



Energy Saving for Air Conditioning System (King Yuan Electronics CO., LTD)

Etern

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京元電子

The Testing Industry Benchmark



Case information

Location: Hsinchu / Miaoli, Chunan

Industry: Semiconductor test service

Employees: About 4400 employees

Requirement: Energy saving for AHU

Implementation: Inverter control system is designed for AHU to reduce power consumption

◆ Equipment



◆ Energy saving system & benefit (Hsinchu plant)



▲ Before : $4.61 - 0.04 = 4.57$ (KWH/hr)

▼ After : $8.04 - 6.06 = 1.98$ (KWH/hr)



Saving = $(4.57 - 1.98) / 4.57 = 56.7\%$

◆ Energy saving system & benefit (Hsinchu plant)



Running Current

• 60Hz: 23.79A

• 40Hz: 7.58A
(Saving 68%)

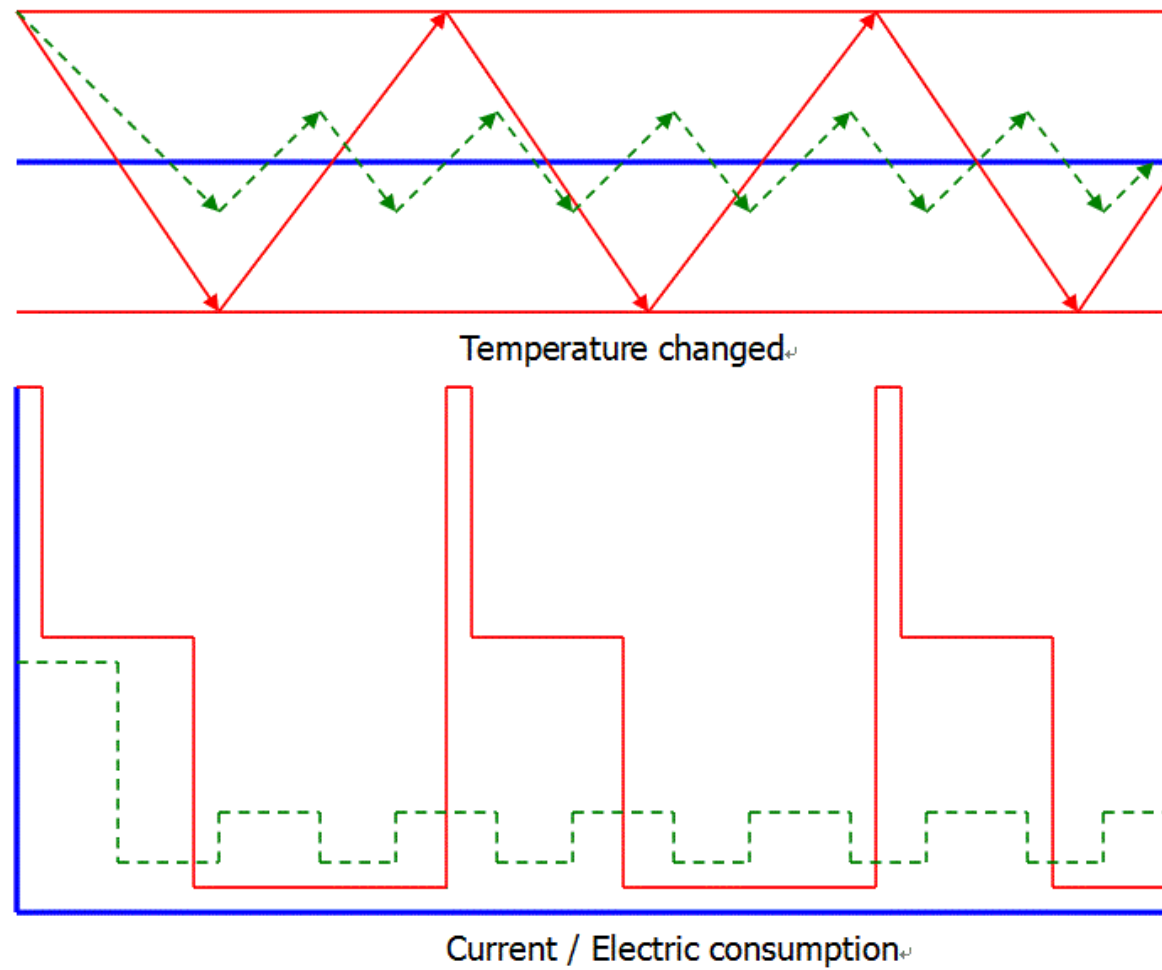
• 30Hz: 5.48A
(Saving 77%)

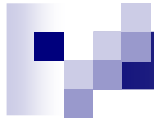




◆ Theorem

With FCM (green) vs. Without FCM (red)





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