

*tire***Alert**

Tire Pressure Monitoring™

Version
2.0



INSTALLATION GUIDE

LIMITED WARRANTY

Kisan warrants this product to be free of manufacturing defects for a one-year period after the original date of consumer purchase. A purchase receipt or other proof of original retail purchase will be required. This warranty does not include damage to the product resulting from accident, misuse, improper installation or operation or unauthorized repair or alteration. If the product should become defective within the warranty period, we will elect to repair or replace it free of charge at our option. Parts and/or replacement product supplied under the warranty may be new or rebuilt.

The consumer's sole remedy shall be such repair or replacement as is expressly provided above, and **Kisan** shall in no event be liable for any incidental or consequential damages arising out of the use of; or inability to use this product for any purpose whatsoever.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights. You may have other rights, which vary from state to state.

If you have to return the product for warranty service, please contact our service department to obtain a R.M.A. (Return Merchandise Authorization) number and instructions on how to pack and ship the product to us.

Kisan technologies, Inc.

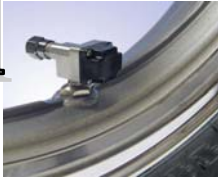
1219 Lake Plaza Drive, Colorado Springs. CO 80906

Ph: 719-226-0300
(9am to 4pm Mountain Time)

Fax: 719-576-4700
email:sales@kisantech.com



1 SENSOR



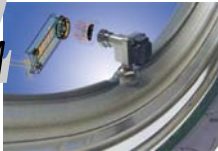
Install Sensors.

Installation Overview

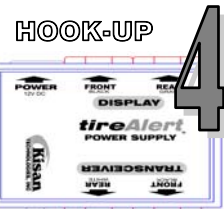
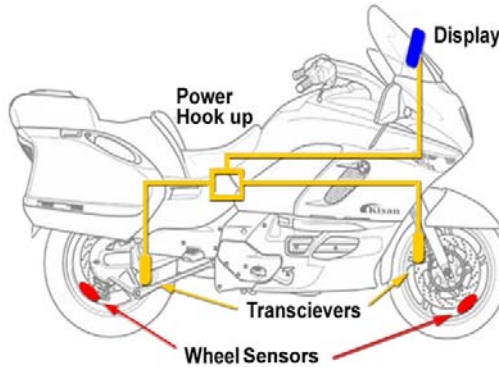


Mount the Display.

2 TRANSCEIVER



Install Transceivers.



Power and ground hook up.

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1

TPM-20 VALVE-CAP SENSOR:

For the **TPM-20** sensors, the integrity of the existing tire valves is vitally important. Please inspect each tire valve carefully.

Inspect tire valves carefully before you begin installing sensors.

Use the 4-Way tool supplied to recondition the threads of the valve-stem. This will help with proper installation.

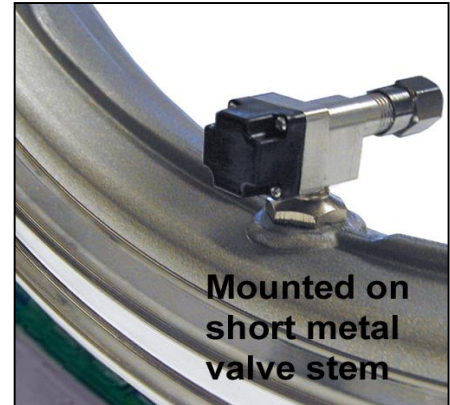
- **Not recommended for long body – over 2” – or rubber tire valves.**

- Screw-on sensors are best suited for short metal tire valves

- Valve-stem should not be bent – **MUST** be straight up vertically

- Remove the existing valve caps and inspect the threads

- Check to see that the valve core is not extending past the neck

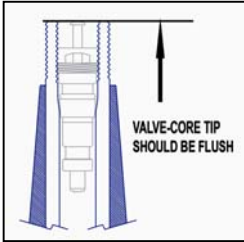


If you find any damage to the tire valve, it is highly recommended to either replace it or purchase the **TPM-30 *tireAlert*^{2.0}** system.

- You can repair minor scratches or a slight damage to the threads of the tire valve.

Use the 4-Way tool to chase the entire length of the threads by twisting $\frac{1}{2}$ turn then backing off each time – use thread lubricant or tapping fluid.

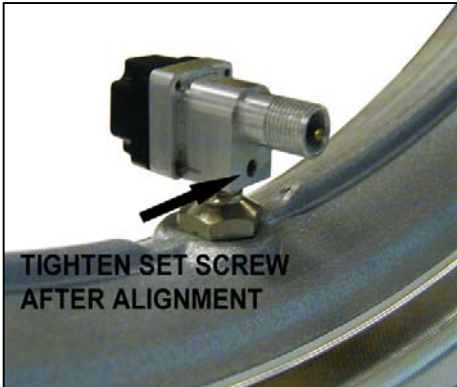




As shown here, the valve-core should be flush with the top of the valve-stem.

- If the tip of the valve-core extends out, use the 4-Way tool to seat it properly – finger-tighten only.
- If the tip of the valve-core is recessed - replace it with new short valve-cores supplied.

Once you have prepared the tire valve, you are ready to install the sensors:



- 1 Begin threading the TPM-20 sensor on the tire valve.
- 2 As you keep threading it, you may hear a slight hiss, as a small amount of air escapes before it is sealed.
- 3 Keep tightening it so that the face is normal to the edge of the wheel as shown.
- 4 DO NOT use a wrench to force the final turn.

If you felt that it was hard to thread it for the last couple of turns, or you need at least a ½ more turn to seal it up, remove the sensor and use the 4-Way tool to chase and clean the threads of the valve-stem.

- 5 Once you have it tightened and aligned correctly, lock it in place with the setscrew in the base collar. Use the 3/32" Allen wrench.

Check for any air leaks - use soapy water and look for air bubbles.

Do not remove valve-core if you do not have air compressor available to re-inflate the tire.

TPM-20 sensors add about ¼ oz (10 grams) to the wheel, which is within limits of a typical wheel balance.

1 TPM-30 VALVE-STEM SENSOR:

TPM-30 version sensors replace the existing tire valves of your motorcycle. This will require the tire bead to be separated and the sidewalls to be clamped so that there is access to the inside of the wheel.

Generally, a tire shop or your motorcycle dealer is better equipped to handle this procedure.

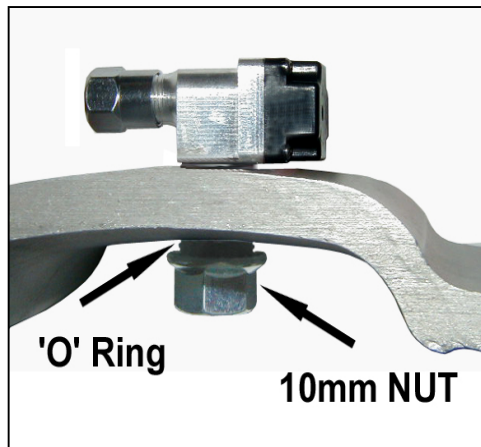
If you plan to install this, you will need (2) large "C" clamps and an air compressor.

Depending on the type of tire valve being replaced, TPM-30 sensor will add about ½ oz (20 grams). It is recommended to have the tires re-balanced. Alternatively, you can use the ½ oz wheel weights supplied for counter balance.

DO NOT use side-stand. Use the center-stand and secure the bike.

- 1 Deflate the tire and separate the tire-bead on the side of the bike that you plan to mount the Transceiver.
- 2 Squeeze the sidewall using 'C' clamps about 3" (7.5cm) on each side of the tire valve.
- 3 Remove the existing tire valve and clean the hole prior to inserting the TPM-30 sensor.

- 4 Insert TPM-30 sensor so that the fill-port is on the opposite side of where the Transceiver will be. Install the sealing grommet and washer and then hand tighten the nut.
- 5 Torque the nut 4 - 6 ft-lbs (5.5 - 8.0 N·meter) - just enough to prevent the Sensor from twisting in the tire valve hole.
- 6 Remove "C" clamps, lubricate the tire bead and inflate the tire.



Check for any air leaks - use soapy water and look for air bubbles.

1 TPM-40 SENSOR for WHEEL-SPOKES:

TPM-40 sensors are specifically for the wheel-spoke mounted tire valves. They do not have a fill-port, so adding or removing air requires them to be taken off – just like a valve cap.



Installing TPM-40 sensors requires them to be fully threaded-in on the tire valve to provide secure sealing.

- Remove the existing valve cap and inspect the threads and check to see that the valve core is flush and not protruding.

- 1 Begin threading the sensor on the tire valve.

- 2 As you keep threading it, you may hear a slight hiss, as a small amount of air escapes before it is the sealed.

If you felt that it was hard to thread it for the last couple of turns, or you need at least a ½ more turn to seal it up; remove the sensor and use the 4-Way tool to chase and clean the threads of the valve-stem.



- You can repair minor scratches or a slight damage to the threads of the tire valve.

Use the 4-Way tool to chase the entire length of the threads by twisting ½ turn then backing off each time – use thread lubricant or tapping fluid.

- Seat the valve-core – finger-tighten only.

TPM-40 sensors add about ¼ oz (10 grams) to the wheel, which is within limits of a typical wheel balance.

Do not remove valve-core if you do not have air compressor available to re-inflate the tire.

Check for any air leaks - use soapy water and look for air bubbles.

2

TRANSCIEIVER MOUNTING:

Transceivers are installed such that when the wheel-mounted sensor rotates past, the air gap is about a ½" (12mm), and it is in radial alignment with the Sensor - the centerline of both are at the same diameter.

Transceivers have a clamp-base, which slides over the dowel pin of the Mounting Adapter. This allows for axial and radial adjustments to achieve the final setting.

Each model-specific TPM kit includes appropriate Mounting Adapters. Visit www.kisantech.com and click on 'Application' to find out more.

Mounting Adapters are used to facilitate the installation of the Transceivers.

For many of the popular makes and models, appropriate Mounting Adapters have been fitted and are listed in our database.

If you purchased a model-specific TPM kit, appropriate Adapters are included.

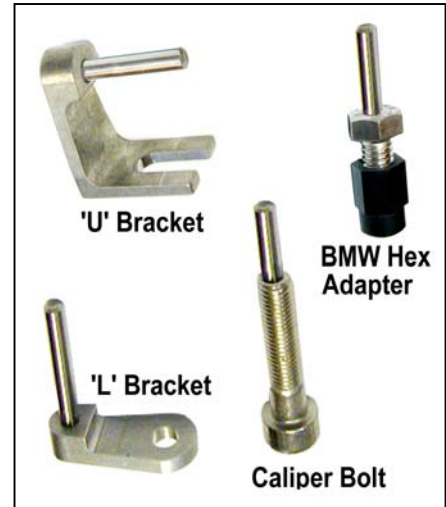
Front Wheel Adapters:

In most cases, an existing caliper bolt makes a good mounting location. Essentially, the tip of the bolt has the dowel pin pressed-in.

On some bikes, fender brace or a flange of the lower fork tube is used.

Rear Wheel Adapters:

Generally, an existing bolt of the driveshaft flange or of the link-arm provides a suitable mounting location. Either of the "L" or "U" adapters works well. There is also a special Hex adapter for BMW shaft-drive.

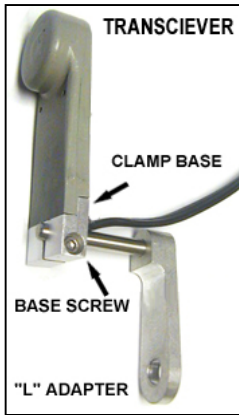


Both Transceivers are identical with 5' (1.5 meters) long cable, sufficiently long to be able to reach the area under the seat with the connector end. Each Transceiver has a color-coded band to help identify as front and rear installations.

2

TRANSCIEVER ALIGNMENT:

At this stage of the installation, the Transceivers are mounted on the dowel pins of the front and rear adapters such that they are lined-up with approximately $\frac{1}{2}$ " (12mm) of air-gap. And the cables are routed for power and ground hook up.



- 1 Install the Mounting Adapter.
- 2 Slide the Transceiver over the dowel pin such that the LED faces outboard.
- 3 Rotate the wheel carefully to line-up the Sensor with the Transceiver.
- 4 Adjust the clamp-base to get an air-gap of $\frac{1}{2}$ " (12mm)
- 5 Lightly tighten clamp-base screw with $\frac{3}{32}$ " Allen wrench. Later on, you may have to adjust this for a final setting.
- 6 Route the cables alongside brake hoses or existing wiring harness, using wire-ties at appropriate places. In most cases, the connector end should end up under the seat for power and ground hook-up.



As shown here the head of the Transceiver should line-up with the face of the Sensor on the wheel – with about a $\frac{1}{2}$ " (12mm) of air gap.

- Later, when the rest of the installation is completed and the system is powered, the LED of the transceiver will begin flashing to indicate if the Sensor is within the acceptable range.

Objective is to achieve an air-gap of $\frac{1}{2}$ " (12mm) between the Transceiver and the Sensor.

Check to see that after installing the Transceiver, the wheel is able to rotate freely without interference.

Make sure that cables do not touch any sharp edges or high temperature parts.

3

MOUNTING THE DISPLAY:

tireAlert^{2.0} multi-function display can be either flush mounted or attached to the handlebar.

A Cradle to attach the Display is included with this kit.

The Display has a daylight sensor built-in to adjust the backlight intensity for daytime or nighttime viewing.

Backlight color changes to red if pressure drops below the 2nd level warning.

- For best viewing, the Display should be vertical – not lay flat
- Position the Display in desired location - verify viewing and ascertain that the cables are long enough.

- Determine how to route both input cables
- Hold the Mounting Cradle in place over the handlebar and use each 1/8" tie wrap supplied. Feed them over the half round and the handlebar and pull it tight.
- Make sure the cables have enough slack when you steer both ways

FLUSH MOUNT

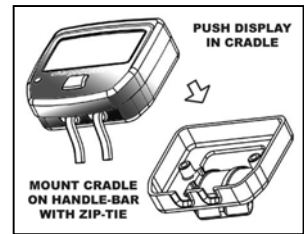


- Clean the mounting surface thoroughly with alcohol swab
- Use the mounting-pad supplied
- Apply pressure to hold it in place
- Allow 24 hours for the bond to cure.

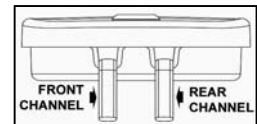
Front and Rear channel cables are shown. As you look at the Display, the Front channel is on the left side and the Rear channel is on the right side. The cables are sealed at the entry point of the case to keep the Display waterproof.



HANDLEBAR MOUNT



CABLE LOCATION



4

POWER & GROUND HOOK-UP:

In this last step of the installation: Front and rear channel cables are connected, and the power and ground wires are hooked-up.



- 1 Plug the Display and Transceiver cables in appropriate sockets as shown here.
- 2 Hook up Power cord with RED Stripe to a switched 12V source and attach the Ground wire to good, clean metal chassis point.
- 3 Plug the power cord in the jack and turn the ignition On, the LED be On.

Typically, the front and rear channel cables for Display and Transceivers come together under the seat for power & ground hook-up.

CHECKLIST OF INSTALLATION:

Wheel Sensors:

- Installed & aligned properly
- Leak tested
- Inflated to correct tire pressures

Transceivers:

- Mounted on adapters & aligned
- Setup to an air-gap of approximately 1/2" (12mm)
- Cables routed & zip tied

Display:

- Setup in a convenient & readable location
- Cables routed & zip tied

Power Hook-up:

- Front & rear channel connectors plugged-in
- Ground wire attached to a good, clean chassis point
- Power wire connected to a switched power source

Checklist provides a final verification of the installation.

5

INITIAL CALIBRATION:

tireAlert^{2.0} Display is programmed to operate in two distinct modes: Pressure Monitoring Mode and Performance Capture Mode. Upon power-up the default mode is Pressure Monitoring.

INITIAL CALIBRATION

After Initialization, both tires flash '99' and the bar graph streams forward.

❶ Rotate front wheel so that the wheel Sensor and the Transceiver are lined-up – LED will begin flashing if in proper range.

❷ Push & hold front button to advance pressure display to match the actual pressure in the front tire.

❸ Push the 'Mode. Button to register the new value. Front tire display will stop flashing.

❹ Use the 3/32" Allen key to tighten the clamp-base of the front Transceiver.

REPEAT FOR REAR TIRE

- To change from default English units to Metric units ■

Push & Hold the 'MODE' button, then turn the ignition on. This will be the new default mode for BAR display and Performance options.

START-UP DISPLAY ROUTINE

- As the Display is powered with ignition on, it performs Initialization and a system integrity check.
 - All segments are turned on briefly.
- Tire pressures are recalled from previous setting.
 - Front & Rear tire icons and pressures are on briefly.
- Next, the system attempts to acquire tire pressures.
 - Horizontal bar graph flashes sequentially
- Tire pressures are captured and displayed.
 - Front & Rear tire icons and pressures shown.



2-STAGE WARNING SEQUENCE

- **1st Stage** warning activated, if the pressure drops 4 PSI
 - Tire icon and pressure readings flash.
- **2nd Stage** warning activated, if pressure drops 6 PSI
 - Backlight color changes to red.



5

PERFORMANCE OPTIONS:

Once the input parameters for the wheel diameter and the loaded weight are entered, the Display is able to show following: Speed & instantaneous Horsepower output of the driven wheel. Maximum HP and 0 to 60MPH times are captured in background.

- To enter Performance monitoring Mode ■

Push & Hold both tire buttons, then turn the ignition on. This mode will revert to the Pressure mode upon power off.

Push 'Mode' button to scroll through different screens.



- 1st screen in this mode is the speed in MPH or KPH
 - Use it to compare accuracy. Adjust wheel diameter input to correlate actual rolling diameter of the bike.
- 2nd screen in this mode is the instantaneous HP output.
 - HP readings and bar graph will fluctuate continuously as you accelerate or slow down.
- 3rd screen in this mode is for 0 to 60 MPH capture time.
 - When the horizontal bar graph is full – time is shown. You can review this reading even after pulling over. The best effort readings overwrite previous ones.
- 4th screen in this mode is for Max HP achieved.
 - Horizontal bar graph is blanked out to distinguish it from the real-time HP display. You can review this reading even after pulling over. Maximum values are shown.

REQUIRED SETUP

- ➊ Push & Hold both tire buttons, then turn the ignition on. The rear tire only and either MPH or KPH will come on.
- ➋ Push & hold rear tire button to advance the rear wheel diameters from 10" to 20" to match your wheel.
- ➌ Push the 'Mode' Button to register the new value.
- ➍ Push & Hold the front tire button to advance the total loaded weight of the bike (including you) from 500 to 2000 lbs or 250 to 1000 Kg.
- ➎ Push the 'Mode' Button to register the new value.

FREQUENTLY ASKED QUESTIONS:

Q: I have short metal valve-stems on my wheels but I am having difficulty to seal the front Sensor. It won't stop leaking. What do I do now?

A: TPM-20 Sensors have a roll-pin plunger and a seal built-in the mounting base. For the plunger to push the existing valve-core open and simultaneously seal the connection, it **MUST** be fully seated. Check to make sure the 'O' ring seal is in place. Also check to see that there are no deep scratches along the neck of your metal valve-stem.

If you are able to tighten the Sensor and stop the leak but the face of the Sensor won't line-up normal to the wheel, then you may have to turn the entire valve-stem. Sometimes, you can start the threading with a different approach angle to finally end-up with a properly aligned Sensor – tight enough for a leak-free installation.

Q: I purchased the complete valve-stem **tireAlert**. The holes in my wheel are too small to install the Sensors.

A: TPM-30 has valve-stems for 10MM diameter holes, which is the most common size. Some wheels have smaller 8MM holes. You will have to drill out the wheel to the larger diameter.

Q: My bike has valve-stem that is slightly bent (much less than 90°) so the front Sensor won't line-up. What now?

A: There is a special version Sensor available with an 18° bent inlet.

Q: I have noticed that the tire pressure display does not change even with hot tires and higher pressures. Why?

A: The tire pressure display is scaled-back to cold tire pressure used for initial calibration. It is normal for the tire pressures to rise with heat generated from riding. **tireAlert** system keeps track of normal pressure increase of 1 PSI for each 10°F temperature rise. If it exceeds normal parameters, the display will show non-compensated pressure.

Q: The MPH display is off by at least 5MPH compared to the bike's speedometer, and my 0 to 60 times are also off quite a bit. How can I fix it?

A: Check the wheel diameter input. If needed, to allow for a lower profile tire, you can change to a smaller diameter.