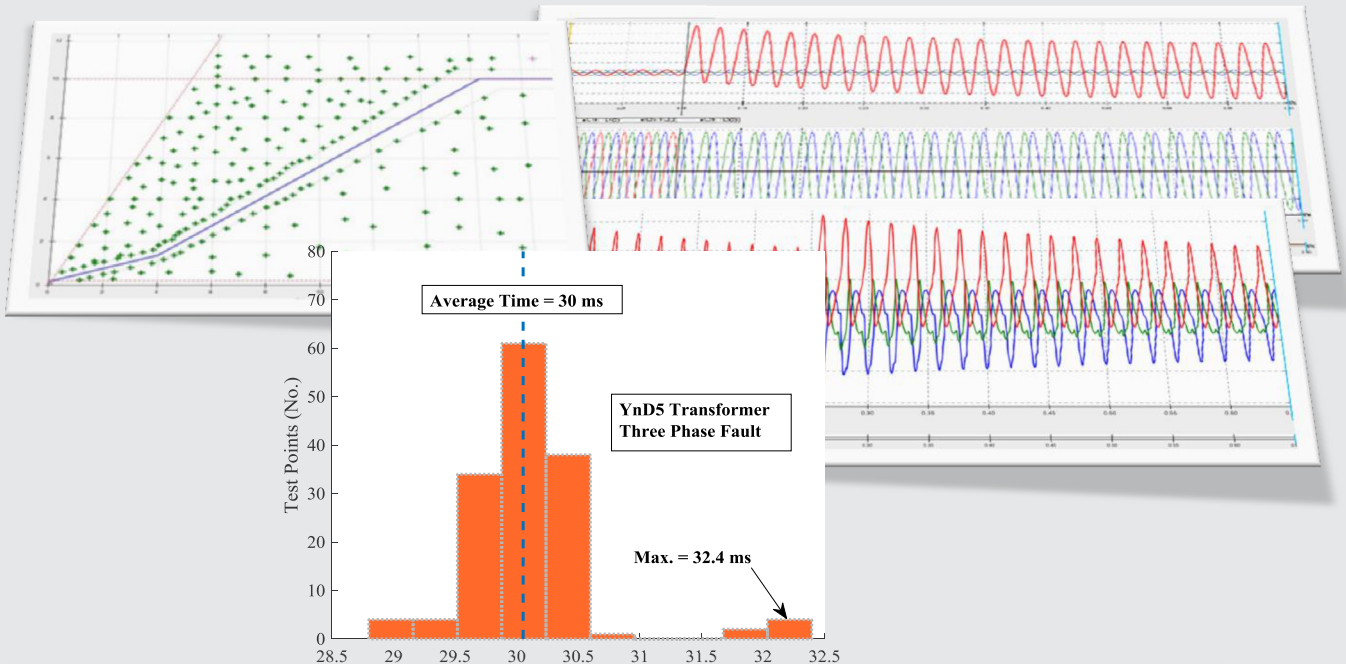


# LAPCO-HF 6208



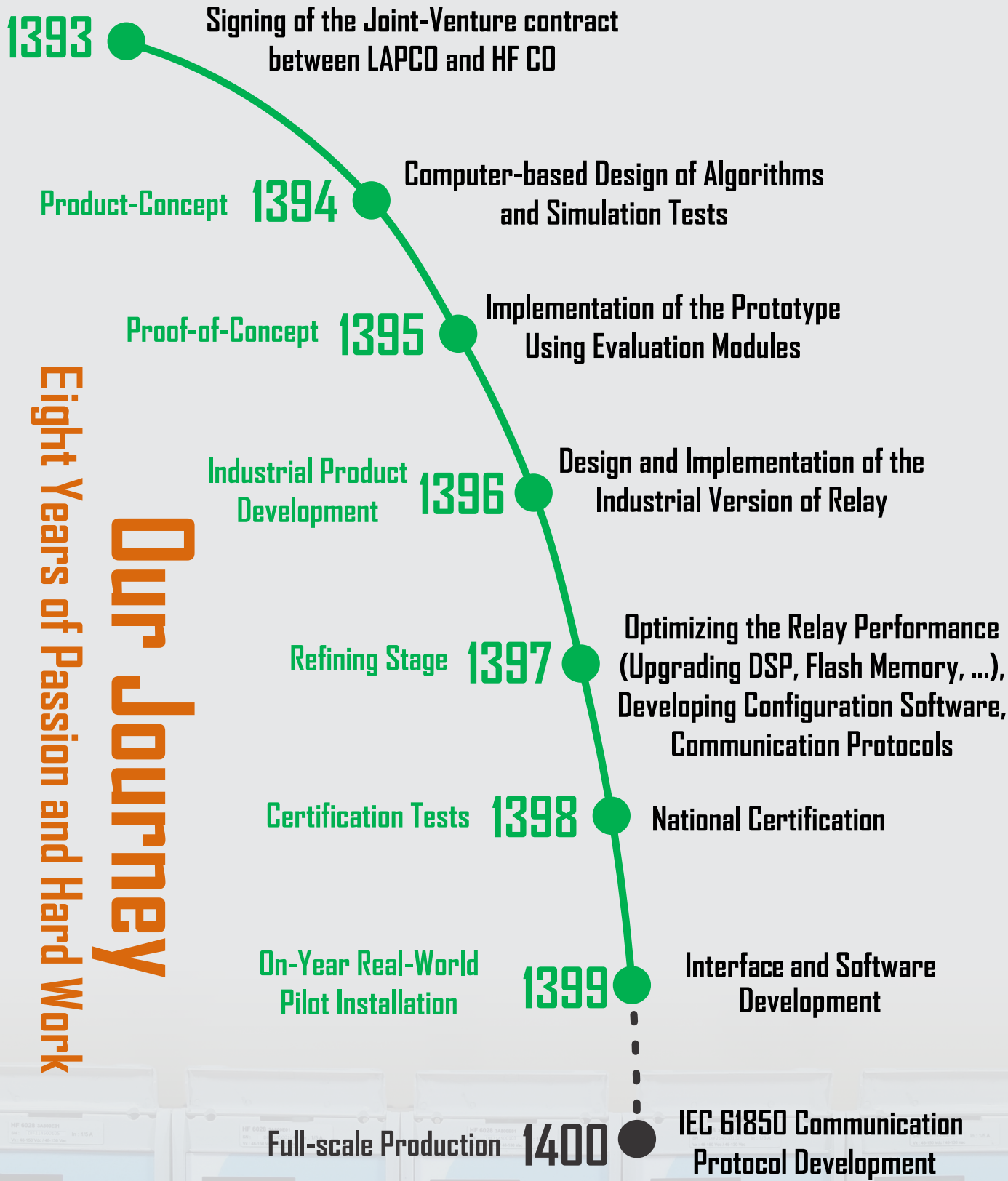
SHARIF  
**LAPCO**

The **LAPCO-HF 6208** differential protection device provides a fast and selective protection of sub-transmission transformers with two windings. Comprehensive integrated back-up protection functions such as time Restricted Earth Fault and overcurrent protection make additional protection devices obsolete.



**Industry-University Joint-Venture**  
**Seeking to Implement Industrial Intelligent Electronic Devices**

**Our Journey**  
Eight Years of Passion and Hard Work

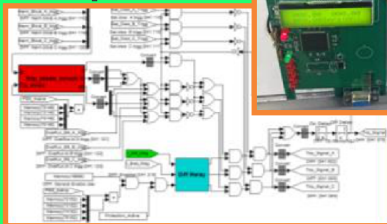


# Protection Functions

- Differential Protection – 2 windings (87T)
  - ✓ A dual-slope percentage characteristic
  - ✓ Two high-set differential elements
  - ✓ Inrush stabilization
  - ✓ Over-fluxing restraint
  - ✓ Operating time including output relay:  $\leq 35$  ms (with Inrush stabilization)
  - ✓ Deviations:  $\pm 5\%$
- Restricted Earth Fault Protection (87N)
  - ✓ Two separated functions (REF1 and REF2) for primary and secondary windings
  - ✓ Two operating modes: sum(IP) and max(IP)
  - ✓ High-set differential element
- Definite-time Overcurrent Protection (50 P/Q/N)
  - ✓ Two separated functions (DTOC1 and DTOC2) for primary and secondary windings
  - ✓ Three-stages, phase current protection ( $I>$ ,  $I>>$ ,  $I>>>$ )
  - ✓ Three-stages, negative-sequence current protection ( $I_{neg}>$ ,  $I_{neg}>>$ ,  $I_{neg}>>>$ )
  - ✓ Three-stages, residual current protection ( $I_N>$ ,  $I_N>>$ ,  $I_N>>>$ )
  - ✓ inrush blocking option
- Inverse-time Overcurrent Protection (51 P/Q/N)
  - ✓ Two separated functions (IDMT1 and IDMT2) for primary and secondary windings
  - ✓ 12 tripping characteristics available for selection (IEEE, IEC, ANSI, RI-Type)
  - ✓ One-stage, phase current protection
  - ✓ One-stage, independent negative-sequence current protection
  - ✓ One-stage, independent residual current protection
  - ✓ inrush blocking option
- Disturbance Recording
  - ✓ Fault Recording: 25
  - ✓ Event Recording: 250
  - ✓ Disturbance Recording: 8 (Programmable Trigger for Start of Recording, Pre-Fault Time: 50 Cycles, Max Record Time: 300 Cycles)

**A Marathon is Achieved Step by Step!**

**Concept 1394**



**Pilot 1396**



**Product 1398**



**Type Test**



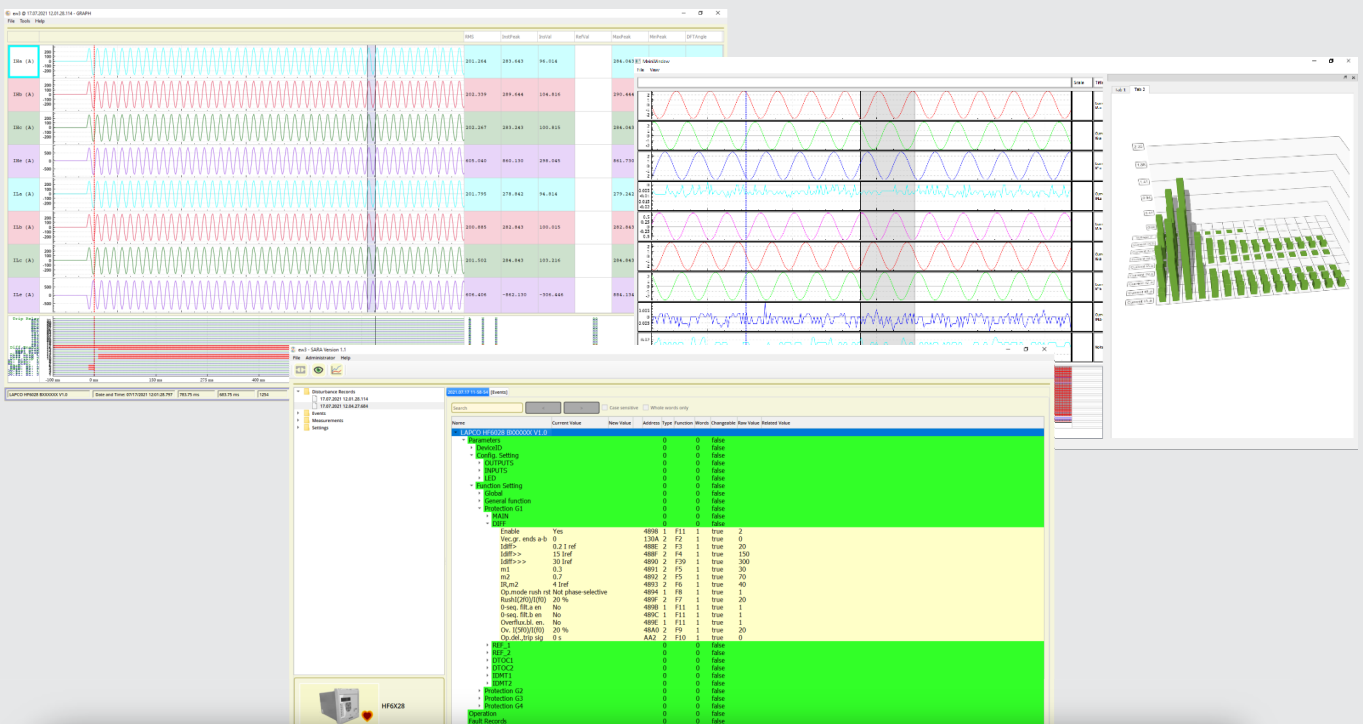
**Installation and commissioning in parallel**



**1400**

# Features

- Vector group matching
- Amplitude matching
- Zero-sequence current filtering
- Nominal input current: 1 A and 5 A
- Four parameter subset selection
- 2X16 LCD display
- 8 two color LEDs (Relay status/programmable functions)
- 8 digital outputs
- 5 digital input
- Easy integration in substation Digital Control System or SCADA through Modbus, IEC60870-5-103
- Compliance with international standard EN 60255- 26 and EN 60255- 27
- Native interactive Configuration Software
- Visual disturbance viewer to plot recorded COMTRADE files



## Native User-Friendly Support Software for Setting, Configuration and File Transfer

Visit Us



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