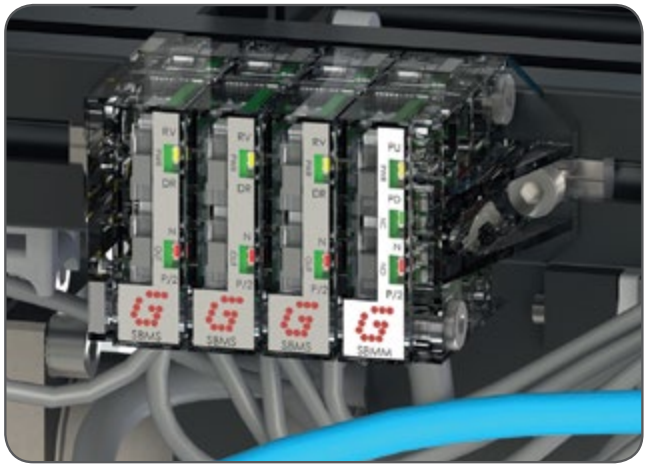
SBM – Modular Sensor Box

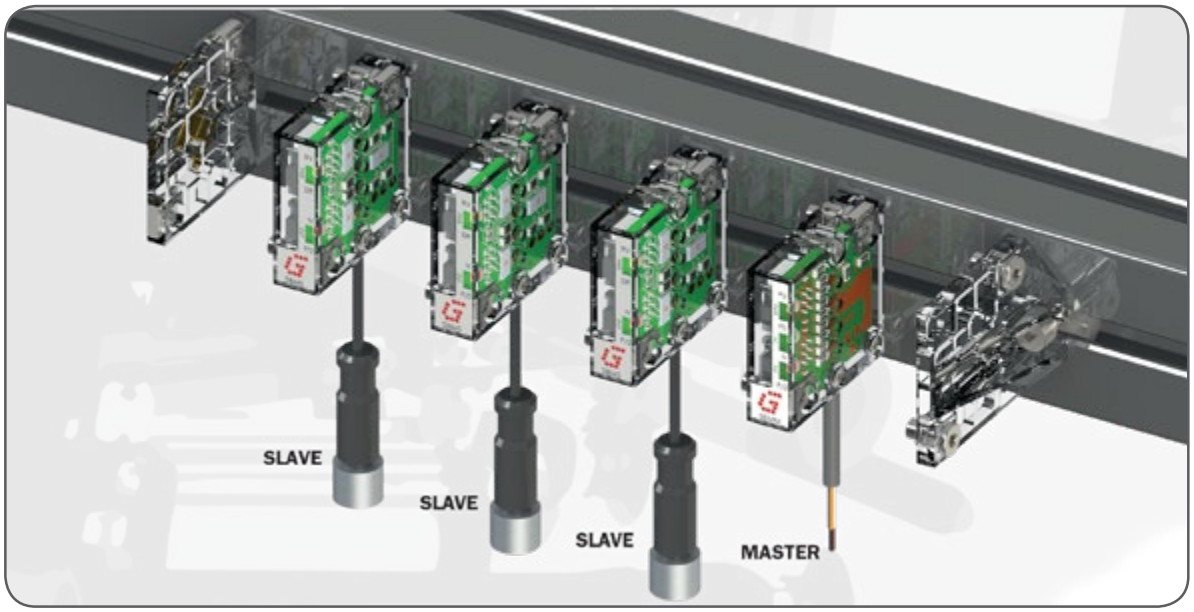
The SBM modular Sensor Box is a configurable sensor management system that consists of one or more master modules (SBMM-E, SBMM) for outputs to the robot or PLC; one or more slave modules (SBMS-E, SBMS) to receive inputs from the sensors and transfer the signal to the master module; and one mounting and termination unit (SBMK).



- A modular, very compact, scalable solution.
- Easy configuration with switches (see Configuration and indicators below).
- Sensor input can be switched from Normally Open (NO) to Normally Closed (NC) to suit application needs.
- 12-24Vdc power.
- Series connection up to 20 sensors.
- Direct mounting on standard aluminum profile.
- IP40 rating.
- Which modules to use?
  - Use SBMM–E Master & SBMS-E Slave versions if only using NO logic
  - Use SBMM Master & SBMS Slave versions if both NO & NC will be needed

Modular Sensor Box Components

Quick#	Part#	Price	Description	Input Connections	Output Connections	Weight
7402	SBMM	$74.00	Master - 4 wires unterminated	2 wires for power supply (Blue: GND, Brown: Vcc)	2 configurable PNP or NPN outputs	50g
7405	SBMM-E	$47.47	Master - 3 wires unterminated		1 configurable PNP or NPN output	50g
7403	SBMS	$53.06	Slave - 1 female M8 3 poles connector	1 input PNP/NPN/REED type	none	50g
7406	SBMS-E	$40.49	Slave - 1 female M8 3 poles connector			50g
7404	SBMK	$10.47	Sensor Box End Cap - Mounts to profile			



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SBMM / SBMM-E - Master module

The first module of any SBM series stack. The Master Module receives the power supply and transmits the output signal to a robot or PLC. Depending on output needs, one or more master units can be used in a stack.

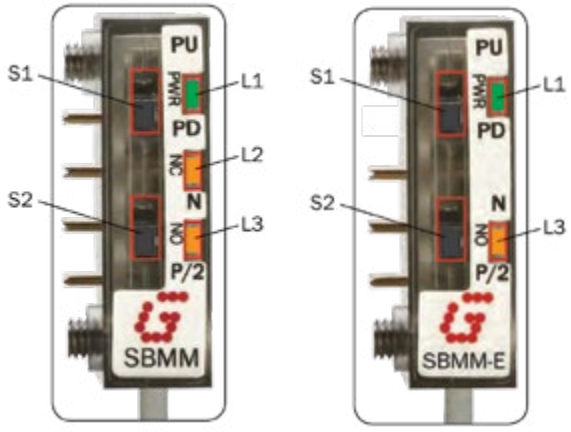
- The SBMM-E transmits one NO output signal based on the condition of all its slave units.
- The SBMM can transmit one NO and one NC output signal simultaneously based on the condition of its slave units.
- Output can be PNP, NPN, and REED
- LED status indicators for easy monitoring.

NEW

Part#	SBMM	SBMM-E
Quick#	7402	7405
Price	$74.00	$47.47
Type	4 wires unterminated cable	3 wires unterminated cable
Formation	4x0.14mm²	3x0.14mm²
Length	1m	
Blue	GND	
Brown	Vcc	
Black	OUT1: series of slave NO contacts (depending on configuration)	
White	OUT2: series of slave NC contacts (depending on configuration)	/
Max. current of NO output	1A	
Max. current of NC output	150 mA	/
Max. supply current	2A	

Configuration and indicators

- S1: allows the selection of internal PULL-UP resistors (PU) or PULL-DOWN resistors (PD) according to NPN or PNP selection (using S1), respectively.
- S2: allows the selection of PNP (P/2) or NPN (N) output signal type.
- L1: green when power supply is present.
- L2: amber when NC series output is enabled (i.e. open contact).
- L3: amber when NO series output is enabled (i.e. closed contact).



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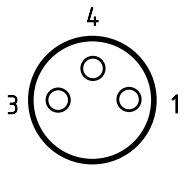
SBMS / SBMS-E - Slave module

The Slave Modules receive the signal from the sensor and transmits it to the Master Module.

- Up to 20 slave modules can be linked to one Master Module.
- SBMS-E is used in a NO configuration only.
- SBMS can be used in a NO and NC configuration and send both conditions simultaneously.
- Work with 2 wire REED or 3 wire sensors PNP or NPN
- NO / NC Sensor logic can be reversed.

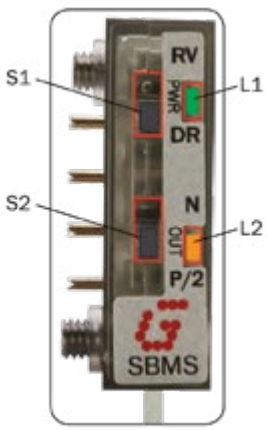


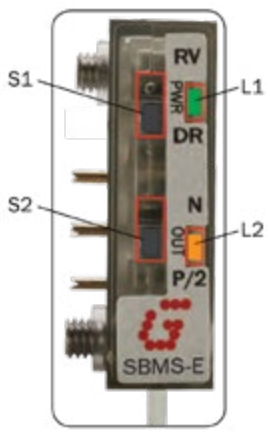
NEW

Part#	SBMS	SBMS-E
Quick#	7403	7406
Price	$53.06	$40.49
Type	M8 3 poles female connector with 2 Digital Outputs	M8 3 poles female connector with 1 Digital Output
Formation	3x0.096mm²	
Length	150mm	
Blue	GND	
Brown	Vcc	
Black	Sensor output signal (input for the Slave module)	
Max. supply current to sensor	200mA	

Configuration and indicators

- S1: allows the selection of sensor's output logic as DIRECT (DR) or REVERSE (RV).
- S2: allows the selection of PNP/2 wires (P/2) or NPN (N) output \signal type.
- L1: green when power supply is present (available from internal BUS).
- L2: amber when slave output is enabled (i.e. output activated or not depending on sensor's output type and configuration of the module).





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Application examples

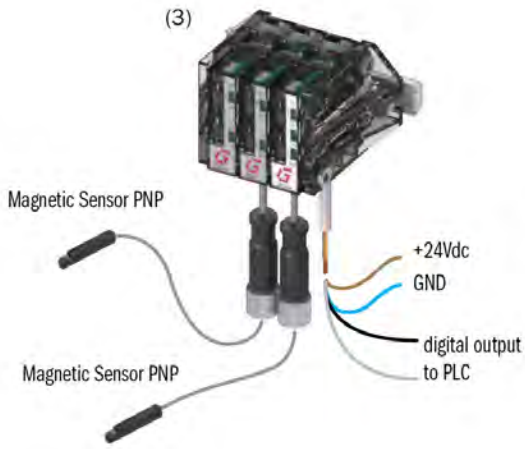
Photo 1 shows a typical applications where only 1 master module (SBMM) is used in combination with 6 slave modules (SBMS) and 1 termination module (SBMK).

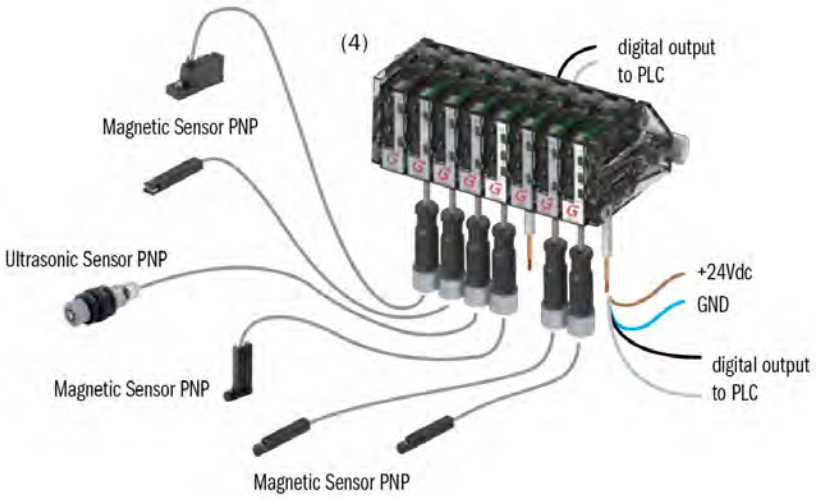
Photo 2 shows the 2 options for the cables exit orientation: the square shaped design of all the modules allows the user to customize the output orientation maintaining the same fixation on an external frame.

The following picture shows an extended configuration with 4 additional slave modules and 1 additional master module in between generating the signal processing of only the last 4 slave modules.

The first master module processes the signals of only the first 2 slave modules.

Please note the power supply conductor of the central master module are not used in this example (the first master module power connections provide the power supply to the whole system busing an internal BUS).





Quick# 7527 can be used in combination with either PRO-SS or PRO-SN and these modular version Gimatic SBM sensor boxes.

Y Extension Cable-M8

Quick#	Part#	Description	Price
7527	CFGM8CMGM8X3Y	1x 8 Pin Female 3x 3 Pin Male	$54.00