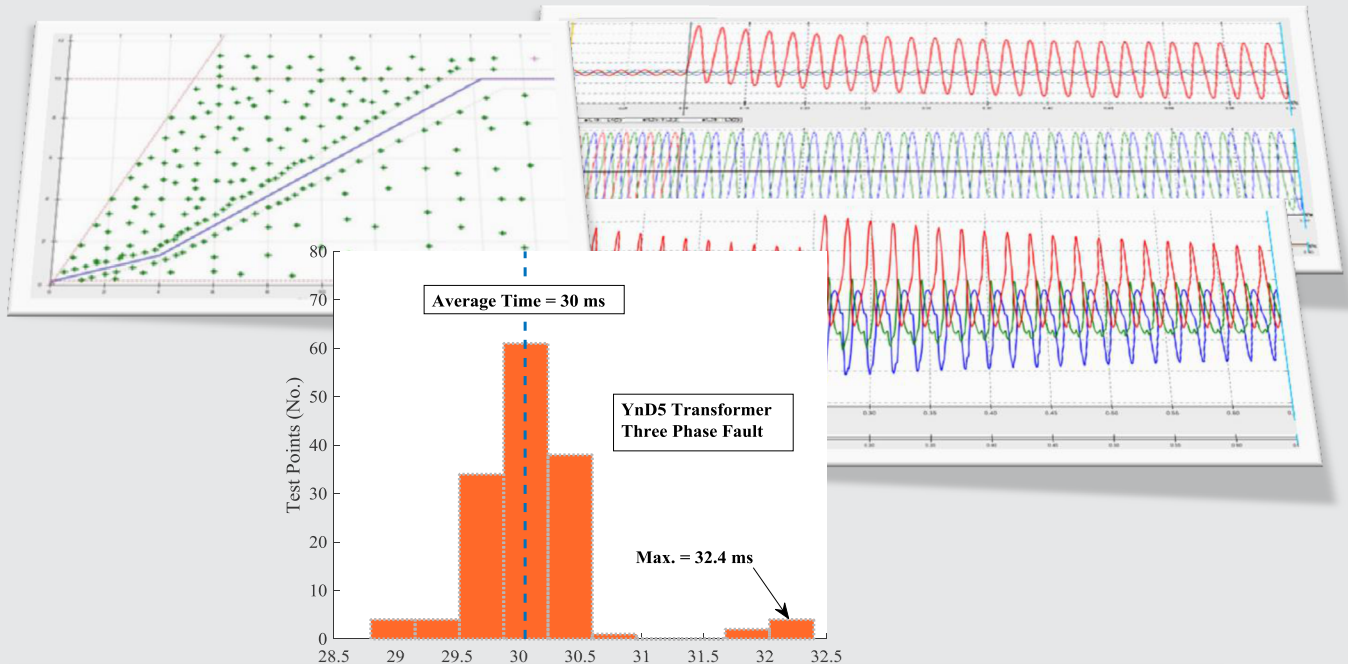


LAPCO-HF 6028



SHARIF
LAPCO

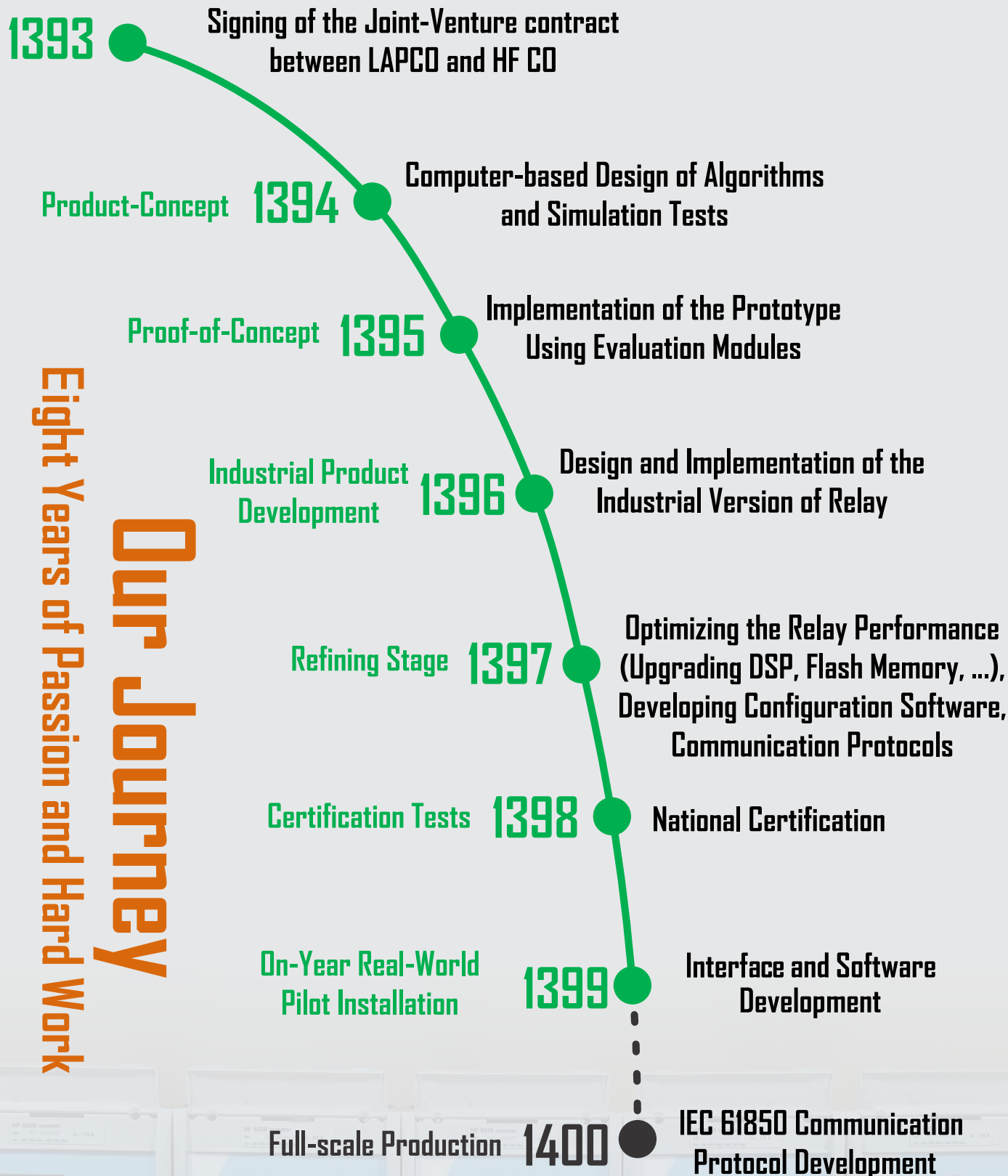
The **LAPCO-HF 6028** differential protection device provides a fast and selective protection of sub-transmission transformers with two windings. Comprehensive integrated back-up time Restricted Earth protection functions such as Fault and overcurrent protection make additional protection devices obsolete.



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: ≤ 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!**

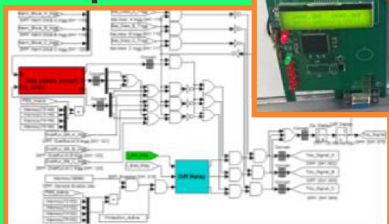
Product 1398



Pilot 1396



Concept 1394



Type Test



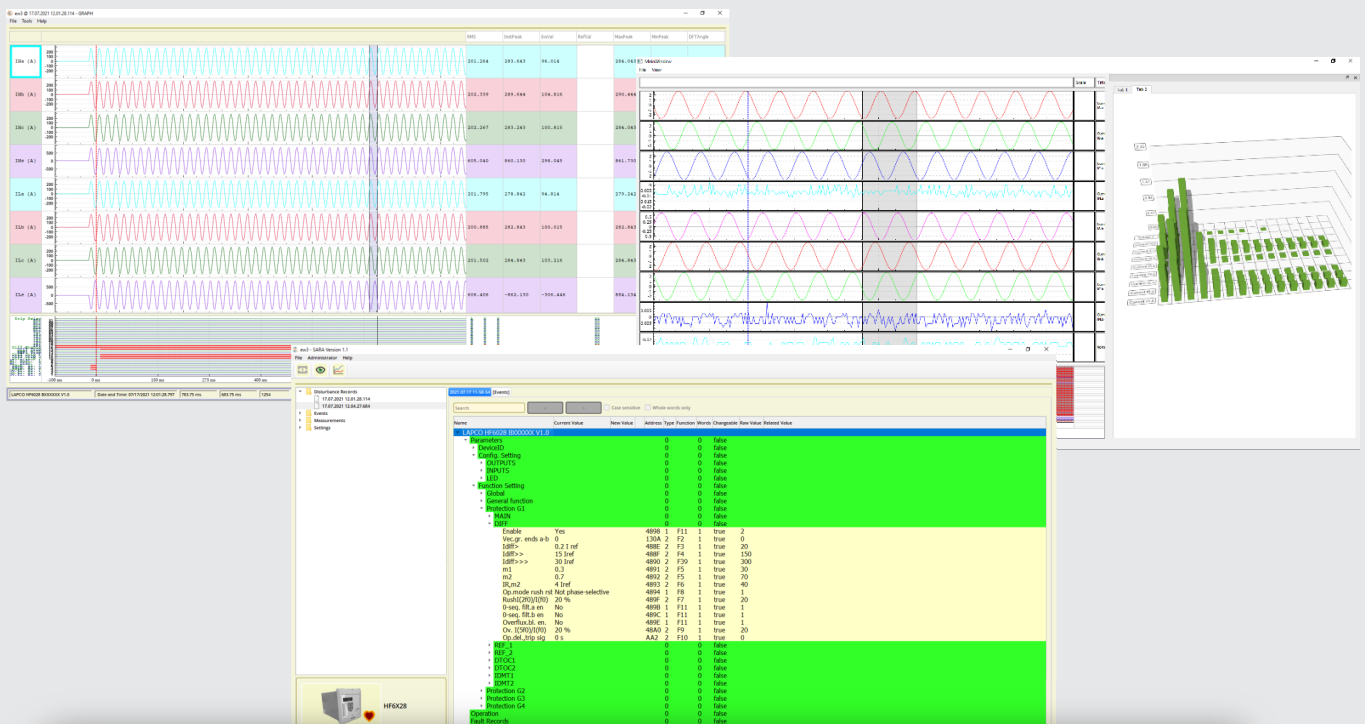
**Installation and
commissioning in parallel**



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



SHARIF
LAPCO

Laboratory of Protection and Automation Cooperation (LAPCO)
2nd floor, Department of Electrical Engineering,
Sharif University of Technology,
P.O. Box 11365-11155
Tehran, Iran



Hamian Fan Company
No.1, Amirkabir Blvd., Shahrak-e-Golestan,
Tehran, Iran
www.hamianfan.com