

Series **BOS S** signal adapters can be used to implement various additional functions for sensors. Output signals or counting and timing functions can be changed without additional installations. The signal adapter is simply plugged in between the standard M12 connections on the sensor and cable. Setting is simple using teach-in and a control line. Signal adapters can also be used as switching amplifiers and can be combined with each other.

The **BOS S-C** counts output pulses or pauses from a sensor and sends an output pulse when a pre-defined number is reached. The count range is from 1...65535 and can be freely set. It also includes an output inverter function (normally open/normally closed).

With the **BOS S-T** you can set a turn-on or turn-off delay from 1 ms to 65 sec. The factory default setting is for a turn-off delay of 100 ms.

The **BOS S-F** converts a connected PNP signal into an NPN signal. In addition, you can toggle the output function between NO and NC.

The **BOS S-M** is a freely configurable module for frequency monitoring. It is "active" when the set frequency is exceeded by 5 %.

**Application**

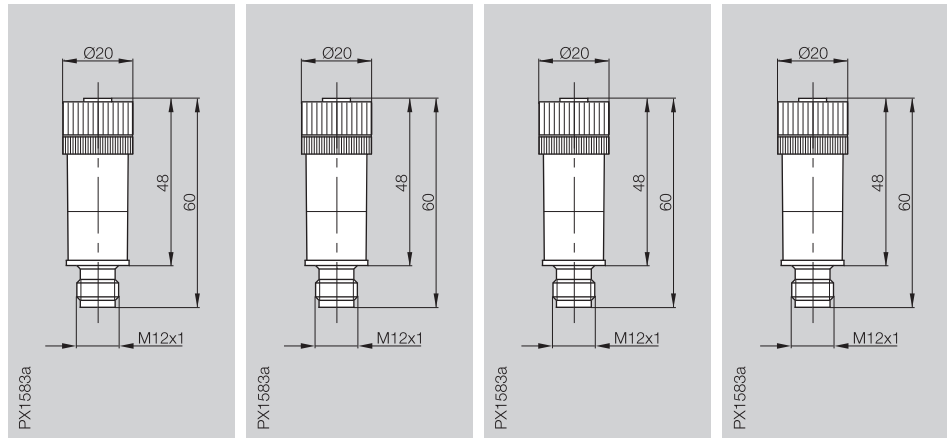
For **all sensors** having a corresponding plug connection and output signal.



**Signal adapter selection guide**

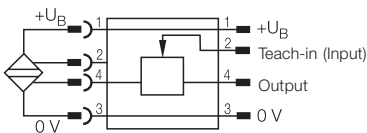
Function	Device	Setting
NC/NO inverter	BOS S- <b>C01</b>	Pause counter 1
Flip-Flop (touch on, off)	BOS S- <b>C01</b>	Pause counter 2
Divider (1 pulse per revolution)	BOS S- <b>C01</b>	Pulse counter n
Parts counter (count down)	BOS S- <b>C01</b>	Pulse counter n
Switching amplifier to 400 mA	BOS S- <b>C01</b>	Pulse counter 1
Off-delay	BOS S- <b>T01</b>	Off-delay n
Off-delay	BOS S- <b>T01</b>	Off-delay n
PNP-/NPN converter	BOS S- <b>F01</b>	Factory setting
PNP-/NPN converter and NC/NO switcher	BOS S- <b>F01</b>	NC/NO teach
Speed monitor	BOS S- <b>M01</b>	
Speed monitor	BOS S- <b>M01</b>	
Pile-up detector	BOS S- <b>M01</b>	

Series	<b>BOS S</b>	<b>BOS S</b>	<b>BOS S</b>	<b>BOS S</b>
Function	programmable pulse or interval counter, switching inverter	programmable timer for on- and off-delay	PNP-/NPN converter, adjustable NC/NO switchover	programmable frequency monitoring



Ordering code	PNP NPN	BOS S-C01 BOS S-C02	BOS S-T01 BOS S-T02	BOS S-F01 BOS S-F02	BOS S-M01 BOS S-M02
Supply voltage $U_B$	10...30 V DC				
Rated operational current $I_e$	< 400 mA				
No-load supply current $I_0$ max.	≤ 10 mA				
Polarity reversal protected	yes				
Short circuit protected	yes				
Input impedance	> 10 kΩ				
On-/off-delay	0.1 ms				
max. input frequency	10 kHz				
Input	PNP	NPN	PNP	NPN	PNP
Output	PNP	NPN	PNP	NPN	PNP
Smallest preset number	1				
Largest preset number	65535				
Shortest settable time	1 ms				
Longest settable time	65535 ms				
Monitoring frequency range					0.015 Hz...1 kHz
Function indicator	LED red				
Ambient temperature range $T_a$	0...+60 °C				
Degree of protection per IEC 60529	IP 67				
Insulation class	□				
Housing material	PBT/PA 6.6				
Connection type input	M12 female 4-pin				
Connection type output	M12 male 4-pin				
Recommended connector	BKS- 19/BKS- 20				
Weight	15 g				

Wiring diagram



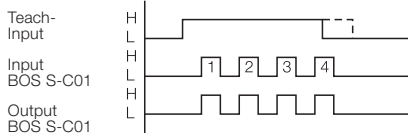
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Connectors  
Splitter boxes  
with  
accessories  
**Electrical  
devices**  
Fasteners  
Tools

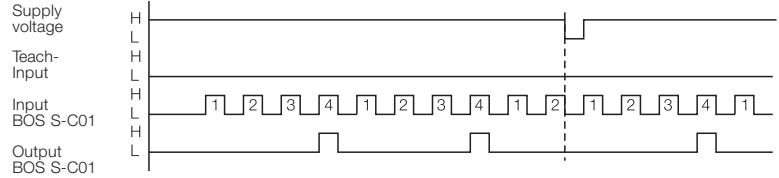
**Signal Adapter BOS S-C**

Programmable pulse or interval counter

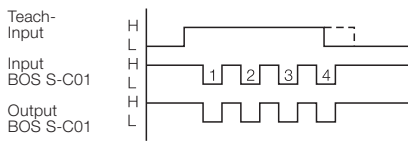
Pulse counter teaching



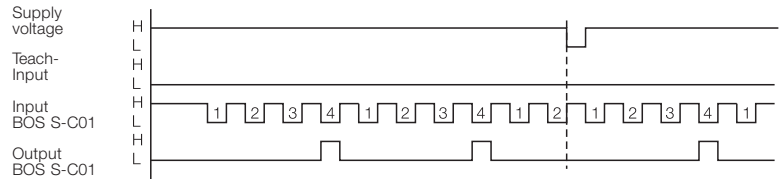
Use as a pulse counter



Interval counter teaching



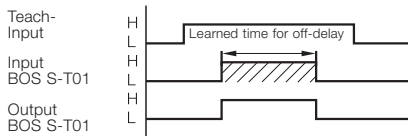
Use as an interval counter



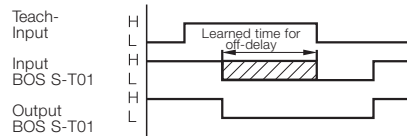
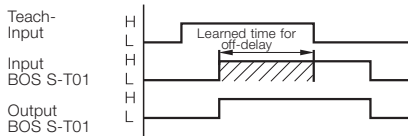
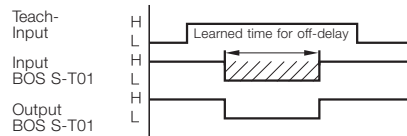
**Signal Adapter BOS S-T**

Programmable timer for turn-on or turn-off delay

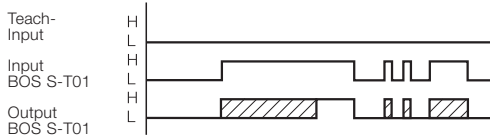
On-delay teaching



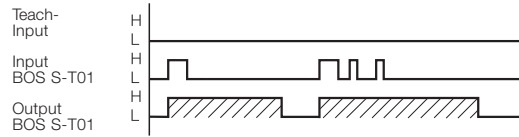
Teaching an off-delay



Operation with on-delay



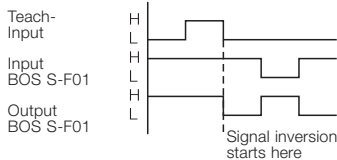
Use with off-delay



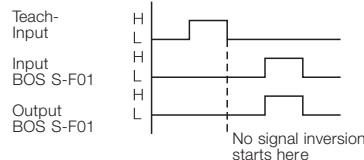
**Signal Adapter BOS S-F**

NPN-/PNP converter, configurable NO/NC toggle

Signal inversion teaching



Teaching without signal inversion



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