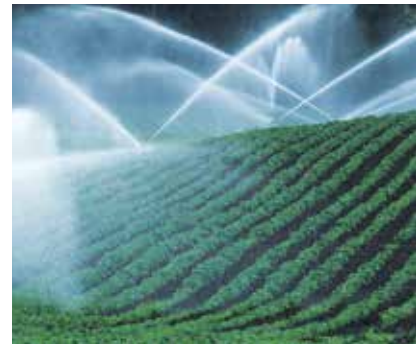
#### ICB series allows:

- Personalized solution with customizable termination options

- High durability and quality
- Resistance to extreme conditions, such as oily and dusty environment

#### Achieved benefits:

- Reduced installation costs
- Product reliability and durability
- Complete range to satisfy all application needs



#### Material handling systems

Material handling systems interconnect the different processes of production, from the raw material to the final product. In these systems it is mandatory to ensure the automatic and reliable flow of goods. Inductive sensors are critical to obtaining the higher productivity and quality from the automated process.

ICB series **is an ideal choice** very well thanks to:

- Microprocessor technology

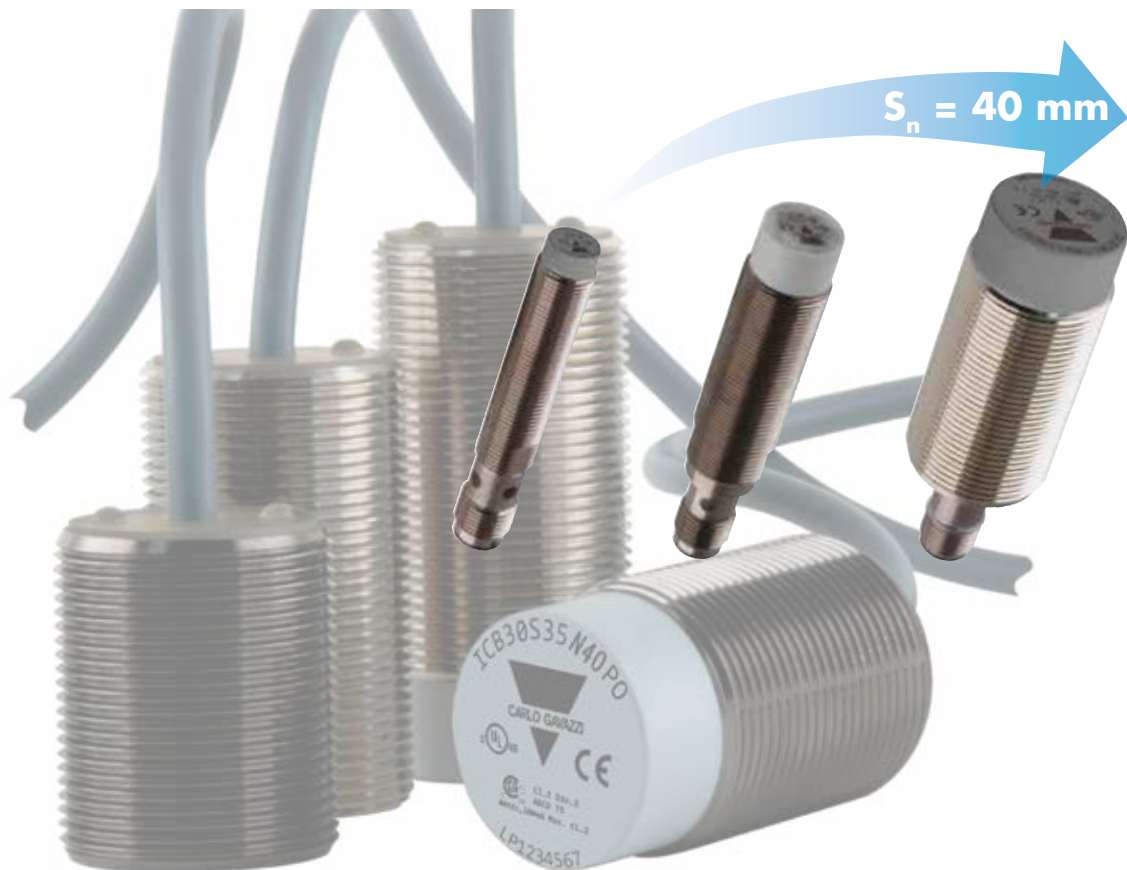
- High precision and temperature stability

#### Achieved benefits:

- Precise fit with customized solutions
- Programmable sensing distance and frequency



## ICB series - Triple sensing distance



The robust and highly reliable ICB series is now available in increased operating distance. In M12, M18 and M30 industrial standard nickel plated brass housings. The new sensors are extremely accurate and represent the best choice for non-contact detection of metallic targets at a distance **up to 40 mm**, the largest sensing distance available on the market for an inductive sensor.

The powerful design of ICB offers the ideal solution in demanding installation conditions typical of industrial environments. The eco-friendly high performance potting material protects the electronic components and provides increased reliability with higher resistance to mechanical stress and vibrations than the traditional proximity sensors.

ICB inductive proximity sensors thanks to an operating distance up to 3 times the standard, allows to position the sensor at an higher distance from a metal target. The result is an **increased sensor's lifetime** especially when the metal target has greater tolerances, being the sensor well protected.

All options already available in ICB standard and extended series are now also available in increased operating distance:

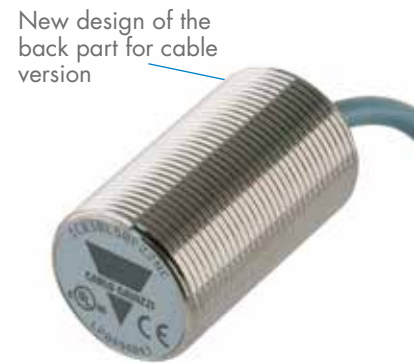
- Long and short barrel housings
- Quasi-flush or non-flush mounting in metal
- NO or NC
- M12-plug or 2 m PVC cable versions
- NPN or PNP switching outputs.

The sensors are rated to IP67 and the mechanical design of the back part ensures an excellent sealing against water and humidity penetration. Thanks to the **built in microcontroller**, all sensors are individually compensated to ensure repeatable and highly accurate operation over the whole temperature range, granting the sensing distance between -25 and +70°C (-13° to +158°F).

# ICB series

## Inductive proximity sensors

### Your benefits



#### ICB12

Quasi-flush:  $S_n$  6 mm  
Non-flush:  $S_n$  10 mm

#### ICB18

Quasi-flush:  $S_n$  12 mm  
Non-flush:  $S_n$  20 mm

#### ICB30

Quasi-flush:  $S_n$  22 mm  
Non-flush:  $S_n$  40 mm

#### Longer sensing distance

Installing the sensor at a longer distance from the moving metal objects reduces the risk of breakdowns granting much lower failure rate.

#### Laser printing

The most important information are permanently laser engraved on the front cap granting the best traceability.

#### High operating frequency

The high operating frequency allows high speed measurements in counting tasks or for monitoring rotational speed.

### Easy mounting

The installation of the sensor is much easier thanks to the built-in setup function.

By approaching the target to the sensor's face the LED starts blinking when the effective operating distance ( $S_r$ ) is between 80% and 100% of the rated operating distance and lights continuously when it is below 80%.

Thus allowing the installer to position the proximity sensor at the correct distance from the target.



### Diagnostics

LED is clearly visible from any direction in both cable and plug disconnect version.

Further to the indication for output ON the LED also has an additional diagnostic function. It flashes with a frequency of 3 Hz in case of shorts circuit or overload.



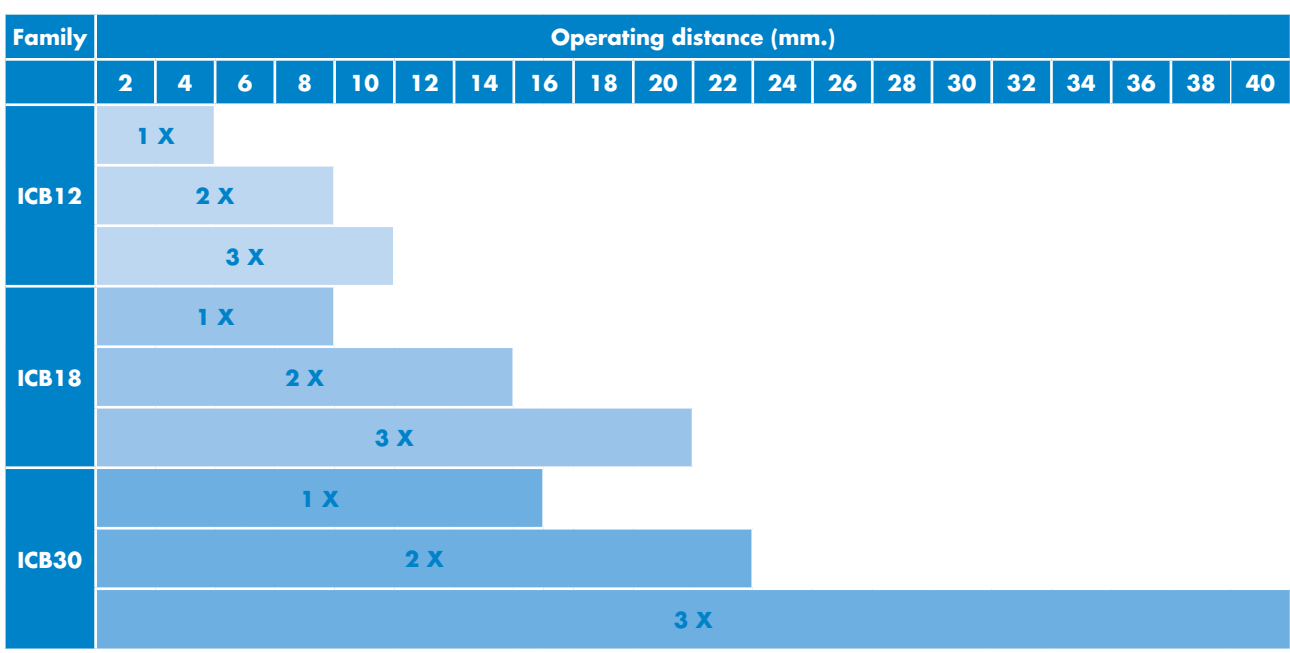
## ICB: a complete range for any application

Family	Diameter	Operating distance	Switching frequency	Output	Connection
ICB12	M12	2 to 10 mm	up to 2000 Hz	NPN-PNP	Cable / Plug
ICB18	M18	5 to 20 mm	up to 1500 Hz	NPN-PNP	Cable / Plug
ICB30	M30	10 to 40 mm	up to 1000 Hz (except for ICB30 3X: ≤ 100 Hz)	NPN-PNP	Cable / Plug

### ICB12                      ICB18                      ICB30



### Operating distance



### Your sensor - your way

Carlo Gavazzi is committed to providing the right solution to our OEM customers and their demanding application requirements. This means that we are ready to customize proximity sensors to meet these specific demands for almost any application.

# ICB series

## Inductive proximity sensors

The new generation of inductive proximity sensors: ICB series

**ICB 12 S 30 F 04 N O M1**

**Housing size:** \_\_\_\_\_

- 12** 12 Ø mm
- 18** 18 Ø mm
- 30** 30 Ø mm

**Housing length:** \_\_\_\_\_

- S** Short body
- L** Long body

**Thread length:** \_\_\_\_\_

- 30** 30 mm
- ...
- 50** 50 mm

**Detection principle:** \_\_\_\_\_

- F** Flush
- N** Non-flush

**Sensing distance:** \_\_\_\_\_

- 02** 2 mm
- ...
- 40** 40 mm

**Output type:** \_\_\_\_\_

- N** NPN
- P** PNP

**Output configuration:** \_\_\_\_\_

- O** Normally open
- C** Normally closed
- A** Antivalent

**Connection:** \_\_\_\_\_

- M1** M12 disconnect plug
- 2 m PVC oil resistant cable



## ICB 12 series (M12)

### Standard sensing range (1 X)

Rated operating distance				2 mm		4 mm	
Installation type				Flush		Non-flush	
Barrel				Short	Long	Short	Long
3-wire	Cable	NPN	NO	<b>ICB12S30F02NO</b>	<b>ICB12L50F02NO</b>	<b>ICB12S30N04NO</b>	<b>ICB12L50N04NO</b>
			NC	<b>ICB12S30F02NC</b>	<b>ICB12L50F02NC</b>	<b>ICB12S30N04NC</b>	<b>ICB12L50N04NC</b>
		PNP	NO	<b>ICB12S30F02PO</b>	<b>ICB12L50F02PO</b>	<b>ICB12S30N04PO</b>	<b>ICB12L50N04PO</b>
			NC	<b>ICB12S30F02PC</b>	<b>ICB12L50F02PC</b>	<b>ICB12S30N04PC</b>	<b>ICB12L50N04PC</b>
	Plug	NPN	NO	<b>ICB12S30F02NOM1</b>	<b>ICB12L50F02NOM1</b>	<b>ICB12S30N04NOM1</b>	<b>ICB12L50N04NOM1</b>
			NC	<b>ICB12S30F02NCM1</b>	<b>ICB12L50F02NCM1</b>	<b>ICB12S30N04NCM1</b>	<b>ICB12L50N04NCM1</b>
		PNP	NO	<b>ICB12S30F02POM1</b>	<b>ICB12L50F02POM1</b>	<b>ICB12S30N04POM1</b>	<b>ICB12L50N04POM1</b>
			NC	<b>ICB12S30F02PCM1</b>	<b>ICB12L50F02PCM1</b>	<b>ICB12S30N04PCM1</b>	<b>ICB12L50N04PCM1</b>
4-wire	Cable	NPN	NO+NC	<b>ICB12S30F02NA</b>	<b>ICB12L50F02NA</b>	<b>ICB12S30N04NA</b>	<b>ICB12L50N04NA</b>
		PNP	NO+NC	<b>ICB12S30F02PA</b>	<b>ICB12L50F02PA</b>	<b>ICB12S30N04PA</b>	<b>ICB12L50N04PA</b>
	Plug	NPN	NO+NC	<b>ICB12S30F02NAM1</b>	<b>ICB12L50F02NAM1</b>	<b>ICB12S30N04NAM1</b>	<b>ICB12L50N04NAM1</b>
		PNP	NO+NC	<b>ICB12S30F02PAM1</b>	<b>ICB12L50F02PAM1</b>	<b>ICB12S30N04PAM1</b>	<b>ICB12L50N04PAM1</b>

### Extended sensing range (2 X)

Rated operating distance				4 mm		8 mm	
Installation type				Flush		Non-flush	
Barrel				Short	Long	Short	Long
3-wire	Cable	NPN	NO	<b>ICB12S30F04NO</b>	<b>ICB12L50F04NO</b>	<b>ICB12S30N08NO</b>	<b>ICB12L50N08NO</b>
			NC	<b>ICB12S30F04NC</b>	<b>ICB12L50F04NC</b>	<b>ICB12S30N08NC</b>	<b>ICB12L50N08NC</b>
		PNP	NO	<b>ICB12S30F04PO</b>	<b>ICB12L50F04PO</b>	<b>ICB12S30N08PO</b>	<b>ICB12L50N08PO</b>
			NC	<b>ICB12S30F04PC</b>	<b>ICB12L50F04PC</b>	<b>ICB12S30N08PC</b>	<b>ICB12L50N08PC</b>
	Plug	NPN	NO	<b>ICB12S30F04NOM1</b>	<b>ICB12L50F04NOM1</b>	<b>ICB12S30N08NOM1</b>	<b>ICB12L50N08NOM1</b>
			NC	<b>ICB12S30F04NCM1</b>	<b>ICB12L50F04NCM1</b>	<b>ICB12S30N08NCM1</b>	<b>ICB12L50N08NCM1</b>
		PNP	NO	<b>ICB12S30F04POM1</b>	<b>ICB12L50F04POM1</b>	<b>ICB12S30N08POM1</b>	<b>ICB12L50N08POM1</b>
			NC	<b>ICB12S30F04PCM1</b>	<b>ICB12L50F04PCM1</b>	<b>ICB12S30N08PCM1</b>	<b>ICB12L50N08PCM1</b>
4-wire	Cable	NPN	NO+NC	<b>ICB12S30F04NA</b>	<b>ICB12L50F04NA</b>	<b>ICB12S30N08NA</b>	<b>ICB12L50N08NA</b>
		PNP	NO+NC	<b>ICB12S30F04PA</b>	<b>ICB12L50F04PA</b>	<b>ICB12S30N08PA</b>	<b>ICB12L50N08PA</b>
	Plug	NPN	NO+NC	<b>ICB12S30F04NAM1</b>	<b>ICB12L50F04NAM1</b>	<b>ICB12S30N08NAM1</b>	<b>ICB12L50N08NAM1</b>
		PNP	NO+NC	<b>ICB12S30F04PAM1</b>	<b>ICB12L50F04PAM1</b>	<b>ICB12S30N08PAM1</b>	<b>ICB12L50N08PAM1</b>

### Increased sensing range (3 X)

Rated operating distance				6 mm		10 mm	
Installation type				Quasi-flush		Non-flush	
Barrel				Short	Long	Short	Long
3-wire	Cable	NPN	NO	<b>ICB12S30F06NO</b>	<b>ICB12L50F06NO</b>	<b>ICB12S30N10NO</b>	<b>ICB12L50N10NO</b>
			NC	<b>ICB12S30F06NC</b>	<b>ICB12L50F06NC</b>	<b>ICB12S30N10NC</b>	<b>ICB12L50N10NC</b>
		PNP	NO	<b>ICB12S30F06PO</b>	<b>ICB12L50F06PO</b>	<b>ICB12S30N10PO</b>	<b>ICB12L50N10PO</b>
			NC	<b>ICB12S30F06PC</b>	<b>ICB12L50F06PC</b>	<b>ICB12S30N10PC</b>	<b>ICB12L50N10PC</b>
	Plug	NPN	NO	<b>ICB12S30F06NOM1</b>	<b>ICB12L50F06NOM1</b>	<b>ICB12S30N10NOM1</b>	<b>ICB12L50N10NOM1</b>
			NC	<b>ICB12S30F06NCM1</b>	<b>ICB12L50F06NCM1</b>	<b>ICB12S30N10NCM1</b>	<b>ICB12L50N10NCM1</b>
		PNP	NO	<b>ICB12S30F06POM1</b>	<b>ICB12L50F06POM1</b>	<b>ICB12S30N10POM1</b>	<b>ICB12L50N10POM1</b>
			NC	<b>ICB12S30F06PCM1</b>	<b>ICB12L50F06PCM1</b>	<b>ICB12S30N10PCM1</b>	<b>ICB12L50N10PCM1</b>

# ICB series

## Inductive proximity sensors

### ICB 18 series (M18)

#### Standard sensing range (1 X)

Rated operating distance				5 mm		8 mm	
Installation type				Flush		Non-flush	
Barrel				Short	Long	Short	Long
3-wire	Cable	NPN	NO	ICB18S30F05NO	ICB18L50F05NO	ICB18S30N08NO	ICB18L50N08NO
			NC	ICB18S30F05NC	ICB18L50F05NC	ICB18S30N08NC	ICB18L50N08NC
		PNP	NO	ICB18S30F05PO	ICB18L50F05PO	ICB18S30N08PO	ICB18L50N08PO
			NC	ICB18S30F05PC	ICB18L50F05PC	ICB18S30N08PC	ICB18L50N08PC
	Plug	NPN	NO	ICB18S30F05NOM1	ICB18L50F05NOM1	ICB18S30N08NOM1	ICB18L50N08NOM1
			NC	ICB18S30F05NCM1	ICB18L50F05NCM1	ICB18S30N08NCM1	ICB18L50N08NCM1
		PNP	NO	ICB18S30F05POM1	ICB18L50F05POM1	ICB18S30N08POM1	ICB18L50N08POM1
			NC	ICB18S30F05PCM1	ICB18L50F05PCM1	ICB18S30N08PCM1	ICB18L50N08PCM1
4-wire	Cable	NPN	NO+NC	ICB18S30F05NA	ICB18L50F05NA	ICB18S30N08NA	ICB18L50N08NA
		PNP	NO+NC	ICB18S30F05PA	ICB18L50F05PA	ICB18S30N08PA	ICB18L50N08PA
	Plug	NPN	NO+NC	ICB18S30F05NAM1	ICB18L50F05NAM1	ICB18S30N08NAM1	ICB18L50N08NAM1
		PNP	NO+NC	ICB18S30F05PAM1	ICB18L50F05PAM1	ICB18S30N08PAM1	ICB18L50N08PAM1

#### Extended sensing range (2 X)

Rated operating distance				8 mm		14 mm	
Installation type				Flush		Non-flush	
Barrel				Short	Long	Short	Long
3-wire	Cable	NPN	NO	ICB18S30F08NO	ICB18L50F08NO	ICB18S30N14NO	ICB18L50N14NO
			NC	ICB18S30F08NC	ICB18L50F08NC	ICB18S30N14NC	ICB18L50N14NC
		PNP	NO	ICB18S30F08PO	ICB18L50F08PO	ICB18S30N14PO	ICB18L50N14PO
			NC	ICB18S30F08PC	ICB18L50F08PC	ICB18S30N14PC	ICB18L50N14PC
	Plug	NPN	NO	ICB18S30F08NOM1	ICB18L50F08NOM1	ICB18S30N14NOM1	ICB18L50N14NOM1
			NC	ICB18S30F08NCM1	ICB18L50F08NCM1	ICB18S30N14NCM1	ICB18L50N14NCM1
		PNP	NO	ICB18S30F08POM1	ICB18L50F08POM1	ICB18S30N14POM1	ICB18L50N14POM1
			NC	ICB18S30F08PCM1	ICB18L50F08PCM1	ICB18S30N14PCM1	ICB18L50N14PCM1
4-wire	Cable	NPN	NO+NC	ICB18S30F08NA	ICB18L50F08NA	ICB18S30N14NA	ICB18L50N14NA
		PNP	NO+NC	ICB18S30F08PA	ICB18L50F08PA	ICB18S30N14PA	ICB18L50N14PA
	Plug	NPN	NO+NC	ICB18S30F08NAM1	ICB18L50F08NAM1	ICB18S30N14NAM1	ICB18L50N14NAM1
		PNP	NO+NC	ICB18S30F08PAM1	ICB18L50F08PAM1	ICB18S30N14PAM1	ICB18L50N14PAM1

#### Increased sensing range (3 X)

Rated operating distance				12 mm		20 mm	
Installation type				Quasi-flush		Non-flush	
Barrel				Short	Long	Short	Long
3-wire	Cable	NPN	NO	ICB18S30F12NO	ICB18L50F12NO	ICB18S30N20NO	ICB18L50N20NO
			NC	ICB18S30F12NC	ICB18L50F12NC	ICB18S30N20NC	ICB18L50N20NC
		PNP	NO	ICB18S30F12PO	ICB18L50F12PO	ICB18S30N20PO	ICB18L50N20PO
			NC	ICB18S30F12PC	ICB18L50F12PC	ICB18S30N20PC	ICB18L50N20PC
	Plug	NPN	NO	ICB18S30F12NOM1	ICB18L50F12NOM1	ICB18S30N20NOM1	ICB18L50N20NOM1
			NC	ICB18S30F12NCM1	ICB18L50F12NCM1	ICB18S30N20NCM1	ICB18L50N20NCM1
		PNP	NO	ICB18S30F12POM1	ICB18L50F12POM1	ICB18S30N20POM1	ICB18L50N20POM1
			NC	ICB18S30F12PCM1	ICB18L50F12PCM1	ICB18S30N20PCM1	ICB18L50N20PCM1

## ICB30 series (M30)

### Standard sensing range (1 X)

Rated operating distance				10 mm		15 mm	
Installation type				Flush		Non-flush	
Barrel				Short	Long	Short	Long
3-wire	Cable	NPN	NO	<b>ICB30S30F10NO</b>	<b>ICB30L50F10NO</b>	<b>ICB30S30N15NO</b>	<b>ICB30L50N15NO</b>
			NC	<b>ICB30S30F10NC</b>	<b>ICB30L50F10NC</b>	<b>ICB30S30N15NC</b>	<b>ICB30L50N15NC</b>
		PNP	NO	<b>ICB30S30F10PO</b>	<b>ICB30L50F10PO</b>	<b>ICB30S30N15PO</b>	<b>ICB30L50N15PO</b>
			NC	<b>ICB30S30F10PC</b>	<b>ICB30L50F10PC</b>	<b>ICB30S30N15PC</b>	<b>ICB30L50N15PC</b>
	Plug	NPN	NO	<b>ICB30S30F10NOM1</b>	<b>ICB30L50F10NOM1</b>	<b>ICB30S30N15NOM1</b>	<b>ICB30L50N15NOM1</b>
			NC	<b>ICB30S30F10NCM1</b>	<b>ICB30L50F10NCM1</b>	<b>ICB30S30N15NCM1</b>	<b>ICB30L50N15NCM1</b>
		PNP	NO	<b>ICB30S30F10POM1</b>	<b>ICB30L50F10POM1</b>	<b>ICB30S30N15POM1</b>	<b>ICB30L50N15POM1</b>
			NC	<b>ICB30S30F10PCM1</b>	<b>ICB30L50F10PCM1</b>	<b>ICB30S30N15PCM1</b>	<b>ICB30L50N15PCM1</b>
4-wire	Cable	NPN	NO+NC	<b>ICB30S30F10NA</b>	<b>ICB30L50F10NA</b>	<b>ICB30S30N15NA</b>	<b>ICB30L50N15NA</b>
		PNP	NO+NC	<b>ICB30S30F10PA</b>	<b>ICB30L50F10PA</b>	<b>ICB30S30N15PA</b>	<b>ICB30L50N15PA</b>
	Plug	NPN	NO+NC	<b>ICB30S30F10NAM1</b>	<b>ICB30L50F10NAM1</b>	<b>ICB30S30N15NAM1</b>	<b>ICB30L50N15NAM1</b>
		PNP	NO+NC	<b>ICB30S30F10PAM1</b>	<b>ICB30L50F10PAM1</b>	<b>ICB30S30N15PAM1</b>	<b>ICB30L50N15PAM1</b>

### Extended sensing range (2 X)

Rated operating distance				15 mm		22 mm	
Installation type				Flush		Non-flush	
Barrel				Short	Long	Short	Long
3-wire	Cable	NPN	NO	<b>ICB30S30F15NO</b>	<b>ICB30L50F15NO</b>	<b>ICB30S30N22NO</b>	<b>ICB30L50N22NO</b>
			NC	<b>ICB30S30F15NC</b>	<b>ICB30L50F15NC</b>	<b>ICB30S30N22NC</b>	<b>ICB30L50N22NC</b>
		PNP	NO	<b>ICB30S30F15PO</b>	<b>ICB30L50F15PO</b>	<b>ICB30S30N22PO</b>	<b>ICB30L50N22PO</b>
			NC	<b>ICB30S30F15PC</b>	<b>ICB30L50F15PC</b>	<b>ICB30S30N22PC</b>	<b>ICB30L50N22PC</b>
	Plug	NPN	NO	<b>ICB30S30F15NOM1</b>	<b>ICB30L50F15NOM1</b>	<b>ICB30S30N22NOM1</b>	<b>ICB30L50N22NOM1</b>
			NC	<b>ICB30S30F15NCM1</b>	<b>ICB30L50F15NCM1</b>	<b>ICB30S30N22NCM1</b>	<b>ICB30L50N22NCM1</b>
		PNP	NO	<b>ICB30S30F15POM1</b>	<b>ICB30L50F15POM1</b>	<b>ICB30S30N22POM1</b>	<b>ICB30L50N22POM1</b>
			NC	<b>ICB30S30F15PCM1</b>	<b>ICB30L50F15PCM1</b>	<b>ICB30S30N22PCM1</b>	<b>ICB30L50N22PCM1</b>
4-wire	Cable	NPN	NO+NC	<b>ICB30S30F15NA</b>	<b>ICB30L50F15NA</b>	<b>ICB30S30N22NA</b>	<b>ICB30L50N22NA</b>
		PNP	NO+NC	<b>ICB30S30F15PA</b>	<b>ICB30L50F15PA</b>	<b>ICB30S30N22PA</b>	<b>ICB30L50N22PA</b>
	Plug	NPN	NO+NC	<b>ICB30S30F15NAM1</b>	<b>ICB30L50F15NAM1</b>	<b>ICB30S30N22NAM1</b>	<b>ICB30L50N22NAM1</b>
		PNP	NO+NC	<b>ICB30S30F15PAM1</b>	<b>ICB30L50F15PAM1</b>	<b>ICB30S30N22PAM1</b>	<b>ICB30L50N22PAM1</b>

### Increased sensing range (3 X)

Rated operating distance				22 mm		40 mm	
Installation type				Quasi-flush		Non-flush	
Barrel				Short	Long	Short	Long
3-wire	Cable	NPN	NO	<b>ICB30S30F22NO</b>	<b>ICB30L50F22NO</b>	<b>ICB30S30N40NO</b>	<b>ICB30L50N40NO</b>
			NC	<b>ICB30S30F22NC</b>	<b>ICB30L50F22NC</b>	<b>ICB30S30N40NC</b>	<b>ICB30L50N40NC</b>
		PNP	NO	<b>ICB30S30F22PO</b>	<b>ICB30L50F22PO</b>	<b>ICB30S30N40PO</b>	<b>ICB30L50N40PO</b>
			NC	<b>ICB30S30F22PC</b>	<b>ICB30L50F22PC</b>	<b>ICB30S30N40PC</b>	<b>ICB30L50N40PC</b>
	Plug	NPN	NO	<b>ICB30S30F22NOM1</b>	<b>ICB30L50F22NOM1</b>	<b>ICB30S30N40NOM1</b>	<b>ICB30L50N40NOM1</b>
			NC	<b>ICB30S30F22NCM1</b>	<b>ICB30L50F22NCM1</b>	<b>ICB30S30N40NCM1</b>	<b>ICB30L50N40NCM1</b>
		PNP	NO	<b>ICB30S30F22POM1</b>	<b>ICB30L50F22POM1</b>	<b>ICB30S30N40POM1</b>	<b>ICB30L50N40POM1</b>
			NC	<b>ICB30S30F22PCM1</b>	<b>ICB30L50F22PCM1</b>	<b>ICB30S30N40PCM1</b>	<b>ICB30L50N40PCM1</b>

## OUR SALES NETWORK IN EUROPE

### AUSTRIA

Carlo Gavazzi GmbH  
Ketzergasse 374,  
A-1230 Wien  
Tel: +43 1 888 4112  
Fax: +43 1 889 10 53  
office@carlogavazzi.at

### FRANCE

Carlo Gavazzi Sarl  
Zac de Paris Nord II, 69, rue de la Belle Etoile,  
F-95956 Roissy CDG Cedex  
Tel: +33 1 49 38 98 60  
Fax: +33 1 48 63 27 43  
french.team@carlogavazzi.fr

### ITALY

Carlo Gavazzi SpA  
Via Milano 13,  
I-20020 Lainate  
Tel: +39 02 931 761  
Fax: +39 02 931 763 01  
info@gavazziacbu.it

### SPAIN

Carlo Gavazzi SA  
Avda. Iparraguirre, 80-82,  
E-48940 Leioa (Bizkaia)  
Tel: +34 94 480 4037  
Fax: +34 94 431 6081  
gavazzi@gavazzi.es

### BELGIUM

Carlo Gavazzi NV/SA  
Mechelsesteenweg 311,  
B-1800 Vilvoorde  
Tel: +32 2 257 4120  
Fax: +32 2 257 41 25  
sales@carlogavazzi.be

### GERMANY

Carlo Gavazzi GmbH  
Pfnorstr. 10-14  
D-64293 Darmstadt  
Tel: +49 6151 81000  
Fax: +49 6151 81 00 40  
info@gavazzi.de

### NETHERLANDS

Carlo Gavazzi BV  
Wijkermeerweg 23,  
NL-1948 NT Beverwijk  
Tel: +31 251 22 9345  
Fax: +31 251 22 60 55  
info@carlogavazzi.nl

### SWEDEN

Carlo Gavazzi AB  
V:a Kyrkogatan 1,  
S-652 24 Karlstad  
Tel: +46 54 85 1125  
Fax: +46 54 85 11 77  
info@carlogavazzi.se

### DENMARK

Carlo Gavazzi Handel A/S  
Over Hadstenevej 40,  
DK-8370 Hadsten  
Tel: +45 89 60 6100  
Fax: +45 86 98 15 30  
handel@gavazzi.dk

### GREAT BRITAIN

Carlo Gavazzi UK Ltd  
4.4 Frimley Business Park,  
Frimley, Camberley, Surrey GU16 7SG  
Tel: +44 1 276 854 110  
Fax: +44 1 276 682 140  
sales@carlogavazzi.co.uk

### NORWAY

Carlo Gavazzi AS  
Melkeveien 13,  
N-3919 Porsgrunn  
Tel: +47 35 93 0800  
Fax: +47 35 93 08 01  
post@gavazzi.no

### SWITZERLAND

Carlo Gavazzi AG  
Verkauf Schweiz/Vente Suisse  
Sumpfstrasse 3,  
CH-6312 Steinhausen  
Tel: +41 41 747 4535  
Fax: +41 41 740 45 40  
info@carlogavazzi.ch

### FINLAND

Carlo Gavazzi OY AB  
Ahventie, 4 B,  
FI-02170 Espoo  
Tel: +358 9 756 2000  
Fax: +358 9 756 20010  
myynti@gavazzi.fi

### PORTUGAL

Carlo Gavazzi Lda  
Rua dos Jerónimos 38-B,  
P-1400-212 Lisboa  
Tel: +351 21 361 7060  
Fax: +351 21 362 13 73  
carlogavazzi@carlogavazzi.pt

## OUR SALES NETWORK IN THE AMERICAS

### USA

Carlo Gavazzi Inc.  
750 Hastings Lane,  
Buffalo Grove, IL 60089, USA  
Tel: +1 847 465 6100  
Fax: +1 847 465 7373  
sales@carlogavazzi.com

### CANADA

Carlo Gavazzi Inc.  
2660 Meadowvale Boulevard,  
Mississauga, ON L5N 6M6, Canada  
Tel: +1 905 542 0979  
Fax: +1 905 542 22 48  
gavazzi@carlogavazzi.com

### MEXICO

Carlo Gavazzi Mexico S.A. de C.V.  
Calle La Montaña no. 28, Fracc. Los Pastores  
Naucalpan de Juárez, EDOMEX CP 53340  
Tel & Fax: +52.55.5373.7042  
mexicosales@carlogavazzi.com

### BRAZIL

Carlo Gavazzi Automação Ltda.Av.  
Francisco Matarazzo, 1752  
Conj 2108 - Barra Funda - São Paulo/SP  
Tel: +55 11 3052 0832  
Fax: +55 11 3057 1753  
info@carlogavazzi.com.br

## OUR SALES NETWORK IN ASIA AND PACIFIC

### SINGAPORE

Carlo Gavazzi Automation Singapore Pte. Ltd.  
61 Tai Seng Avenue #05-06  
Print Media Hub @ Paya Lebar iPark  
Singapore 534167  
Tel: +65 67 466 990  
Fax: +65 67 461 980  
info@carlogavazzi.com.sg

### MALAYSIA

Carlo Gavazzi Automation (M) SDN. BHD.  
D12-06-G, Block D12,  
Pusat Perdagangan Dana 1,  
Jalan PJU 1A/46, 47301 Petaling Jaya,  
Selangor, Malaysia.  
Tel: +60 3 7842 7299  
Fax: +60 3 7842 7399  
sales@gavazzi-asia.com

### CHINA

Carlo Gavazzi Automation  
(China) Co. Ltd.  
Unit 2308, 23/F.,  
News Building, Block 1, 1002  
Middle Shennan Zhong Road,  
Shenzhen, China  
Tel: +86 755 83699500  
Fax: +86 755 83699300  
sales@carlogavazzi.cn

### HONG KONG

Carlo Gavazzi Automation  
Hong Kong Ltd.  
Unit 3 12/F Crown Industrial Bldg.,  
106 How Ming St., Kwun Tong,  
Kowloon, Hong Kong  
Tel: +852 23041228  
Fax: +852 23443689

## OUR COMPETENCE CENTRES AND PRODUCTION SITES

### DENMARK

Carlo Gavazzi Industri A/S  
Hadsten

### MALTA

Carlo Gavazzi Ltd  
Zejtun

### ITALY

Carlo Gavazzi Controls SpA  
Belluno

### LITHUANIA

Uab Carlo Gavazzi Industri Kaunas  
Kaunas

### CHINA

Carlo Gavazzi Automation (Kunshan) Co., Ltd.  
Kunshan

## HEADQUARTERS

Carlo Gavazzi Automation SpA  
Via Milano, 13  
I-20020 - Lainate (MI) - ITALY  
Tel: +39 02 931 761  
info@gavazziautomation.com



Printed on 100% recycled paper  
produced using  
post consumer de-inked waste.

**CARLO GAVAZZI**  
Automation Components

*Energy to Components!*

[www.gavazziautomation.com](http://www.gavazziautomation.com)

