

Trend Resumption Momentum

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Trend Continuation / Momentum	M15 – H1	www.algotbot.live

⚠ Important Disclaimer This document is for educational and informational purposes only. It does not constitute financial or investment advice. Trading forex, CFDs, and other leveraged instruments involves substantial risk of loss and is not suitable for all investors. Past backtest performance does not guarantee future results. Never trade with capital you cannot afford to lose.

Overview

Trend Resumption Momentum is a trend-following, pullback-continuation Expert Advisor. Rather than chasing breakouts or trying to pick tops and bottoms, it waits for an established trend to pause, catch its breath on a shallow pullback, and then *resume* in the original direction — entering precisely as momentum re-ignites.

Every trade must satisfy the confluence of **three independent, rule-based filters**. Because a signal only fires when all three agree, the EA is deliberately selective: it stays out of choppy, directionless conditions and gives each entry a clear structural reason to exist.

- **Trend filter (direction + slope):** the fast EMA must be on the correct side of the slow EMA *and* be actively drifting that way — its value now versus its value `SlopeLookback` bars ago. This demands genuine directional momentum, not just a static ordering of the averages.
- **Momentum resumption (the trigger):** during a healthy trend, RSI dips toward the midline on a pullback and then turns back up. The EA enters on the bar where RSI *crosses* back through `ResumeLevel` in the trend's direction — momentum resuming after resting.
- **Volatility expansion (the gate):** a fast ATR must be at least `VolExpansionMult` × a slow ATR. This confines trading to periods where range is expanding, filtering out dead or whipsaw-prone markets.

The EA is timeframe-agnostic — all reads use the chart's own timeframe. Its natural home is an intraday major FX pair or a metal on **M15** or **H1**, where clean impulse–pullback–resume cycles are common, but it will run on whatever symbol and timeframe you attach it to.

How It Works

The Three-Filter Confluence

On each newly closed bar, the EA evaluates the current market state. A new position is opened only when the trend, momentum, and volatility conditions all line up in the same direction.

1. TREND — DIRECTION AND SLOPE

Two exponential moving averages define the trend. The EA computes the fast EMA at the current bar and again `SlopeLookback` bars earlier to measure its slope:

```
upTrend    = EMA(fast) > EMA(slow)  AND  EMA(fast) > EMA(fast, SlopeLookback bars ago)
downTrend  = EMA(fast) < EMA(slow)  AND  EMA(fast) < EMA(fast, SlopeLookback bars ago)
```

Requiring both the ordering *and* a matching slope ensures the fast average is not merely above the slow one, but is still actively pulling in the trade's direction.

2. MOMENTUM — RSI RESUMPTION CROSS

RSI captures the pullback-and-resume rhythm. The EA compares RSI on the last closed bar (`rsiNow`) against the bar before it (`rsiPrev`) and looks for a fresh cross through the level:

```
upLevel    = ResumeLevel           downLevel = 100 - ResumeLevel
crossUp    = rsiPrev < upLevel     AND  rsiNow >= upLevel    (long trigger)
crossDown  = rsiPrev > downLevel   AND  rsiNow <= downLevel  (short trigger)
```

With the default `ResumeLevel` of 50, a long fires as RSI turns back up through the midline and a short fires as RSI turns back down through it — the moment momentum re-ignites after the pullback.

3. VOLATILITY — EXPANSION GATE

A fast ATR is compared against a slow ATR to confirm the market is alive:

```
volOk = ATR(fast) >= VolExpansionMult × ATR(slow)
```

Only when the fast ATR is expanding relative to the slow baseline is a new entry permitted. This keeps the EA out of flat, low-range conditions where pullback signals tend to whipsaw.

Entry Logic

When there is no open position and the volatility gate is satisfied:

- **Long:** if `upTrend` and `crossUp` are both true, the EA buys at the Ask.
- **Short:** if `downTrend` and `crossDown` are both true, the EA sells at the Bid.

The EA holds **one position at a time** per magic number, so no new trade is opened while an existing one is being managed.

Exit Logic — Stop, Target, and Trend-Flip

Every trade is bracketed by an ATR-scaled protective stop and a fixed reward:risk take-profit. The stop distance is derived from the fast ATR at entry:

```
risk = AtrStopMult × ATR(fast)
Long:  SL = entry - risk      TP = entry + RewardRisk × risk
Short: SL = entry + risk      TP = entry - RewardRisk × risk
```

Beyond the static stop and target, the EA runs an **active trend-flip exit**. On every closed bar it re-checks the EMA structure; if the fast EMA crosses to the wrong side of the slow EMA against an open trade, the position is closed early — before price necessarily reaches the stop or target.

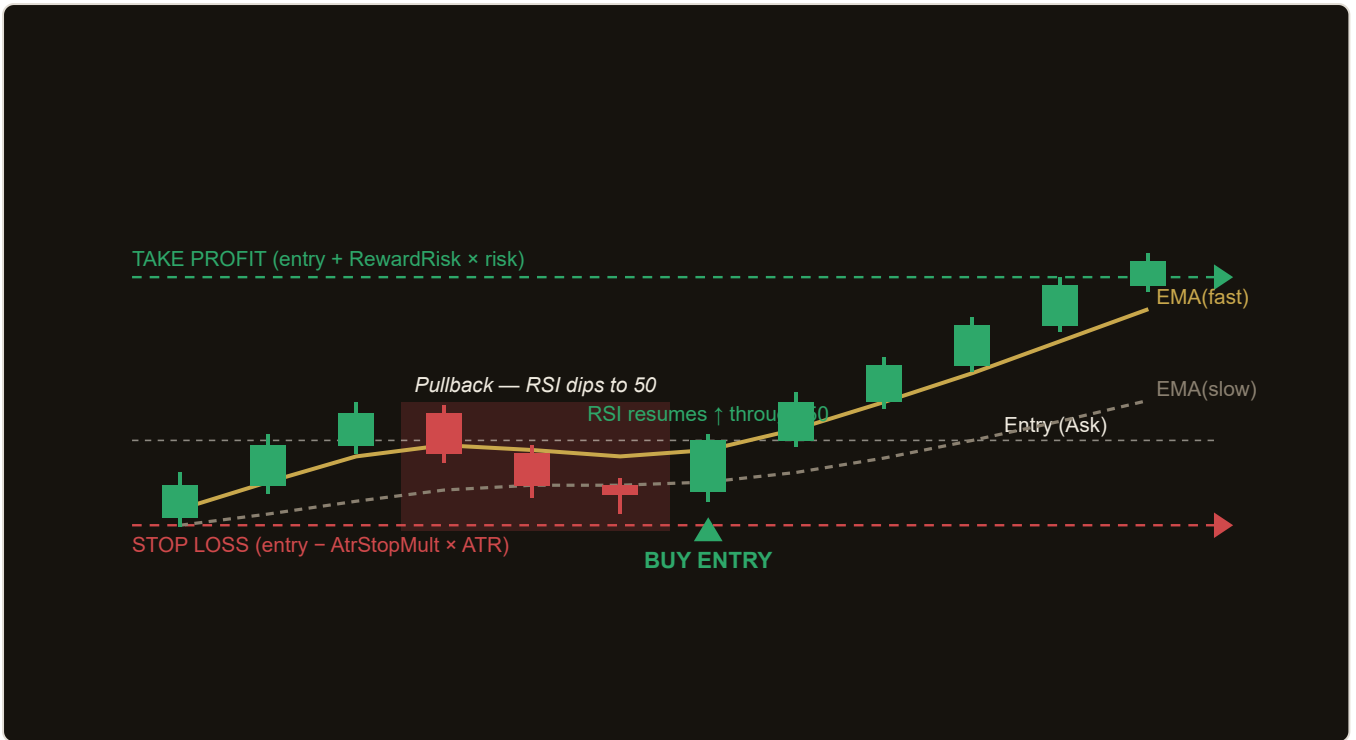
Tip — adaptive stops. Because the stop is a multiple of the fast ATR at the moment of entry, the EA automatically widens its risk in volatile conditions and tightens it in quiet ones. Adjust `AtrStopMult` to control how much breathing room each trade is given, and `RewardRisk` to set the target as a multiple of that risk.

Position Sizing

Order volume is fixed by the `Lots` parameter. There is no compounding or equity-based sizing built in, which keeps behaviour predictable and easy to reason about during testing. Size positions conservatively relative to your account balance and the instrument's contract size.

Strategy in Action

The illustration below shows an example of how the strategy identifies a setup and triggers its entry and exit. This is a simplified, illustrative example for educational purposes — not real market data.



Illustrative example only. Actual market behaviour varies.

Worked example (long)

Price is in a clean uptrend — the fast EMA sits above the slow EMA and is rising. A shallow pullback drags RSI down toward 50 while the fast ATR remains expanded versus the slow ATR. On the bar where RSI crosses back up through 50, all three filters agree: the EA buys at the Ask, places a stop at $\text{entry} - \text{AtrStopMult} \times \text{ATR}(\text{fast})$, and sets a take-profit at RewardRisk times that risk above entry. As price resumes higher, the trade runs to target — unless the EMA structure flips first, in which case the trend-flip exit closes it early.

Parameters

Parameter	Default	Description
FastEmaPeriod	20	Period of the fast EMA that defines short-term trend direction. Range 8–60, step 2.
SlowEmaPeriod	50	Period of the slow EMA that defines the underlying trend. Range 20–150, step 5.
SlopeLookback	3	Number of bars back used to measure the fast-EMA slope (rising vs. falling). Range 1–12, step 1.
RsiPeriod	14	Lookback period of the RSI momentum oscillator. Range 6–30, step 1.
ResumeLevel	50	RSI level the oscillator must cross to signal resumption. Longs cross up through it; shorts cross down through (100 – level). Range 40–60, step 1.
AtrFastPeriod	14	Period of the fast ATR used for the volatility gate and the stop distance. Range 7–30, step 1.
AtrSlowPeriod	50	Period of the slow ATR baseline in the volatility-expansion test. Range 20–120, step 5.
VolExpansionMult	1.0	Multiplier in the gate: enter only when $\text{ATR}(\text{fast}) \geq \text{VolExpansionMult} \times \text{ATR}(\text{slow})$. Higher values demand stronger expansion. Range 0.0–2.0, step 0.1.
AtrStopMult	1.5	Multiple of the fast ATR used to size the protective stop-loss distance. Range 0.5–4.0, step 0.5.
RewardRisk	2.0	Reward-to-risk ratio; the take-profit distance is this multiple of the stop distance. Range 1.0–4.0, step 0.5.
Lots	0.10	Fixed order volume in lots for each position. Range 0.01–1.0, step 0.05.
Magic	20250708	Unique magic number identifying this EA's orders and positions. Use a distinct value per chart to avoid conflicts.

Recommended Settings

The defaults are a sensible starting point for intraday trend continuation. Adjust them to your instrument and timeframe after backtesting.

- **Instruments:** major FX pairs (e.g. EUR/USD, GBP/USD) or a metal such as XAU/USD, where impulse–pullback–resume cycles are frequent.

- **Timeframe:** M15 or H1. Lower timeframes generate more signals but more noise; higher timeframes yield fewer, cleaner setups.
- **Trend separation:** keep a clear gap between `FastEmaPeriod` and `SlowEmaPeriod` (e.g. 20 / 50) so the two averages describe genuinely different horizons.
- **Volatility gate:** raise `VolExpansionMult` above 1.0 to trade only strong expansions, or lower it toward 0 to loosen the filter and take more trades.
- **Risk geometry:** the default `AtrStopMult` 1.5 with `RewardRisk` 2.0 targets twice the risk. Widen the stop for volatile metals; tighten the reward ratio if your win rate is lower.

Note. Because the EA acts only on closed bars, signals are confirmed and stable — there is no intrabar repainting. Always validate any parameter set on out-of-sample history in the MT5 Strategy Tester before trading it live.

How to Install on MetaTrader 5

- 1 Copy `TrendResumptionMomentum.ex5` to your MT5 `MQL5\Experts\` folder
- 2 Restart MetaTrader 5 and refresh the Navigator panel
- 3 Drag the EA onto a chart matching the recommended symbol and timeframe
- 4 Configure the input parameters and click **OK**
- 5 Enable **Algo Trading** in the MT5 toolbar

Risk Warning

Trading foreign exchange, CFDs, and other leveraged financial instruments involves substantial risk of loss and is not suitable for all investors. The strategies and tools described in this document are provided for **educational purposes only** and do not constitute financial advice, investment recommendations, or solicitation to trade. Always consult a qualified financial adviser before making trading decisions. Past backtest performance is not indicative of future results.