

Inside Bar Momentum

Expert Advisor Documentation

PLATFORM

MetaTrader 5 (MT5)

TYPE

Pattern Breakout · Momentum-Gated

TIMEFRAME

M15 – H1

WEBSITE

www.algotbot.live

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Overview

Inside Bar Momentum is a candlestick-pattern breakout strategy fused with a momentum filter. It identifies the classic two-bar **inside-bar** compression — a short pause where the market coils energy — and then trades the expansion out of that coil, but only ever in the direction the prevailing momentum already favours.

The inside-bar pattern alone has a well-known weakness: in choppy, directionless markets it produces frequent false breaks. Inside Bar Momentum addresses this directly by gating every entry through an **RSI momentum check**. A break of the coil is only taken when RSI confirms the move; a break against momentum is treated as exactly the fakeout the strategy is designed to avoid — and is skipped.

Risk is managed entirely on a volatility-adaptive basis using ATR, so stops, targets, and the breakeven trigger automatically scale to whatever symbol and timeframe the EA is attached to. The strategy holds at most one position at a time, tagged by its **Magic** number, and runs on a single timeframe — whichever chart it is placed on.

In one sentence: wait for an inside-bar coil to form inside a real-range "mother" bar, then enter the moment price breaks the coil *with* RSI momentum confirming, managing the trade with ATR-based stop, target, and breakeven.

How It Works

1. The Setup — the Inside-Bar Coil

The pattern is read off the two most-recently **closed** bars on the chart timeframe:

- **Mother bar** — the older of the two bars. Its **High** and **Low** define the breakout "walls". To count as a genuine coil rather than a doji, its range must be at least $\text{MinMotherAtrMult} \times \text{ATR}$ wide.
- **Inside bar** — the newer bar, which must be **fully contained** within the mother bar (its High below the mother High *and* its Low above the mother Low). This containment is the energy coiling up.

When a qualifying inside bar closes, the EA **arms** the mother bar's High and Low as breakout walls. The arm stays live for ExpiryBars bars. If a fresh, qualifying coil forms in the meantime, it overwrites the old arm. If no break occurs before expiry, the arm is simply cancelled.

2. The Momentum Gate — RSI

While a coil is armed, the EA watches live price on every tick for a break of either wall — but a break is only valid if RSI agrees with its direction:

- **Long** — the Ask price breaks **above** the mother High *and* RSI is above $50 + \text{RsiBuffer}$.
- **Short** — the Bid price breaks **below** the mother Low *and* RSI is below $50 - \text{RsiBuffer}$.

The RsiBuffer sets how far past the RSI 50 mid-line momentum must lean before a break is permitted. If price breaks the wall whose direction momentum does *not* confirm, the trade is skipped. Only one wall direction can ever fill, and the arm is cleared on entry.

Why a market entry, not a pending order? The EA does not place a resting stop order on the walls. Instead it enters at market the instant a wall is broken with momentum confirmed. This keeps the RSI gate authoritative — an order only ever fires when both the price break *and* momentum line up at the same moment.

3. Exit — ATR Stop & Target

Every trade is bracketed at entry with a volatility-adaptive stop and target derived from ATR:

```
Stop Loss   = entry -/+ ATR × S1AtrMult
Take Profit = entry +/- ATR × TpAtrMult
```

With the defaults ($\text{S1AtrMult} = 1.2$, $\text{TpAtrMult} = 2.4$) this produces a clean **1 : 2 reward-to-risk** profile that rescales automatically as volatility changes.

4. Trade Management — Breakeven

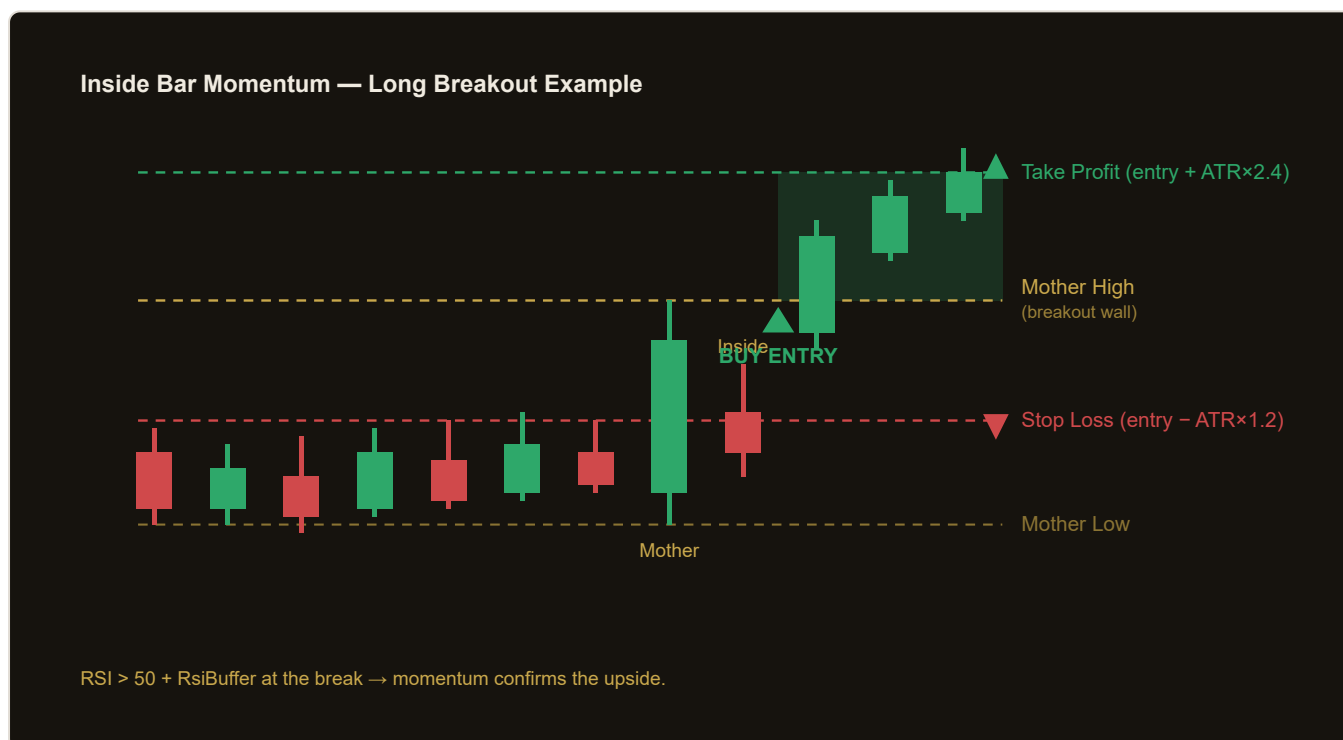
Once an open trade runs $\text{BeAtrMult} \times \text{ATR}$ in its favour, the stop is pulled up to the entry price, making the position risk-free for the remainder of its life. This is a one-time move, guarded so it never re-triggers. Setting $\text{BeAtrMult} = 0$ disables the breakeven feature entirely.

Worked example (long)

Suppose $\text{ATR} = 0.0020$ (20 pips) and the mother High is 1.10500. Price ticks up to 1.10520 (a break above the wall) while RSI reads 56 — above $50 + 3$. The EA buys at market. $\text{Stop} = 1.10520 - (0.0020 \times 1.2) = 1.10280$; $\text{Target} = 1.10520 + (0.0020 \times 2.4) = 1.11000$. After price runs 20 pips ($1 \times \text{ATR}$) into profit, the stop is moved up to the 1.10520 entry — the trade can no longer lose.

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	Period of the RSI momentum gate. Range 5–30, step 1.
RsiBuffer	3.0	How far above/below the RSI 50 mid-line momentum must lean before a break is permitted. Range 0.0–15.0, step 1.0.
AtrPeriod	14	ATR window used for stop, target, and breakeven distances. Range 5–30, step 1.
SIatrMult	1.2	Stop-loss distance as a multiple of ATR. Range 0.5–4.0, step 0.1.
TpAtrMult	2.4	Take-profit distance as a multiple of ATR. Range 0.5–6.0, step 0.1.
BeAtrMult	1.0	Move the stop to breakeven after this many ATR of favourable travel. Set to 0 to disable. Range 0.0–3.0, step 0.1.
MinMotherAtrMult	0.6	The mother bar's range must be at least this many ATR wide to count as a real coil. Range 0.0–2.0, step 0.1.
ExpiryBars	4	Cancel an un-triggered armed coil after this many bars. Range 1–10, step 1.
Lots	0.10	Trade volume in lots. Range 0.01–1.00, step 0.05.
Magic	7314	Magic number identifying this EA's positions. Range 0–9,999,999, step 1.

Recommended Settings

Inside Bar Momentum is symbol- and timeframe-agnostic because all of its distances are ATR-relative. It is best suited to **momentum-prone instruments** on intraday timeframes, where inside-bar coils resolve into clean directional bursts.

SUGGESTED STARTING POINT

- **Symbols:** a momentum-prone major such as **EURUSD** or **GBPJPY**.
- **Timeframe:** **M15** or **H1**.
- **Defaults:** the shipped values give a balanced 1:2 reward-to-risk with momentum confirmation already tuned around the RSI 50 mid-line.

Tuning tips. Raise `RsiBuffer` to demand stronger momentum (fewer but cleaner breaks); lower it to take more setups. Increase `MinMotherAtrMult` in quiet conditions to ignore shallow coils. Widen `SlAtrMult` if normal noise is stopping trades out prematurely, and adjust `TpAtrMult` to reshape the reward profile.

Always validate first. Backtest and forward-test on a demo account with your broker's spread and execution before risking real capital. ATR-based distances behave differently across symbols and sessions, and live spread can affect where market breaks fill.

How to Install on MetaTrader 5

- 1 Copy `InsideBarMomentum.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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