



S-Trader





EMA | Exponential Moving Average

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Description

An exponential moving average (EMA) is a type of moving average that is similar to a simple moving average, except that more weight is given to the more recent data. It's also known as the exponentially weighted moving average. This type of moving average reacts faster to recent price changes than a simple moving average.

Formula

$$EMAn = [2/(n+1)] * (Value_n - EMA_{n-1}) + EMA_{n-1}$$

NOTE: for the first $n-1$ periods, EMA is approximated with the Simple Moving Average / SMA

Parameters

Source	Any price source (O, H, L, C, Vol, OI) or any other built-in or custom study
Periods	Any number of periods

Output value(s)

There is a single output value resulting from the formula, the Exponential Moving Average.

Plot

The plot is an overlay inside the price series panel.

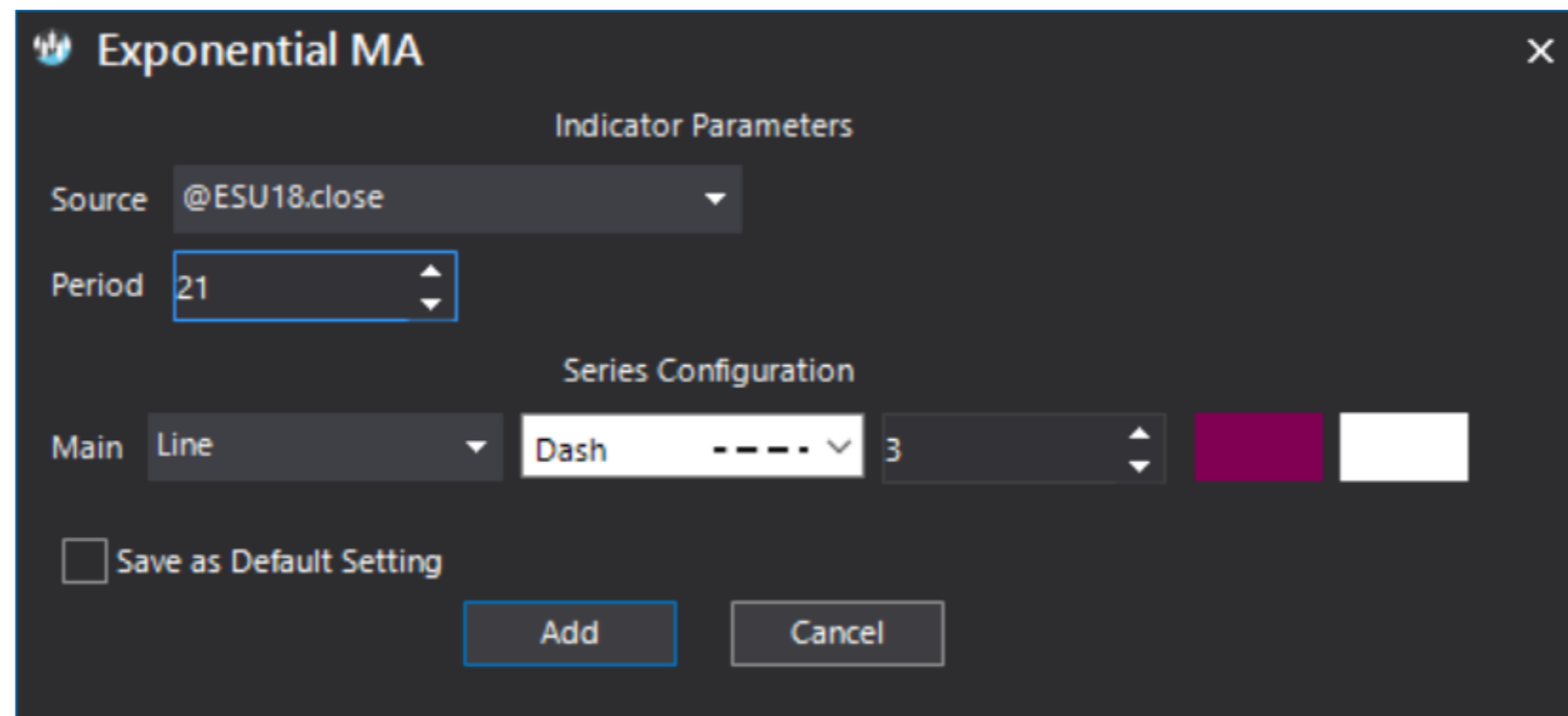


Quant Script™ Syntax

Short Form	EMA(Source, Periods)
Long Form	ExponentialMovingAverage(Source, Periods)

Dialogs

Chart Study Dialog





Sample Chart With Study





Quant Script™ Wizard Study Dialog

The image shows two overlapping dialog boxes in the S-Trader desktop platform. The background dialog is the 'Custom Study Wizard' and the foreground dialog is the 'Add Variable' dialog.

Custom Study Wizard Dialog:

- Save To Group: Default
- Custom Study Name: [Empty text box]
- Password: [Empty text box]
- Result: Histogram, Solid, 2, [Green color swatch]
- Reverse_Result: Histogram, Solid, 2, [Purple color swatch]
- Buttons: Add To New Panel (checked), Add New Variable, Edit Selected Variable
- Table with columns: Name, Description
- Buttons: OK, Cancel

Add Variable Dialog:

- Name: [Empty text box]
- Description: [Empty text box]
- Tree view of categories:
 - Envelopes
 - General Indicator Functions
 - Math Function - Algebraic
 - Math Function - Trigonometric
 - Moving Averages
 - EMA
 - ExponentialMovingAverage (Selected)
 - SimpleMovingAverage
 - SMA
 - TimeSeriesMovingAverage
 - TMA
 - TriangularMovingAverage
 - TSMA
 - VariableMovingAverage
 - VIDYA
 - VIDYAMovingAverage
 - VMA
 - VolumeWeightedMovingAverage

- Source: CLOSE
- Period: 21
- Button: Create Script Line
- Code preview: EXPONENTIALMovingAverage(CLOSE, 21)
- Buttons: OK, Cancel



Quant Script™ Study Dialog

Custom Study Editor [Close]

Save To Group: Default [Dropdown] A 18.00 [Dropdown]

Custom Study Name: [Text Field]

Password: [Text Field]

Result: Histogram [Dropdown] Solid [Dropdown] 2 [Dropdown] [Green Box] [White Box]

Reverse_Result: Histogram [Dropdown] Solid [Dropdown] 2 [Dropdown] [Purple Box] [White Box]

Formula Add To New Panel

```
set result = EMA(Close,21)
set reverse_result = ExponentialMovingAverage(Close,21)
```

[OK] [Cancel]