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.

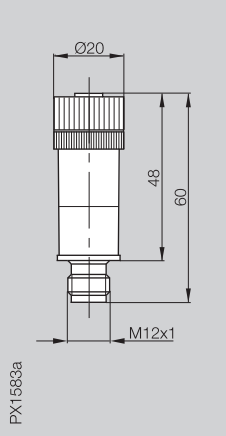
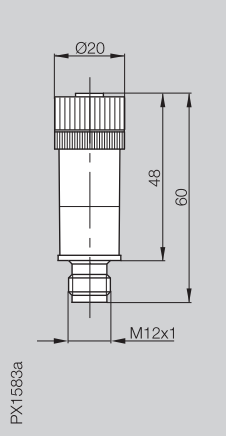
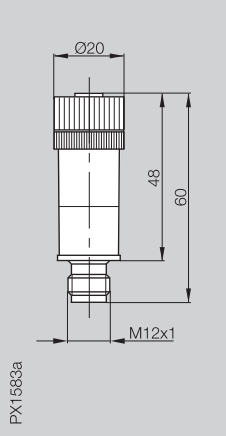
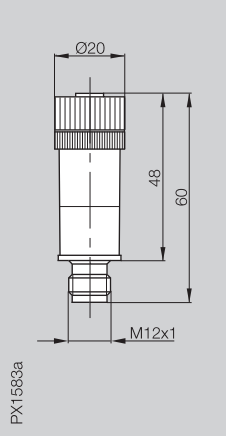
The **BOS S-M** is a freely configurable module for frequency monitoring. It is "active" when the set frequency is exceeded by 5 %.

Application

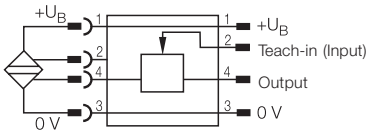
For **all sensors** having a corresponding plug connection and output signal.

Signal adapter selection guide

Function	Device	Setting
NC/NO inverter	BOS S-**C**01	Pause counter 1
Flip-Flop (touch on, off)	BOS S-**C**01	Pause counter 2
Divider (1 pulse per revolution)	BOS S-**C**01	Pulse counter n
Parts counter (count down)	BOS S-**C**01	Pulse counter n
Switching amplifier to 400 mA	BOS S-**C**01	Pulse counter 1
Off-delay	BOS S-**T**01	Off-delay n
Off-delay	BOS S-**T**01	Off-delay n
PNP-/NPN converter	BOS S-**F**01	Factory setting
PNP-/NPN converter and NC/NO switcher	BOS S-**F**01	NC/NO teach
Speed monitor	BOS S-**M**01	
Speed monitor	BOS S-**M**01	
Pile-up detector	BOS S-**M**01	

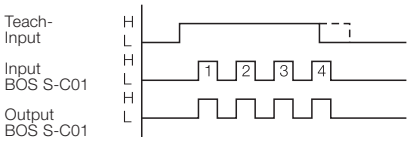
Series	BOS S	BOS S	BOS S	BOS S
Function	programmable pulse or interval counter, switching inverter	programmable timer for on- and off-delay	PNP-/NPN converter, adjustable NC/NO switchover	programmable frequency monitoring
				
Ordering code PNP	BOS S-C01	BOS S-T01	BOS S-F01	BOS S-M01
Ordering code NPN	BOS S-C02	BOS S-T02	BOS S-F02	BOS S-M02
Supply voltage U_B	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
Rated operational current I_e	< 400 mA	< 400 mA	< 400 mA	< 400 mA
No-load supply current I_0 max.	≤ 10 mA	≤ 10 mA	≤ 10 mA	≤ 10 mA
Polarity reversal protected	yes	yes	yes	yes
Short circuit protected	yes	yes	yes	yes
Input impedance	> 10 kΩ	> 10 kΩ	> 10 kΩ	> 10 kΩ
On-/off-delay	0.1 ms	0.1 ms	0.1 ms	0.1 ms
max. input frequency	10 kHz	10 kHz	10 kHz	10 kHz
Input	PNP NPN	PNP NPN	PNP NPN	PNP NPN
Output	PNP NPN	PNP NPN	NPN PNP	PNP NPN
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	LED red	LED red	LED red
Ambient temperature range T_a	0...+60 °C	0...+60 °C	0...+60 °C	0...+60 °C
Degree of protection per IEC 60529	IP 67	IP 67	IP 67	IP 67
Insulation class	⧈	⧈	⧈	⧈
Housing material	PBT/PA 6.6	PBT/PA 6.6	PBT/PA 6.6	PBT/PA 6.6
Connection type input	M12 female 4-pin	M12 female 4-pin	M12 female 4-pin	M12 female 4-pin
Connection type output	M12 male 4-pin	M12 male 4-pin	M12 male 4-pin	M12 male 4-pin
Recommended connector	BKS-_ 19/BKS-_ 20	BKS-_ 19/BKS-_ 20	BKS-_ 19/BKS-_ 20	BKS-_ 19/BKS-_ 20
Weight	15 g	15 g	15 g	15 g

Wiring diagram

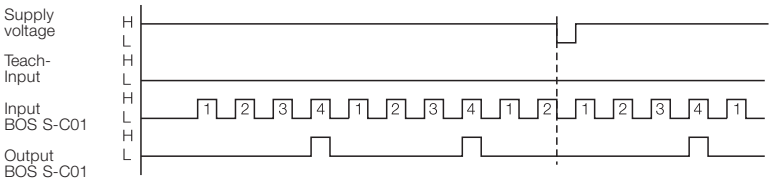


Signal Adapter BOS S-C
Programmable pulse or interval counter

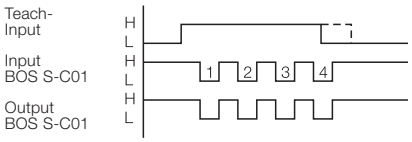
Pulse counter teaching



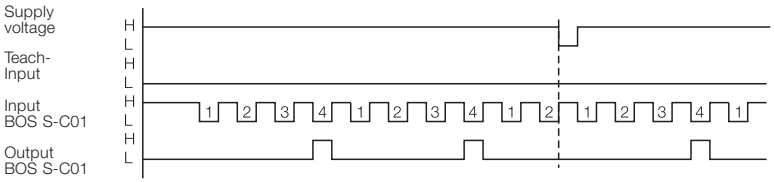
Use as a pulse counter



Interval counter teaching

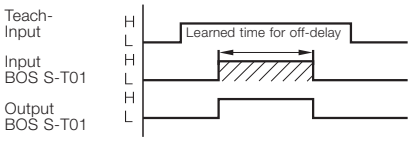


Use as an interval counter

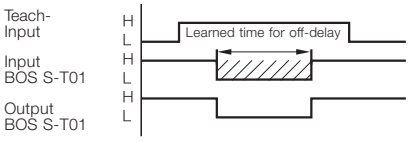


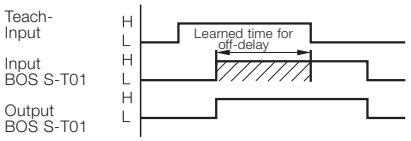
Signal Adapter BOS S-T
Programmable timer for turn-on or turn-off delay

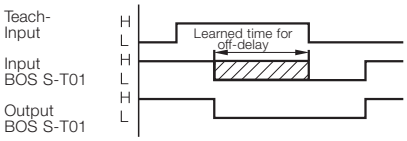
On-delay teaching



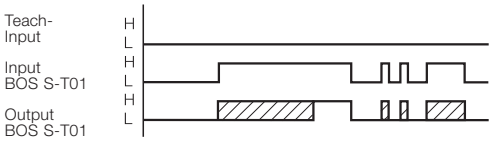
Teaching an off-delay



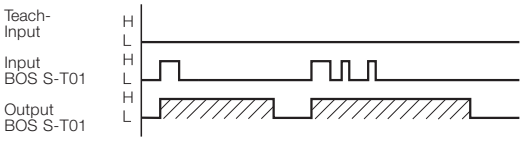




Operation with on-delay

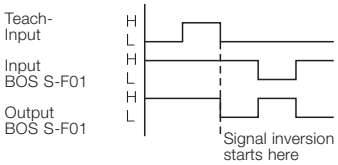


Use with off-delay

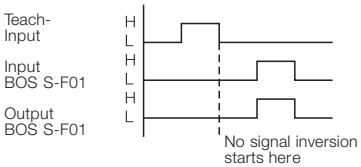


Signal Adapter BOS S-F
NPN-/PNP converter, configurable NO/NC toggle

Signal inversion teaching



Teaching without signal inversion



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