

Dual Rsi Momentum Shift

Expert Advisor Documentation

PLATFORM

MetaTrader 5 (MT5)

TYPE

Momentum / Trend Continuation

TIMEFRAME

H1

WEBSITE

www.algotbot.live

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Overview

Dual Rsi Momentum Shift is a trend-following momentum Expert Advisor whose signal engine is the crossover of **two RSI lines** computed on the same close series but with different periods — a **fast RSI** and a **slow RSI**. A single RSI line is famously noisy: it whipsaws around 50 in chop and fires late at the extremes. Running a fast RSI against a slower one turns that raw oscillator into a smoothed momentum comparator — the fast line is the immediate momentum, the slow line is the momentum baseline.

When the fast line crosses **above** the slow line, short-term pressure has just overtaken the baseline (momentum is shifting up); when it crosses **below**, pressure has rolled over. Because both lines must actually diverge rather than merely brush a level, this crossover-of-oscillators construction filters far more mid-range noise than an overbought/oversold rule or a raw RSI-50 cross.

The crossover alone would still fire against the prevailing tide, so **three independent gates must all agree** before a trade is taken — this is where the reduction in false signals comes from. Risk is managed with an ATR-scaled stop and a fixed reward-multiple target, so the system self-adapts to each symbol and timeframe. Its natural home is a liquid tender such as **EURUSD** or **XAUUSD** on **H1**.

Core idea: a fast-over-slow RSI cross is an early, smoothed read on an order-flow momentum shift. Demanding trend-regime agreement plus a non-extreme entry zone strips out the counter-trend and chase-the-top signals where naive RSI systems bleed. You join momentum as it turns — not after it has blown off.

How It Works

The EA evaluates its logic **once per newly-closed bar**. On each new bar it recomputes the fast RSI, slow RSI and trend EMA on the freshly-closed close series, then compares them against the previous bar's readings to detect a crossover.

The Three Entry Gates

A fresh position is opened only when **all three** of the following conditions agree in the same direction:

- **1. Direction of the cross** — the fast RSI must cross the slow RSI the right way (up for longs, down for shorts).
- **2. Regime (EMA trend + slope)** — price must sit on the correct side of the trend EMA *and* the EMA itself must be sloping that way. Longs are taken only in a rising-EMA uptrend and shorts only in a falling-EMA downtrend, so the momentum shift is a *continuation*, not a fade of a strong trend.
- **3. Momentum zone, not extreme** — the fast RSI must be on the correct side of the midline (bullish or bearish territory) but *not* already stretched past `MaxEntryRsi`. This keeps the EA out of exhausted, over-extended pushes where reward-to-risk has already collapsed.

LONG ENTRY

A buy is sent when the fast RSI crosses **above** the slow RSI, the fast RSI is above the `Midline` but below `MaxEntryRsi`, the closed price is above the EMA, and the EMA is rising.

SHORT ENTRY

A sell is sent when the fast RSI crosses **below** the slow RSI, the fast RSI is below the `Midline` but above the mirrored short cap (`100 - MaxEntryRsi`), the closed price is below the EMA, and the EMA is falling.

Risk Management (ATR-Scaled)

Stop and target distances are derived from the Average True Range, so they automatically widen on volatile instruments and tighten on quiet ones:

```
stopDistance = AtrMult × ATR
Stop Loss    = entry -/+ stopDistance
Take Profit  = entry +/- (RewardRatio × stopDistance)
```

With the defaults (`AtrMult = 1.6` , `RewardRatio = 1.7`) each trade risks 1.6 ATR to target $1.7 \times$ that distance — a reward-to-risk of roughly 1.7 : 1.

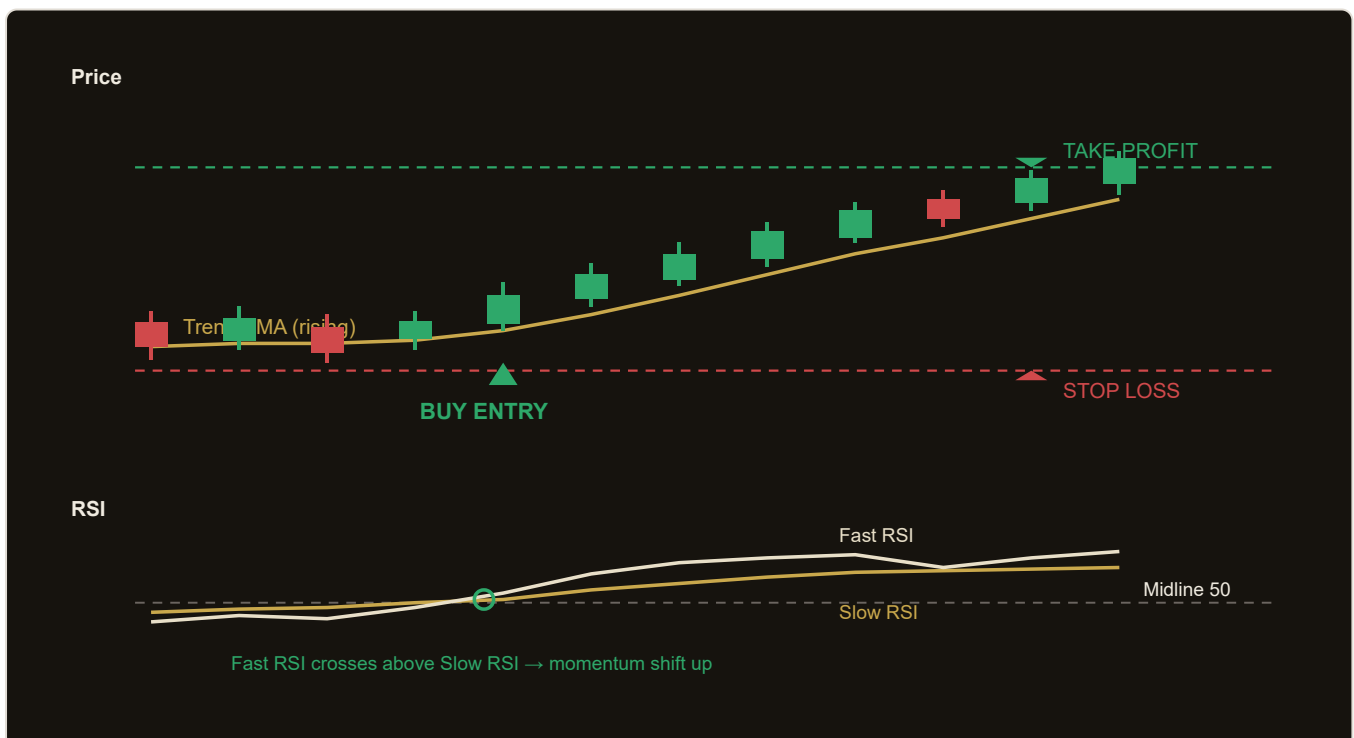
Position Management & Exits

- **One position per magic** — the EA never stacks entries. While a trade is open it manages only that position.
- **Stop Loss / Take Profit** — every trade carries a hard SL and TP set at entry.
- **Early exit on momentum flip** — when `ExitOnOppositeCross = 1` , an open trade is closed the moment the fast/slow lines cross back the other way. Momentum has flipped, so the thesis is void even before SL or TP is reached. Set it to `0` to let SL/TP run.
- **Spread gate** — a fresh entry is skipped if the current spread exceeds `MaxSpreadPoints` .

Fast-faster-than-slow guard: if `FastRsiPeriod` is set greater than or equal to `SlowRsiPeriod` , the EA automatically bumps the slow period to `FastRsiPeriod + 1` so the fast line genuinely remains the faster of the two.

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.

Reading the illustration

After a stretch of chop, the fast RSI (light line) crosses up through the slow RSI (gold) while the trend EMA has turned to rise and price sits above it. All three gates agree, so a

BUY

is opened. The stop is placed $\text{AtrMult} \times \text{ATR}$ below entry and the target at RewardRatio times that distance above — the rally carries price into the take-profit before any reverse cross forces an early exit.

Parameters

| Parameter | Default | Description |
|---------------------|---------|---|
| FastRsiPeriod | 7 | Fast RSI period — the immediate-momentum line. Range 3–20. |
| SlowRsiPeriod | 21 | Slow RSI period — the momentum baseline the fast line must cross. Range 10–50. |
| EmaTrendPeriod | 50 | Trend-regime EMA period: price must be on the right side of it and it must slope the trade's way. Range 20–200. |
| Midline | 50.0 | Momentum midline the fast RSI must be beyond (bullish/bearish territory gate). Range 45–55. |
| MaxEntryRsi | 72.0 | Upper cap for long entries; the short cap mirrors to $100 - \text{this}$. Skips over-extended pushes. Range 60–85. |
| AtrPeriod | 14 | ATR period used for stop/target scaling. Range 7–30. |
| AtrMult | 1.6 | Stop distance as a multiple of ATR ($\text{stop} = \text{AtrMult} \times \text{ATR}$). Range 0.5–5.0. |
| RewardRatio | 1.7 | Take-profit distance as a multiple of the stop distance. Range 0.8–4.0. |
| ExitOnOppositeCross | 1 | 1 = close the open trade when the fast/slow lines cross back; 0 = let SL/TP run. |
| MaxSpreadPoints | 30 | Skip a new entry if the current spread (points) is wider than this. Range 1–200. |
| Lots | 0.10 | Trade volume in lots. Range 0.01–1.00. |
| Magic | 7042 | Magic number identifying this EA's positions. Range 0–9,999,999. |

Recommended Settings

The defaults are tuned for a liquid trending instrument on the H1 timeframe. Suggested starting points:

- **Symbols:** EURUSD, GBPUSD, or XAUUSD — instruments with clean, persistent trends.
- **Timeframe:** H1 (the design timeframe). Higher frames reduce signal count; lower frames add noise.
- **Fast / Slow RSI:** keep a clear separation (default 7 / 21). Narrowing the gap increases trade frequency but re-introduces the whipsaw the dual-RSI design exists to filter.
- **EMA trend filter:** 50 is a balanced regime gate; raise toward 100–200 for a stricter, slower trend definition.
- **Reward ratio:** 1.7 balances hit-rate against payoff. Raising it demands larger moves; lowering it books profits sooner.

Tip: before going live, run the Strategy Tester on your target symbol and broker feed to confirm the ATR-scaled stops suit its typical volatility, and verify the `MaxSpreadPoints` gate matches your broker's real spreads on that instrument.

Position sizing: the fixed `Lots` value does not scale to account equity. Size it to your own risk tolerance — a fixed lot that is comfortable on one account may over-leverage another.

How to Install on MetaTrader 5

- 1 Copy `DualRsiMomentumShift.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

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