

OptiTire™

Tire Pressure Monitoring System (TPMS) for Trailers



OptiTire Strap Mounted Sensors (SMS) & Fastening Straps

(1) Strap Mounted Sensor	Sensor color	ZF Part Number	Maximum distance from receptor		(2) Fastening Strap & Seam Color	ZF Part Number	Rim diameter	Adjustable Circumference [mm]
			Single tires	Twin tires				
	Blue*	960 733 000 0	1.6 m	-	WABCO Red	960 733 117 0	175"	1200 - 1350
	Grey	960 733 001 0	2.5 m	2.2 m	WABCO Blue	960 733 119 0	19.5"	1300 - 1450
	Yellow	Not supplied	Supplier side information		WABCO Yellow	960 733 122 0	22.5"	1535 - 1685
	Red	Not supplied			WABCO Green	960 733 124 0	24.5"	1725 - 1875

OptiTire Wheel Internal Sensors (WIS) & Valve Sets

Wheel Internal Sensor	(3) WIS Module Part Number	(4) Valve Set Part Number	
		Steel rims	Aluminium rims
	960 732 000 0* *Not SAE compliant with telematics. Not supported by Repeater.	960 732 100 0	960 732 104 0
		960 732 102 0	960 732 105 0
			960 732 117 0

OptiTire Strap Mounted Sensors (SMS) Installation on rim

Inside (unmarked)

Outside (marked)

Slide the sensor into the pocket on the inside of the strap (unmarked side), rounded side first.

Pass the fastening strap through the center of the drop center and once around the rim.

Pass the Velcro through the ladder buckle.

Tighten strap with ~100N tension and close Velcro fastener.

The sensor must be positioned flat on the rim's centre-drop with the concave underside to the rim. The Velcro fastener must be pressed firmly over its entire length. Place the sensor aligned with the inflation valve for easier location after tire mounting.

Secure Velcro by pulling the plastic strap loop centrally onto the sewn end of Velcro.

OptiTire Wheel Internal Sensors (WIS) Installation

Steel Rim

Internal sensor sits flat on the rim

Aluminium Rim

Only the rear section of the wheel electronics sits on the rim

The internal sensor must be aligned parallel to the rim.

TPMS Configurations

	Trailer EBS	Main ECU	Signal Enhancer	Range Extender	Repeater
TEBS E					
Other Trailer EBS					
IEBS Basic					
IEBS Standard					
IEBS Premium					

TPMS Installation examples

3 axes Semitrailer with twin tires

Ensure that the reception rate shows sufficient signal availability for all sensors

Drawbar trailer with single tires

The master ECU can also be installed on the front axle and the slave on the rear axle.

TPMS components

OptiTire ECU 446 220 110 0

Range Extender 446 220 110 0

OptiTire Bracket 446 220 000 4

SCALAR EVO Pulse with Battery

346 292 000 0
former 1x-TRALERPULSE with Battery

346 292 001 0*
*with battery and surge protection

Brackets for SCALAR EVO Pulse

Advanced I - Bracket 554 052 051 4 (Default bracket)

L - Bracket (alternative) 554 052 041 4

TPMS Manager 300 200 001 0

Repeater 557 046 011 0

OptiTire Diagnostic Software 246 301 730 0

Fleet Installer App for telematics

<https://install-fltnewwabco-fleet.com/>

OptiTire Sticker 813 000 003 3 (Contains 6 units)

OptiTire System Description 815 010 229 3

TPMS Cables

TEBS E Cables

OptiTire™, SCALAR EVO Pulse

System: TEBS E

Port: SUBSYSTEMS

449 963 020 0 2 m

449 963 050 0 5 m

OptiTire™, SCALAR EVO Pulse and ECAS Remote Control Unit

System: TEBS E

Port: SUBSYSTEMS

449 912 234 0 L1 = 5 m / L2 = 7 m

OptiTire™, SCALAR EVO Pulse

System: TEBS E

Port: SUBSYSTEMS

449 913 050 0 5 m

OptiTire™, SCALAR EVO Pulse and SmartBoard

System: TEBS E

Port: SUBSYSTEMS

449 916 182 0 L1 = 0.4 m / L2 = 4 m

449 916 243 0 L1 = 1 m / L2 = 6 m

449 916 253 0 L1 = 6 m / L2 = 6 m

OptiTire™, SCALAR EVO Pulse and ECAS Control Box

System: TEBS E

Port: SUBSYSTEMS

449 934 330 0

OptiTire™, SCALAR EVO Pulse

System: TEBS E

Port: SUBSYSTEMS

449 934 330 0

OptiTire™, SCALAR EVO Pulse

System: TEBS E

Port: SUBSYSTEMS

449 944 217 0

SmartBoard Adapter

894 600 074 2 0.15 m

OptiTire™ & SCALAR EVO Pulse Adapter

894 600 001 2 0.15 m

IEBS Cables

OptiTire™, SCALAR EVO Pulse

System: IEBS

Port: SUBSYSTEMS

449 928 020 0 2 m

449 928 050 0 5 m

449 928 120 0 12 m

449 928 150 0 15 m

SUBSYSTEMS Port Duplicator

System: IEBS

Port: SUBSYSTEMS

894 600 161 2 0.5 m

OptiTire™, SCALAR EVO Pulse

System: HALDEX EB+ 4.0

Port: DIAG

554 051 011 0 5 m

OptiTire™, SCALAR EVO Pulse

System: Knorr-Bremse

Port: IN/OUT

449 040 003 0 2 m

449 040 006 0 5 m

Additional components

3 Way Cable Junction box 894 600 991 2

Knorr-Bremse TEBS Connector kit 554 053 011 4

Contains:

- 1x DTM connector 12 pin - Code A
- 1x DTM connector 12 pin - Code B
- 1x Wedglock for 12 pin
- 10x Sealing plugs

Power cable for Repeater

557 041 011 0 6 m

Repeater Adapter

554 051 031 0 0.3 m

The repeater transmits and amplifies tire messages to the OptiTire ECU/SCALAR EVO Pulse connected to the trailer EBS modulator (TEBS E, IEBS, Other TEBS devices). The cables are used to provide power supply and do not transmit messages information. The repeater adapter can be connected to any OptiTire-HDSCS plug for power supply. The repeater adapter is compatible as well with the OptiTire adapter.

The * symbol and ** symbol indicate the cables ends that can be connected together