

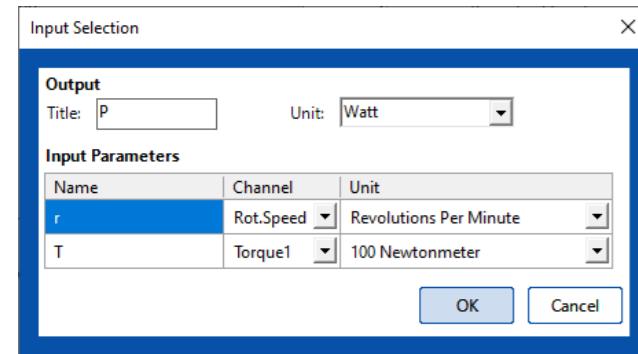
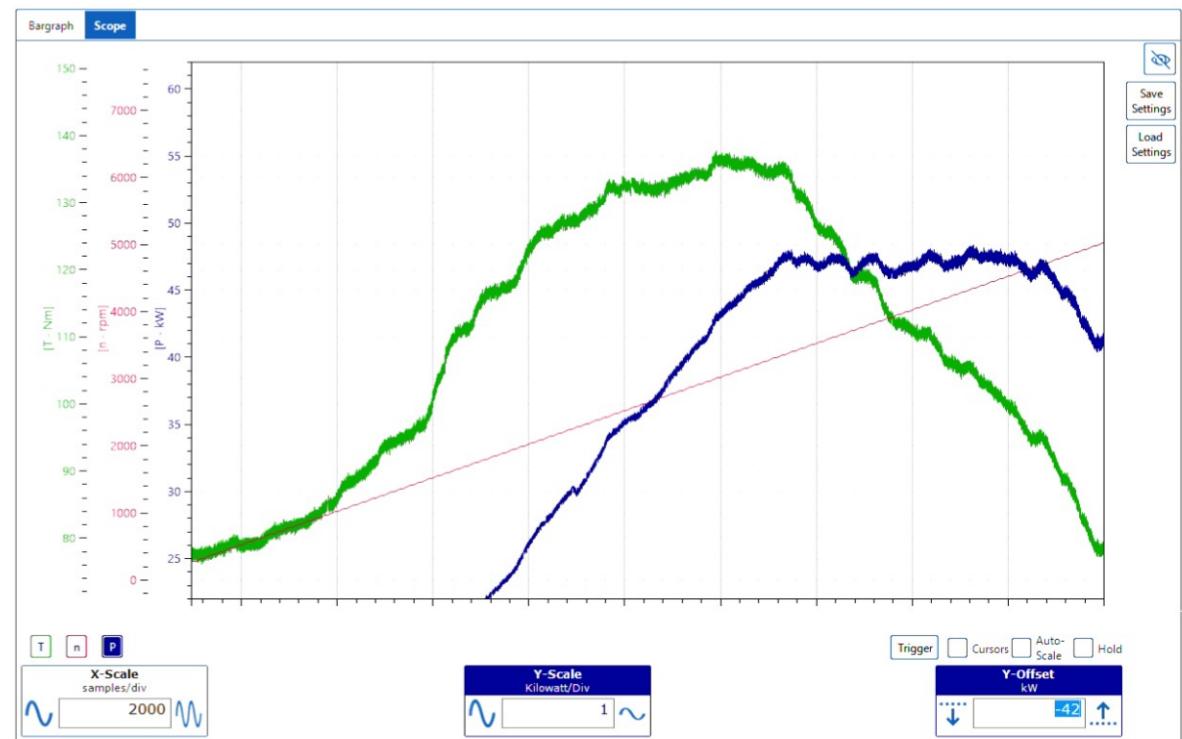
# Life Data Analysis

## Manner Telemetry System:

- modern telemetry data acquisition system for simple standalone devices to complex, integrated solutions.
- powerful analysis software for realtime data processing
- comprehensive toolbox for standard analysis and customizable calculations.

Include features such as:

- Sensor Calibration: Ensuring the accuracy of the collected data by calibrating the sensors.
- Visualization tools: Providing graphical representations of the data with charts such as:
  - Bargraph, Oscilloscope,
  - Line chart,
  - Histogram
  - Scatter plot / xy-Chart.
- Time & Frequency Analysis in Realtime
- Data Logging: Capturing and storing the telemetry data for later analysis.



## Online and Post Analysis: Power, Torque, Efficiency, Power-Loss, Vibration, Rotation, Vector, Angle

**Formula Editor**

Select a function:

- Mechanical Functions
  - Efficiency
  - Power for Rotational Motion**
- Math
  - Math.E
  - Math.PI
  - Math.Tau
  - Math.Abs
  - Math.Acos
  - Math.Acosh
  - Math.Asin

Please enter the formula:

The values of the channels are represented by the respective short title in square brackets.  
Common mathematical functions can be used from the C# Math library.  
Example formula: "[Ch01] + Math.Abs([Ch02])"

```
MecFunc.PowerRot(rev: [Rot.Speed],t: [Torque1])
```

⚠ 0 Errors

Code	Description

**Power for Rotational Motion (r, T)**

Returns the mechanical power, which is calculated using the torque and speed.

**Formula**

$$P = 2 * \text{Math.PI} * r * T \text{ with } P \text{ in W/kW}$$

**Parameters**

r = Rotational Speed in rpm/Hz.  
T = Torque in Nm/kNm.

Calculation of reaction forces, force flow, moments, tension, deflection and twist of the shaft ...

Berechnung der Reaktionskräfte, des Kraftflusses, der Momente, der Spannung, der Durchbiegung und Verdrehung der Wellen

## Multiline / Complex Formula

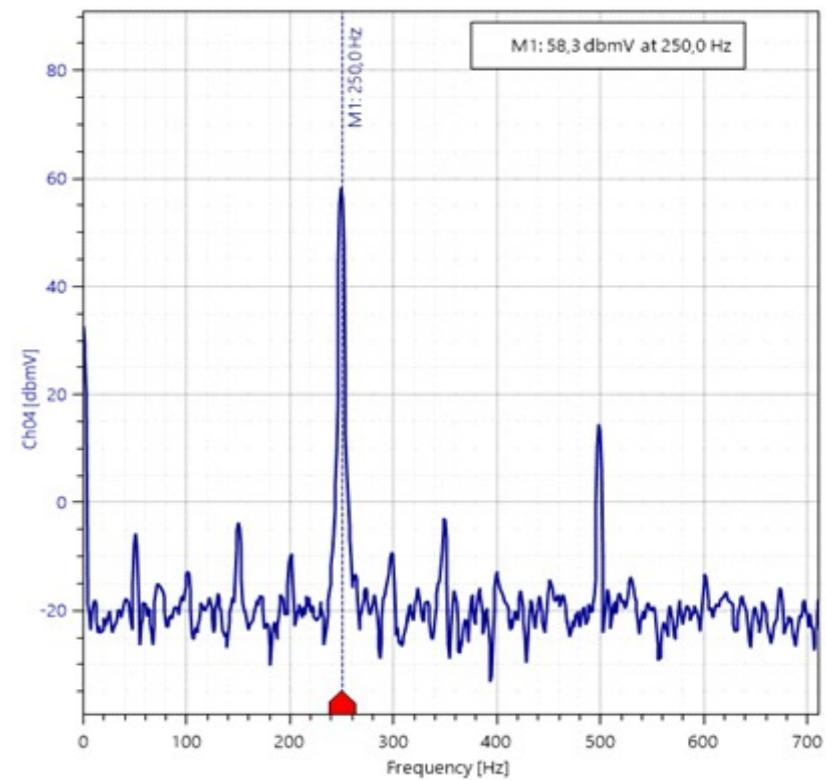
Example formula: "[Ch01] + Math.Abs([Ch02])"

```
var p_In =MecFunc.PowerRot(rev: [Rot.Speed In],t: [T_in]);
var p_Out =MecFunc.PowerRot(rev: [Rot.Speed Out],t: [T_out]);
return MecFunc.EfficiencyPct(POut: [P_out],Pin: [P_in])
```

## Suggestion / Formula-Tool-Box

m	Math.Sign()
	Math.Truncate()
	Math.ScaleB()
	Math.Abs()
	Math.Acos()
	C!Math.Acosh()
	Math.Asin()
	Math.Asinh()

Die "m" ist im aktuellen Kontext nicht vorhanden.



## Suggestion / Channel - Selection

[Torque1]	ion
[Torque2]	ehler. "]" erwartet.
[Rot.Speed]	
[Pin]	
[Pout]	
[Eta]	
[PVerlust]	
[Vektor]	

# CMT

## Channel Monitoring and Power Control Tool

Monitoring [Logfile=C:\Manner\Monitoring\Monitoring\_Data\_2023-05-26\_16-12-01.log]

Setup		V23 Line		V24 Line		Temperature																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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Monitoring Setup

LOG-File	Error	2,3	Warn	3,3	Ok	500,0	Warn	500,0	Error	0,1
Module-Temperature [°C]	Error	<= -20,0	Warn	<= -15,0	Ok	<= 135,0	Warn	<= 145,0	Error	Hysteresis 1,0
Power-Control "Evaluation Unit 1 / 50W" RF-Power [W]	Error	<= 0,0	Warn	<= 0,0	Ok	<= 45,0	Warn	<= 48,0	Error	Hysteresis 0,2
Power-Control "Evaluation Unit 1 / 50W" Reflection [W]	Ok	<= 2,5	Warn	<= 5,0	Error	<= 0,2				
Millivolt [mV]	Error	<= -11000	Warn	<= -10500	Ok	<= 10500	Warn	<= 11000	Error	Hysteresis 100
Temperature [°C]	Error	<= -253,4	Warn	<= -241,9	Ok	<= 241,9	Warn	<= 253,4	Error	Hysteresis 2,3

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100.0 %	100.0 %
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