sampling rate: 4 frequency (0.57143 samples per hour)
signal period: 7 hours, frequency: 0.14286 cycles per hour
number of samples: 33, 8 periods
df: 0.01732, Δf: 0.55411 cycles per hour
dt: 1.75000, Δt: 56.00000 hours
$df = 1/\Delta t, \Delta f = (n-1)df = 1/dt$
offset: 0 m, amplitude: 2 m, initial phase: 0.0 °, noise: 0.0

Raw signal

Fourier transform modulus
Most present freq: 0.13853 cycles per hour
Period: 7.21875 Hours

Reconstructed signal
Difference: 2.508E-15

found parameters: amplitude = 2.032 m, period = 7.006 hours, offset = 0.073 m, initial_phase = -0.203 °
train r2: 7.588E-01, test r2: 7.453E-01