

## BOS S Signal Adapter

BOS S signal adapters are crucial for quick, versatile modifications, retrofits and enhancements of a sensor's functionality. Several available models provide quick-change options that will convert PNP/NPN outputs, add delay timing and counting functions, or monitor frequency of machine speeds and motion.

For example, when an NPN normally closed sensor is needed and a PNP normally open sensor is the only type available, a BOS S inverter is the solution. The inverter model converts from PNP to NPN or NPN to PNP output, and can be programmed from normally open or normally closed outputs. The timer model can add an on-delay or off-delay up to 65.535 seconds to any DC sensor, and eliminates the need for a separate counter totalizer. It can store a pre-set count up to 65,535 and produce an output when that count is reached. The frequency model will increase the life of a machine in uptime as it monitors over-speed, under-speed, motion and communicates when a machine is jammed.

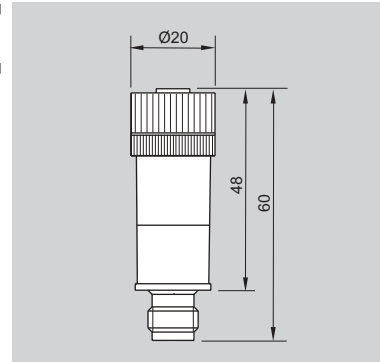
BOS S signal adapters take the place of expensive signal converters and other control elements. They are also suitable as stand-alone solutions in areas lacking external controllers. They are ideal for areas where a solution must retrofit without changing the controller. Signal adapters are plugged-in between the sensor and the connection cable, and can be programmed through the control line using a simple teach-in procedure. The output current of 400 mA also allows any signal adapter to be used as a switching amplifier.

### Applications

- Batch counting
- Indexing
- Increased switch output
- Underspeed detection
- Jam detection
- Motion detection
- Pulse stretcher
- Broken conveyor detection

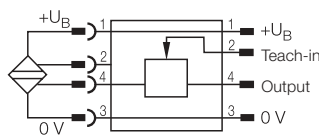
Series	
Model	

<b>Signal Adapter</b>
Timer 1ms...65.535s
Counter 1...65535
Signal Inverter PNP to NPN, NPN to PNP
Frequency (Under speed) 0.15...1000Hz



Timer	
PNP	BOS S-T01
NPN	BOS S-T02
Counter	
PNP	BOS S-C01
NPN	BOS S-C02
Signal Inverter	
PNP to NPN	BOS S-F01
NPN to PNP	BOS S-F02
Frequency (under speed)	
PNP	BOS S-M01
NPN	BOS S-M02

Rated operational voltage	10...30 Vdc
Supply voltage	12...24 Vdc
Input resistance	>10k Ω
Minimum response time	100 μs
Maximum load current	400mA
Timer	
Minimum delay	1ms
Maximum delay	65.535s
Operating frequency (max.)	10 kHz
Counter	
Minimum count	1
Maximum count	65535
Operating frequency (max.)	10 kHz
Signal Inverter	
Operating frequency (max.)	10 kHz
Frequency (under speed)	
Minimum frequency	0.15 Hz
Maximum frequency	1000 Hz
Operating frequency (max.)	1000 Hz
Short circuit protection	Yes
Ambient temperature range	0...60°C
Remote Teach	Yes
Output indication	Red Led
Mechanical protection	IP67
Housing material	Plastic PBTA/PA
Input connection	M12 4 pin Female
Output connection	M12 4 pin Male

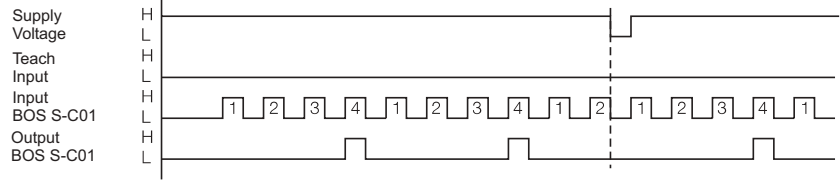
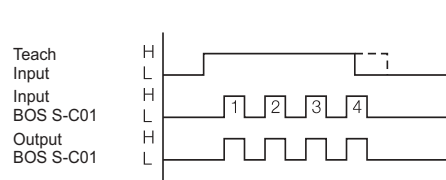


### Signal Adapter BOS S-C

Programmable pulse or pause counter

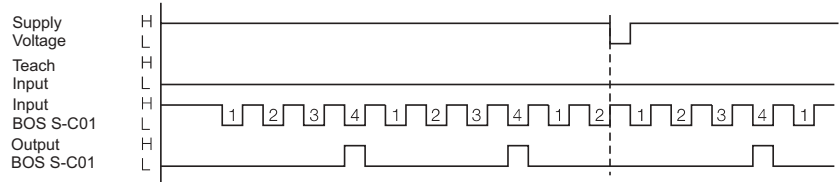
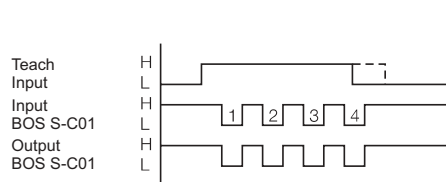
Teaching a pulse count

Used as pulse counter



Teaching a pause count

Used as pause counter

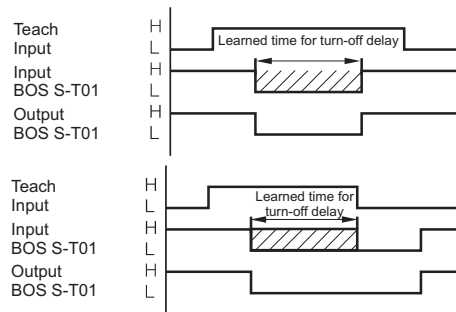
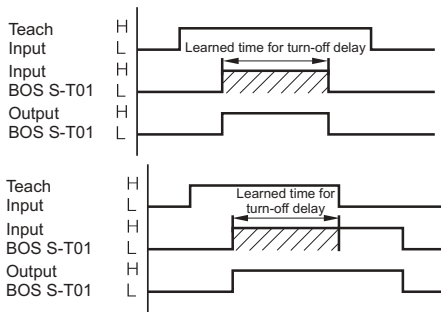


### Signal Adapter BOS S-T

Programmable timer for turn-on or turn-off delay

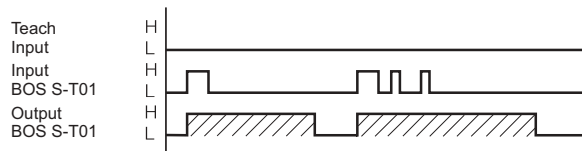
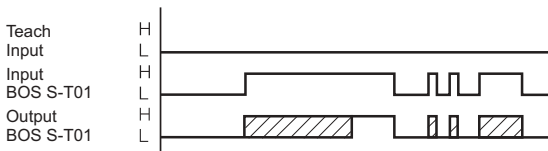
Teaching a turn-on delay

Teaching a turn-off delay



Using with turn-on delay

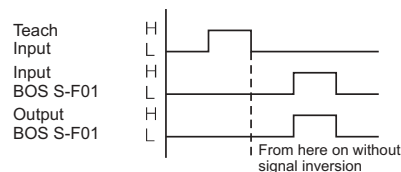
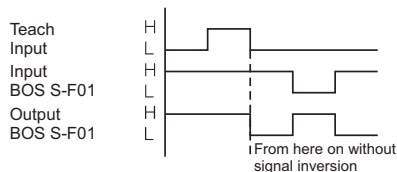
Using with turn-off delay



### Signal Adapter BOS S-F

NPN/PNP logic converter, selectable normally open/normally closed

Teaching without signal inversion



H = Input or Output active; L = Input or Output inactive

- Contents
- Selection Guide
- Universal Mounting Accessories
- Inductive Accessories
  - Mounting Brackets
  - Protection Devices
  - Prox Actuator
  - Banking Screws
- Capacitive Accessories
- Photoelectric Accessories
  - Brackets
  - Protection & Apertures
  - Lenses
  - Reflectors
- Magneto-inductive Mounting Accessories
- Signal Conditioning**
- Power Supplies
  - Sensor Testers
  - Controllers

**6** Connectors

**7** Accessories

**t** Technical Reference

**p** Part Number Index