

Pullback Momentum Relay

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Trend Continuation (Pullback)	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

Pullback Momentum Relay is a trend-following *pullback continuation* Expert Advisor. It deliberately does not try to pick tops or bottoms. Instead it waits for an established trend, lets price take a breather, and then re-joins the trend the moment momentum is “relayed” back to the dominant side.

Every entry requires **three independent conditions to agree at once** — a triple confirmation. This is what keeps the strategy out of the sideways chop where most single-signal systems bleed, which in turn keeps drawdown shallow:

- **Trend regime** — a fast EMA above/below a slow EMA decides which direction the EA is even allowed to trade.
- **Trend slope** — the slow EMA must actually be rising (or falling) versus where it sat several bars ago. A flat slow EMA means a drifting market and no trade. This slope requirement is the single biggest chop filter.
- **Momentum relay** — RSI must first cool into the pullback and then cross back through the pullback level on the freshly-closed bar, confirming momentum has been handed back to the trend side.

Risk is entirely **ATR-based**, so distances self-scale to any symbol and timeframe. A once-in-profit ATR trailing stop locks in open gains, and position sizing is equity-aware — compounding gently as the account grows and automatically de-risking during a drawdown. Only **one position per Magic number** is ever open, so exposure is bounded at all times.

Design philosophy. The EA is built from a few robust, orthogonal filters with wide parameter ranges rather than many finely-tuned knobs. The goal is an edge that survives out-of-sample — not one curve-fit to a single slice of history.

How It Works

The EA evaluates its logic **once per newly-closed bar** on the chart's timeframe. Because the momentum trigger is a one-shot cross event on a single closed bar, entries are naturally rationed — there is no machine-gunning of the same setup.

Entry Logic — Triple Confirmation

Let $upperLevel = PullbackLevel$ and $lowerLevel = 100 - PullbackLevel$ (the symmetric short level).

LONG SETUP

- **Regime:** fast EMA > slow EMA *and* slow EMA now > slow EMA $SlopeLookback$ bars ago (an up-regime with a genuinely rising trend).
- **Relay:** RSI on the previous closed bar was at or below $upperLevel$, and RSI on the freshly-closed bar has pushed back *above* it — momentum handed back to the buyers.

SHORT SETUP

- **Regime:** fast EMA < slow EMA *and* slow EMA now < slow EMA $SlopeLookback$ bars ago (a down-regime with a falling trend).
- **Relay:** RSI was at or above $lowerLevel$ and has just crossed back *below* it — the exact mirror of the long side.

Worked long example

Slow EMA is rising and the fast EMA sits above it (up-regime confirmed). Price pulls back and RSI cools to 43, dipping below the default $PullbackLevel$ of 45. On the next closed bar RSI recovers to 47 — crossing back above 45. All three conditions now agree, so the EA buys at the Ask, places its stop $SlAtrMult \times ATR$ below entry and its target $TpAtrMult \times ATR$ above.

Exit Logic — Stops, Targets & Trailing

- **Stop loss:** entry $-/+ SlAtrMult \times ATR$.
- **Take profit:** entry $+/- TpAtrMult \times ATR$. Keep $TpAtrMult$ above $SlAtrMult$ for a reward-to-risk ratio greater than 1.
- **ATR trailing stop:** once a trade moves $TrailStartAtr \times ATR$ in your favour, the stop is dragged to $SlAtrMult \times ATR$ behind price. It only ever *tightens* toward price — never loosens — locking in open

gains and cutting tail risk on trades that stall. Set `TrailStartAtr = 0` to disable trailing.

Position Sizing

Sizing is equity-aware and anti-overfit:

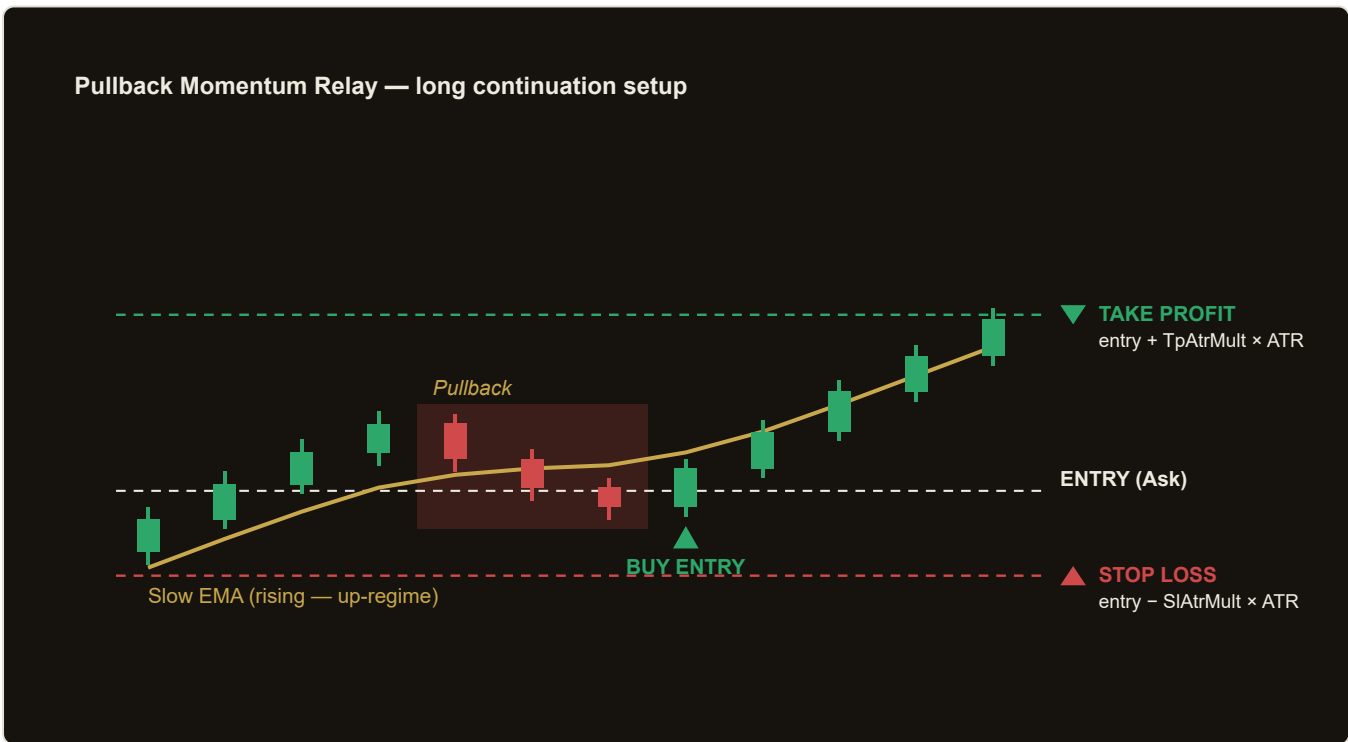
```
volume = Lots * (Balance / 10000)
volume = clamp(volume, 0.01, MaxLots)
```

Volume compounds gently as the account grows and automatically shrinks during a drawdown, rather than betting a fixed slug regardless of account health. The result is rounded to two decimals and hard-capped at `MaxLots`.

Exposure guard. Only one position per `Magic` is open at any time. While a trade is live the EA manages only its trailing stop and places no new orders until the position closes.

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
FastEma	12	Fast EMA — the responsive side of the regime filter. Range 5–40, step 1.
SlowEma	34	Slow EMA — the trend baseline whose slope is the chop filter. Range 20–120, step 2.
RsiPeriod	14	RSI smoothing period for the momentum-relay trigger. Range 7–28, step 1.
PullbackLevel	45	Long pullback level: RSI must cool to \leq this then cross back above it. The short side mirrors around $(100 - \text{PullbackLevel})$. Range 30–49, step 1.
SlopeLookback	5	How many bars back the slow-EMA slope is measured over. Range 2–25, step 1.
AtrPeriod	14	ATR period used for stop, target and trail distances. Range 7–28, step 1.
SIatrMult	1.8	Stop distance as a multiple of ATR. Range 0.8–4.0, step 0.1.
TpAtrMult	3.0	Target distance as a multiple of ATR (keep above SIatrMult for R:R > 1). Range 1.0–6.0, step 0.5.
TrailStartAtr	1.5	Favourable ATR multiples before the trailing stop arms (0 = trailing off). Range 0.0–5.0, step 0.5.
Lots	0.10	Base lot size at a 10,000-unit balance (scaled by equity). Range 0.01–1.00, step 0.01.
MaxLots	2.0	Hard ceiling on the equity-scaled volume. Range 0.10–20.0, step 0.10.
Magic	7715	Magic number identifying this EA's positions. Range 0–9,999,999, step 1.

Degenerate-config guard. If `FastEma` is set greater than or equal to `SlowEma`, the EA automatically clamps the fast period to `SlowEma - 1` so the regime filter always remains valid.

Recommended Settings

The EA is designed for a liquid, trending instrument in a trend-following style. Sensible starting points:

- **Instruments:** a liquid trending FX major or metal — for example GBPUSD or XAUUSD.
- **Timeframe:** M15 to H1.

- **Reward-to-risk:** keep `TpAtrMult` > `SlAtrMult` so each trade carries a positive expectancy (the 3.0 vs 1.8 default gives roughly 1.7:1).
- **Trailing:** the default `TrailStartAtr = 1.5` arms the trail after modest favourable movement; raise it to give trends more room, or set 0 to rely purely on the fixed target.
- **Sizing:** leave `Lots` and `MaxLots` conservative until you have validated the EA on your broker's spread and swap conditions.

Always validate first. Backtest across multiple years and market regimes, then run on a demo account before committing real capital. Spread, slippage and swap costs on your specific broker materially affect a trend-following, ATR-scaled system like this one.

How to Install on MetaTrader 5

- 1 Copy `PullbackMomentumRelay.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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