



MDA 8000HD Motor Drive Analyzer

350 MHz – 2 GHz
8 Channels, 12-bit Resolution

Static, Dynamic, Complete



Test Coverage	Teledyne LeCroy MDA 8000HD Motor Drive Analyzer	Yokogawa PX8000 Precision Power Scope	Yokogawa WT1800 Power Analyzer
Power Semiconductor	Complete	No Capability	No Capability
Inverter Subsection	Complete	Very Limited	No Capability
Complete Drive System	Complete	Very Limited	No Capability
Embedded Control System	Complete	No Capability	No Capability

	Teledyne LeCroy MDA 8000HD Motor Drive Analyzer	Yokogawa PX8000 Precision Power Scope	Yokogawa WT1800 Power Analyzer
Analog Inputs	8 + 8 (with OscilloSYNC)	8	12
Digital Inputs	16 (with MSO option)	No	No
Resolution	12 bits	12 bits ¹	16 bits ¹
Bandwidth	350 MHz - 2 GHz	20 MHz	5 MHz
Sample Rate	10 GS/s	100 MS/s	2 MS/s
Memory	50 Mpts/Ch standard 1.25 Gpts/Ch maximum	10 Mpts/Input standard 100 Mpts/Input maximum	2 Mpts/Input
Display Size	15.6"	10.4"	8.4"
Static Power Analysis (3-phase)	Yes	Yes	Yes
Dynamic Power Analysis (3-phase)	Yes	No (simple V*I math only)	No
Mechanical Interface	9 Speed, 5 Torque, 4 Angle (standard)	2 Speed, 1 Torque (optional)	2 Speed, 1 Torque (optional)
Vector Display	Yes	Yes	Yes
Harmonics Calcs	Yes	Yes	Yes
Power Accuracy	~1%	0.25%	0.10%
Voltage Probes	Yes	Very Limited	No
Current Probes	Yes	Very Limited	No
Serial Trigger & Decode	Yes	No	No

1 - Crest factor settings of 3 or 6 reduce the practical resolution to less than this amount.

“Channels and Probes” vs. “Elements”

Teledyne LeCroy MDA 8000HD



Analog and digital input channels

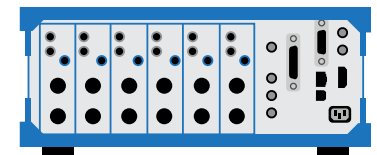
8 analog input channels up to 2 GHz.
Up to 16 analog channels using
OscilloSYNC™ technology.

16 digital channels (optional).

Probes provide HV isolation and
shielding from interference.

**Flexible high-bandwidth inputs can
measure any signal but require use of
probes that add cost and reduce accuracy.**

Typical Power Analyzer



Input modules (number varies)

Specialized for specific voltage and current
signals only.

HV isolated - typically 1000 Vdc.

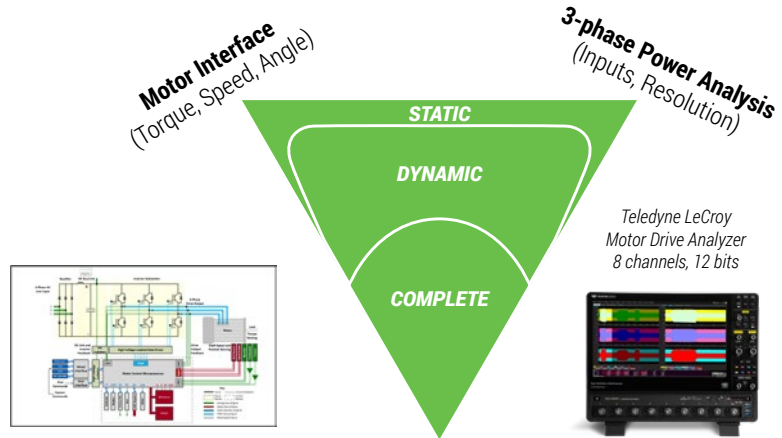
Input cables not shielded - subject to
interference and noise.

No flexibility to measure digital, control, or
serial data signals.

**Specialized inputs have built-in high
voltage isolation but no flexibility for
complete testing. Most accurate only
if not used with external transducer/
transformer.**

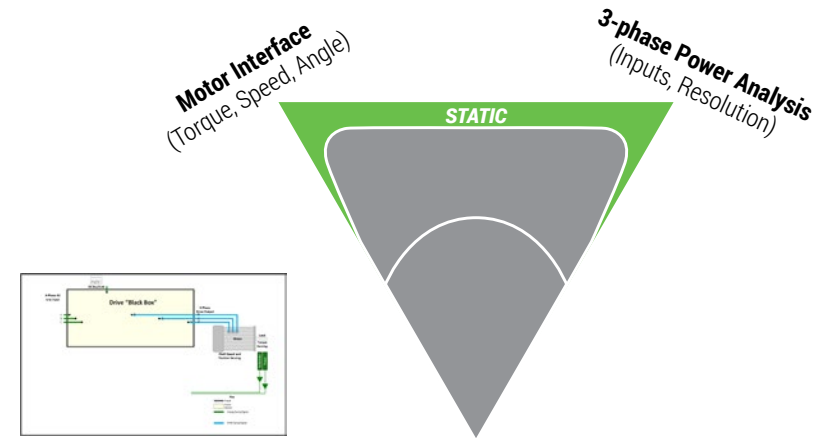
What Motor Drive Engineers Need - Static, Dynamic, Complete

Motor Drive Analyzer



Complete Acquisition Capabilities
(BW, SR, Resolution, Memory;
Analog, Digital, Sensor, Serial Data)

Power Analyzer



Complete Acquisition Capabilities
(BW, SR, Resolution, Memory;
Analog, Digital, Sensor, Serial Data)

Teledyne LeCroy Motor Drive Analyzers combine capabilities of power analyzer instruments and oscilloscopes to provide complete drive system testing, including:

- IGBT/MOSFET Device Test
- Inverter Subsection Test
- Embedded Control System Test
- Control Loop Analysis
- Power Systems Analysis
- Drive System Validation

Capability	Teledyne LeCroy MDA 8000HD Motor Drive Analyzer	Power Analyzer Instrument
Static Power Analysis	Yes Short records. Constant load/speed. Numerics value table. Correlation to controls.	Yes Short records. Constant load/speed. Numerics value table.
Dynamic Power Analysis	Yes Long time durations. Variable loads/speeds. Statistics table. Per-cycle Waveforms. Correlation to controls.	No
Complete Test Capability	Yes View 3-phase waveforms. Mixed Signal (MSO). Serial trigger & decode. Probes & accessories. Combine two instruments for 16 channels.	No Single-use instrument.