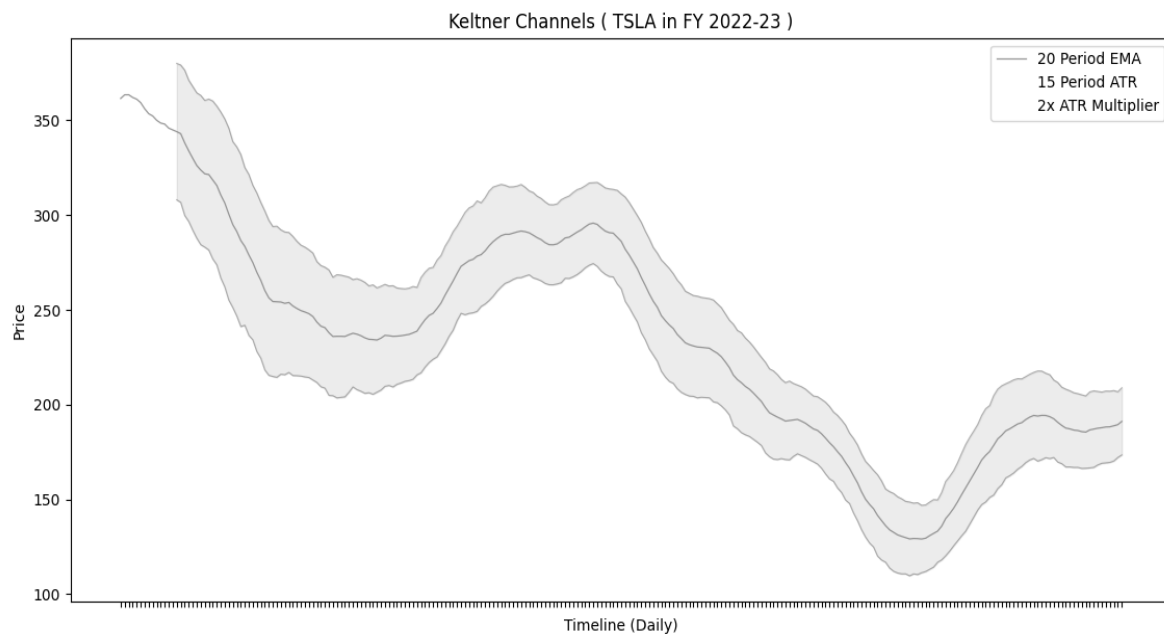


Keltner Channels

Volatility indicator



Keltner Channels is a technical analysis tool that helps identify potential price breakouts, overbought and oversold conditions, and market volatility. It consists of three lines plotted on a price chart. Let's delve into each component, its calculations, and the reasons for its usage:

1. Middle Line: The middle line in Keltner Channels is typically a moving average of the price. It is commonly set as a 20-period exponential moving average (EMA), although the period can be adjusted to suit the trader's preference. The middle line serves as a reference point for the other two lines and represents the average price over a specified period.

2. Upper Band: The upper band is derived from the middle line by adding a multiple of the average true range (ATR) to the middle line. The ATR measures the volatility of an asset by calculating the average range between the high and low prices over a specified period. The multiple used to determine the upper band width is typically 1.5 times the ATR.

Calculation: Upper Band = Middle Line + (ATR x Multiplier)

The upper band expands when market volatility increases, indicating potential overbought conditions or the possibility of a price breakout to the upside.

3. Lower Band: The lower band is derived from the middle line by subtracting a multiple of the ATR from the middle line. Similar to the upper band, the multiple used for the lower band is typically 1.5 times the ATR.

Calculation: Lower Band = Middle Line - (ATR x Multiplier)

The lower band widens during periods of higher volatility, signaling potential oversold conditions or the potential for a price breakout to the downside.

Traders utilize Keltner Channels for various reasons:

1. Volatility Assessment: Keltner Channels adjust to market volatility by expanding or contracting. Traders can gauge market volatility by observing the width of the channels. Wider channels indicate higher volatility, while narrower channels suggest lower volatility.

2. Support and Resistance Levels: The upper and lower bands of Keltner Channels serve as dynamic support and resistance levels. Prices often encounter resistance near the upper band and support near the lower band. Traders can look for potential reversals or breakout opportunities when prices approach these levels.

3. Breakout Signals: Price breakouts from the Keltner Channels can indicate potential trend changes or continuation. A price breakout above the upper band may signal a bullish trend, while a breakout below the lower band may suggest a bearish trend. Traders can use these breakout signals to initiate trades or adjust their positions.

4. Overbought/Oversold Conditions: When prices reach or extend beyond the upper band, it may indicate an overbought condition, suggesting a potential reversal or pullback. Conversely, prices nearing or falling below the lower band can indicate an oversold condition, implying a potential bounce or reversal.

By incorporating Keltner Channels into their analysis, traders gain insights into market volatility, potential support and resistance levels, and overbought/oversold conditions. However, it is important to combine Keltner Channels with other technical indicators and fundamental analysis to make well-informed trading decisions.

What parameters are used?

20 Periods EMA: I used 20 periods because it is default and using a lower value gives so much false trends and for higher value it gives late signals.

2x multiplier used: It is recommended to use a multiplier between 1 and 3 and when I tested 2x comes out to be best result using lower value contracts the bands and price break out so many times resulting false resistance and support. And for higher value it just rarely touches the bands.