

OPTimizer²[™]



OM2D

INCON's OM2D uses patented technology to continuously monitor circuit breaker performance and SF6 density. The OPTimizer2 provides business critical information, allowing you to plan cost-effective maintenance and to reduce random failure.

CAPABILITIES

- Monitors SF6 gas density, with alarms for weekly & monthly density trends and low density
- Measures SF6 density loss
- Forecasts when gas refill is needed
- Provides online timing for trip coil circuit and latch, arc duration, circuit clearing and mechanical travel
- Monitors line currents during trip operations to record line and transformer through-fault information, including date, time, magnitude and duration, on a per-phase basis

APPLICATIONS

- T & D breakers 38-765kV
- SF6 or Oil breaker types
- SF6 Circuit Switchers
- Ganged or Single Phase operators

BENEFITS

- Gives environmental SF6 reporting information
- Monitors SF6 fugitive emissions
- Provides in-service breaker performance data
- Issues alarms and sends e-mails for incipient breaker problems
- Reduces need for routine travel timing tests
- Gives arc-related wear for maintenance planning
- Accessible through networks or the Internet
- Breaker performance & SF6 gas data given in standard spreadsheet format used by MS Excel & others
- SmartGrid ready

FEATURES

- Visual and digital outputs available at the breaker
- Ethernet, RS-232 and RS-485 ports for remote HMI
- Powerful embedded software makes every OPTimizer² a web server
- Access circuit breaker and SF6 data via Web Browser or USB memory stick
- User Interface includes English, French, Spanish, Russian, German & Simplified Chinese languages
- DNP3.0 & TCP/IP communication protocols
- Easy, non-intrusive installation and simple programming
- Rugged, robust utility-style construction for long life and care-free operation
- Low capital cost, low installed cost, rapid ROI
- 2 Form-C dry contact relays (alarms grouped as Warning or Danger)
- 1 Form-A dry contact relay for SF6 alarms

Circuit Breaker Wear and Condition Monitor OPTimizer²

Specifications

POWER SUPPLY

Nominal Input Voltage:	110 to 264V AC/DC 50/60Hz
Power Dissipation:	15 W maximum

CURRENT INPUTS

VA Burden @ 20% Full Scale:	0.1 VA
Continuous Input Current:	CT Full Scale Rating
Full Scale Peak Current:	CT Full Scale Rating

CURRENT TRANSFORMERS

Ranges:	0-20, -30, -50, -100, -160, -250, -400, -800 Amps
Accuracy	+/-1% of Full Scale

CONTROL SIGNAL INPUTS

Auxiliary Control Signal:	48 to 250 Volts DC
Input Resistance:	500K Ohms

CURRENT DATA ACQUISITION

Measurable Arc Duration:	10 Cycles Nominal
Line Frequency:	50/60Hz Programmable
Sampling Rate Per Phase:	32 times per line cycle

SF₆ INPUTS

Sensor Type:	True Density™ or Temperature-Compensated Pressure
Sensor Signal:	4-20mA Analog or Digital
Sensor Power:	20 VDC (Provided)
Measurement Range:	0-60 Grams/Liter, (-50 to +80°C)
Sampling Rate:	Once per second

RELAY OUTPUT

2 each, Form C:	3A at 250 VAC or 30VDC
1 each, Form-A:	3A at 250 VAC or 30 VDC

ISOLATION

CT Input Phase to Enclosure:	1500 Vrms
CT Input Phase to Enclosure:	2500 Vrms
Auxiliary Input to Enclosure:	1500 Vrms
Relay Contacts to Enclosure:	1500 Vrms

SURGE WITHSTAND

Exceeds:	IEEE 472-1972 & ANSI C37.90a
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USER INTERFACE

LED Panel Indicators:	Power, Breaker Position, Alarms, and Percent Wear
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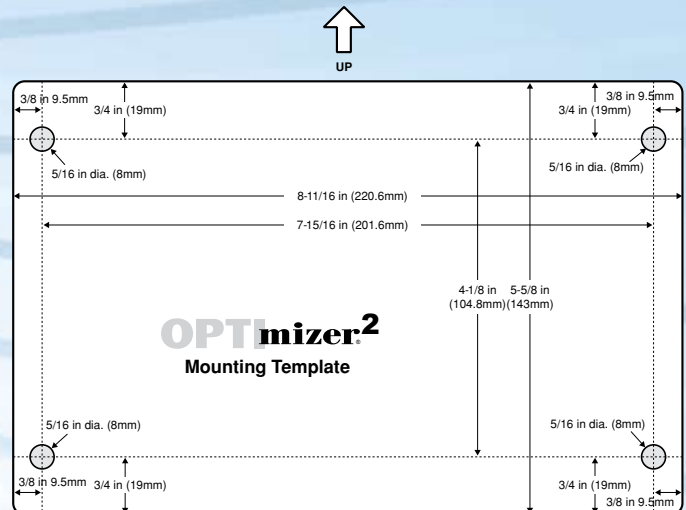
Computer Ports:	RS-232, RS-485 Full Duplex, Ethernet, USB
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OPERATING ENVIRONMENT

Temperature:	-20 to +150 °F (-28 to 65 °C)
Humidity:	85% non-condensing, maximum

WEIGHT AND DIMENSIONS

Shipping Weight:	2.63 kg (5.80 lbs)
Dimensions:	22.1L x 14.3W x 7.62H cm (8.69L x 5.63W x 3.00H in.)
Mounting Weight:	1.80 kg (3.95 lbs.)



Ordering Information

OPTimizer²

Model OM2	CB Monitor
Model OM2D	CB Monitor with SF ₆ Density

ACCESSORIES

Model CT-20	CT Pickup Coil 20 Amps
Model CT-30	CT Pickup Coil 30 Amps
Model CT-50	CT Pickup Coil 50 Amps
Model CT-100	CT Pickup Coil 100 Amps
Model CT-160	CT Pickup Coil 160 Amps
Model CT-250	CT Pickup Coil 250 Amps
Model CT-400	CT Pickup Coil 400 Amps
Model CT-800	CT Pickup Coil 800 Amps
Model DSDP	SF ₆ Density Sensor, Digital, G3/8 Parallel Thread
DSDN	SF ₆ Digital Sensor 3/8" NPT Thread
Model OMX-3-115 or OMX-3-230	Input Expansion Module for use with redundant trip circuits or individual pole operation breakers



BUSINESS CRITICAL



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