

Rsi Exhaustion Pin Reversal

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Mean Reversion	M15 / M30	www.algoBot.live

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Overview

Rsi Exhaustion Pin Reversal is a counter-trend, mean-reversion Expert Advisor that fades stretched moves — but only when two independent signals agree on the same closed bar. It is driven by RSI *and only RSI*, confirmed by a single, classic price-action candle: the pin bar (a long rejection wick). There are no moving averages, no ATR, no Bollinger bands, and no other indicators in the entry logic.

The design solves a well-known weakness of naive oscillator reversals: RSI can sit pinned in oversold for many bars while price keeps bleeding, so a lone oversold/overbought fade often catches a falling knife. This EA never acts on RSI alone. RSI judges *when* a move is exhausted; the pin bar judges *whether the crowd has actually flinched*. Only when stretched momentum and a same-bar rejection candle line up does the EA take the trade.

Risk is fully structural and self-scaling — there is no point or pip arithmetic, so the logic behaves consistently across symbols and timeframes. The stop sits just beyond the rejected extreme of the signal bar (below its Low for a long, above its High for a short), buffered by a fraction of that bar's range. If price trades back through the very wick that was supposed to reject it, the reversal thesis is dead and the trade is closed. The target is a fixed reward-to-risk multiple of that stop distance.

Core idea — require *both* a stretched oscillator *and* a visible price rejection on the same closed bar. One without the other is ignored. That dual filter is the entire point of the strategy: it screens out the open-ended trends where lone RSI fades get run over.

How It Works

The EA evaluates its rules once per newly-closed bar. The just-closed bar becomes the **signal bar** (shift 1). Two conditions must both be true on that bar before a trade is considered.

1. Exhaustion — the RSI condition

Within the last `ExtremeLookback` closed RSI readings (including the signal bar), RSI must have reached an extreme:

- **Long context:** RSI dipped to or below `OversoldLevel` — sellers are exhausted.
- **Short context:** RSI pushed to or above `OverboughtLevel` — buyers are exhausted.

Allowing the extreme to occur anywhere within the lookback window (rather than only on the signal bar itself) lets the rejection candle confirm slightly after the momentum extreme, which is how real reversals tend to print.

2. Rejection — the pin-bar condition

On the same signal bar, price must print a pin bar *against* the prevailing move. Using `range = High - Low` and `body = |Close - Open|`:

```
lowerWick = min(Open, Close) - Low
upperWick = High - max(Open, Close)

LONG pin : lowerWick >= WickBodyRatio × body
           lowerWick >= upperWick
           Close      >= Low + ClosePosFrac × range    (closes in the upper part)

SHORT pin: upperWick >= WickBodyRatio × body
           upperWick >= lowerWick
           Close      <= High - ClosePosFrac × range  (closes in the lower part)
```

A bullish pin shows sellers drove price down but buyers slammed it back up, leaving a long lower wick and a close near the high. The bearish pin is the exact mirror.

Entry

- **LONG** when RSI was oversold recently *and* a bullish pin prints. The EA buys at the current Ask.

- **SHORT** when RSI was overbought recently *and* a bearish pin prints. The EA sells at the current Bid.

Exit — structural stop & target

Both exit levels are derived purely from the signal bar's own price structure, so the "RSI only" rule holds for every signal *and* every exit level:

- **Stop loss (long):** $\text{signalLow} - \text{StopBufferFrac} \times \text{range}$ — just below the rejected wick.
- **Stop loss (short):** $\text{signalHigh} + \text{StopBufferFrac} \times \text{range}$ — just above the rejected wick.
- **Take profit:** a fixed RewardRatio multiple of the stop distance from entry.

Trade management & filters

- **One position per magic number** — the structural stop and target manage the exit; no pyramiding.
- **Spread gate** — the trade is skipped if the current spread exceeds MaxSpreadPoints .
- **Bar-close logic** — signals are only evaluated on a freshly closed bar, never intrabar.

Why structural risk? Because the stop and target are expressed as fractions and multiples of the signal bar's own range, the EA needs no per-symbol point or pip tuning. It adapts automatically to a quiet M15 EURUSD bar or a wide M30 AUDUSD bar alike.

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.

Parameters

Parameter	Default	Description
RsiPeriod	14	RSI smoothing period (range 7–28). Lower = more reactive, more signals.
OversoldLevel	30.0	RSI at or below this within the lookback marks sellers as exhausted (long context). Range 10–40.
OverboughtLevel	70.0	RSI at or above this within the lookback marks buyers as exhausted (short context). Range 60–90.
ExtremeLookback	3	How many recent closed bars the RSI extreme may have occurred within. Range 1–10.
WickBodyRatio	1.5	The rejection wick must be at least this multiple of the candle body. Higher = stricter pin. Range 0.5–4.0.
ClosePosFrac	0.50	Close must sit at least this fraction of the range away from the rejected extreme. Range 0.30–0.90.
StopBufferFrac	0.15	Stop buffer beyond the rejected wick, as a fraction of the signal bar's range. Range 0.00–1.00.
RewardRatio	1.60	Take-profit distance as a multiple of the structural stop distance. Range 0.80–4.00.
MaxSpreadPoints	30	Skip the trade if the current spread (points) is wider than this. Range 1–200.
Lots	0.10	Order volume in lots. Range 0.01–1.00.
Magic	7314	Magic number identifying this EA's positions. Range 0–9,999,999.

Recommended Settings

This strategy is designed for a mean-reverting major such as **EURUSD** or **AUDUSD** on the **M15** or **M30** timeframe — a swing / mean-reversion style. Exhausted RSI plus a same-bar rejection wick captures the moment a crowded move flips, which is precisely the regime these pairs and timeframes tend to offer.

SUGGESTED STARTING POINT

- **Symbol:** EURUSD or AUDUSD

- **Timeframe:** M15 or M30
- **RSI:** period 14, oversold 30 / overbought 70
- **Pin filter:** WickBodyRatio 1.5, ClosePosFrac 0.50
- **Risk:** StopBufferFrac 0.15, RewardRatio 1.60

Tuning notes

Raise `WickBodyRatio` or `ClosePosFrac` to demand a cleaner, more decisive rejection candle — fewer but higher-quality signals. Widen `OversoldLevel` toward 35 (or tighten `OverboughtLevel` toward 65) to act on less extreme readings and trade more often. Increase `RewardRatio` for a higher payoff per winner at the cost of a lower hit rate.

Tip — always validate any parameter changes with a full backtest and forward (demo) test on your specific broker's data before committing real capital. Spread and execution quality differ between brokers and directly affect a structural-stop strategy like this one.

How to Install on MetaTrader 5

- 1 Copy `RsiExhaustionPinReversal.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

Note — if you have the source file `RsiExhaustionPinReversal.mq5`, place it in the same `MQL5\Experts\` folder and compile it in MetaEditor (F7) to produce the `.ex5`.

Risk Warning

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