

Star Pattern Reversal

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Mean Reversion	H1 (H4 / D1 also suitable)	www.algotbot.live

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Overview

Star Pattern Reversal is a mean-reversion Expert Advisor that fades exhaustion at meaningful price levels. It combines exactly two ideas: the classic three-candle **Morning Star** (bullish) and **Evening Star** (bearish) candlestick reversal formations, and **support / resistance** confluence.

A star formation alone appears frequently in the middle of a range, where it produces many false signals. This EA only honours the pattern when its middle "star" candle prints at a **fresh swing extreme** — a recently tested support or resistance level. Demanding that the stall happen exactly at support/resistance filters out the mid-range noise that drives most failed reversals, so it is this confluence of *pattern plus location* that reduces noise and lifts expectancy.

The strategy has fully mirrored long and short rules. The Average True Range (ATR) is used **only** to size the protective-stop buffer — it never generates a signal. Position management is conservative: only one position per symbol per magic number is allowed at any time, so there is no pyramiding and no overlapping reversals.

The core idea. A strong impulse candle drives price into a multi-bar extreme, a small indecision candle stalls right at that level, and an opposite impulse candle immediately reclaims it. That three-bar footprint — at support or resistance — is a high-quality signature of trapped traders and momentum exhaustion.

How It Works

On every newly closed bar the EA inspects the three most recently closed candles and the swing window immediately before them. The three pattern candles are read newest-last:

- **c1 — Lead impulse:** a strong candle in the prevailing direction (bearish for a Morning Star, bullish for an Evening Star).
- **c2 — Star:** a small-bodied indecision candle that prints at the swing extreme.
- **c3 — Confirmation:** a strong impulse candle in the opposite direction that reclaims the midpoint of c1's body.

Measuring "impulse" and "star" size

The EA computes the average candle body over the `ExtremeLookback` window that sits immediately before the pattern. It also records that window's swing high (`priorHigh`) and swing low (`priorLow`) — these are the support and resistance levels.

- A candle qualifies as an **impulse** when its body $\geq \text{avgBody} \times \text{ImpulseBodyFactor}$.
- The **star** qualifies when its body $\leq \text{body1} \times \text{StarBodyFactor}$ (small relative to the lead candle).

Entry logic — Morning Star (LONG)

A long is opened at the Ask when *all* of the following hold:

```
c1 closes bearish AND body1 >= impulseMin    (strong down impulse)
body2 <= starMax                               (small indecision star)
c3 closes bullish AND body3 >= impulseMin    (strong up impulse)
c3.Close >= midpoint of c1's body           (confirmation reclaim)
c2.Low <= priorLow                            (star reached prior support)
```

Entry logic — Evening Star (SHORT)

A short is opened at the Bid under the exact mirror conditions:

```
c1 closes bullish AND body1 >= impulseMin    (strong up impulse)
body2 <= starMax                               (small indecision star)
c3 closes bearish AND body3 >= impulseMin    (strong down impulse)
c3.Close <= midpoint of c1's body           (confirmation reject)
c2.High >= priorHigh                          (star reached prior resistance)
```

A signal is only acted on when it is unambiguous — if both a Morning Star and an Evening Star somehow qualify on the same bar, neither trade is taken.

Stop loss, take profit and risk

The protective stop is placed beyond the full three-candle pattern extreme, with an ATR buffer for breathing room:

- **Long:** Stop Loss = lowest low of c1/c2/c3 - (ATR × `SLAtrBuffer`).
- **Short:** Stop Loss = highest high of c1/c2/c3 + (ATR × `SLAtrBuffer`).

The measured risk is the distance from entry to stop. The take profit is then placed at a structural multiple of that risk: `TP distance = risk × RewardRisk`. With the default `RewardRisk = 2.00`, every winning trade targets twice its risk. If the computed risk is zero or negative, the trade is skipped.

Worked example — Morning Star long

Suppose entry (Ask) = 1.10000, the lowest low across the three pattern candles = 1.09850, ATR = 0.00100 and `SLAtrBuffer = 0.50`. The stop is $1.09850 - (0.00100 \times 0.50) =$

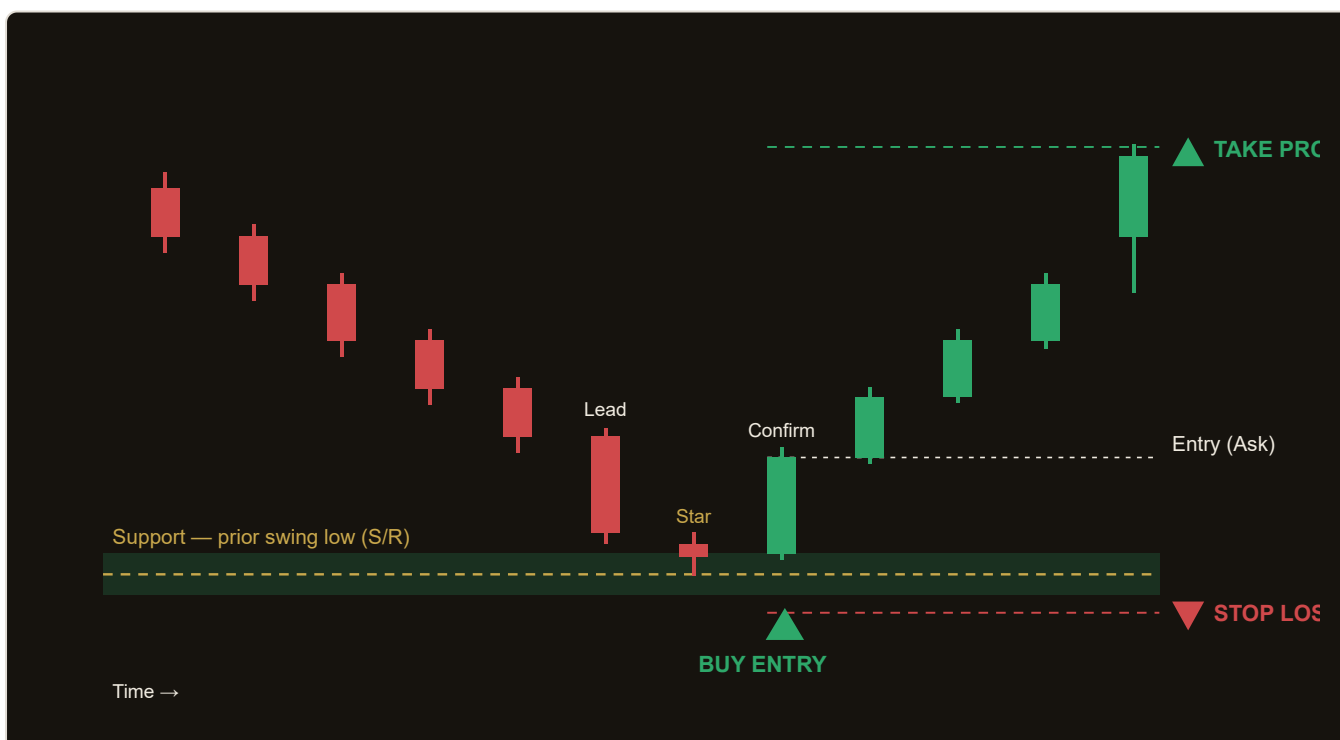
1.09800

, giving a risk of 200 points. With `RewardRisk = 2.00` the take profit is $1.10000 + (0.00200 \times 2.00) =$

1.10400

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.

Price falls in a sustained down-move into the prior swing low. The **Lead** candle drives strongly into that support; the small **Star** stalls right at the level (its low touches the prior extreme); and the bullish **Confirm** candle reclaims the midpoint of the lead candle's body. The long is opened at the Ask, the stop is parked just beneath the three-candle low plus an ATR buffer, and the take profit is set at twice the measured risk.

Parameters

Parameter	Default	Description
StarBodyFactor	0.50	Maximum size of the middle "star" candle's body as a fraction of the lead impulse body. Lower values demand a smaller, more decisive indecision candle. Range 0.20–0.80, step 0.10.
ImpulseBodyFactor	1.00	Minimum body size for the lead and confirmation candles, expressed as a multiple of the average body over the lookback window. Higher values require stronger impulses. Range 0.50–2.00, step 0.10.
ExtremeLookback	20	Number of prior bars used to define the swing extreme (support / resistance) the star must reach, and over which the average body is measured. Range 5–50, step 5.
AtrPeriod	14	ATR period used purely to size the protective-stop buffer — never as an entry signal. Range 5–30, step 1.
SIATRBuffer	0.50	Extra room placed beyond the pattern extreme, expressed in ATR multiples. Larger values widen the stop. Range 0.00–2.00, step 0.10.
RewardRisk	2.00	Take-profit distance as a multiple of the measured risk (structural R-multiple). 2.00 targets twice the risk. Range 1.00–4.00, step 0.50.
Lots	0.10	Fixed trade volume in lots. Range 0.01–1.00, step 0.05.
Magic	7720	Magic number identifying this EA's positions. One position per magic per symbol is allowed — no pyramiding.

Recommended Settings

The defaults are a balanced starting point for major FX pairs on the H1 timeframe. Adjust them to suit the instrument's volatility and your risk tolerance.

- **Symbols:** Liquid major FX pairs (e.g. EURUSD, GBPUSD, USDJPY) where candlestick structure is clean.
- **Timeframe:** H1 is recommended; H4 and D1 produce fewer but higher-quality signals.

- **Confluence strictness:** Keep `StarBodyFactor` ≤ 0.50 and `ImpulseBodyFactor` ≥ 1.00 so only genuine exhaustion footprints qualify.
- **Stop buffer:** Raise `SLAtrBuffer` toward 1.00 on more volatile instruments to avoid being stopped out by noise around the level.
- **Position size:** Set `Lots` so the per-trade risk (entry-to-stop distance) sits within 0.5–1% of account equity.

Tip — let signals come to you. This EA is selective by design. Requiring both a valid star pattern *and* a tested support/resistance level means trades are relatively infrequent. Resist loosening the factors just to see more activity — the confluence filter is the source of the edge.

Always validate first. Backtest on your broker's historical data and run on a demo account across varied market conditions before considering any live deployment. Spread and slippage at the moment of the confirmation candle can materially affect entry quality.

How to Install on MetaTrader 5

- 1 Copy `StarPatternReversal.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.

