



DIGITAL ISOLATOR

OPTICAL ISOLATION DEVICE

- High Reliability
- High Accuracy and Linearity
- Solid State Design
- Simple Installation

The E-MAX Optical Isolation Device is completely solid state and is designed to be utilized to isolate the interface between nuclear power generating station systems and monitoring equipment. They are particularly useful in instrumentation and control applications.

The digital isolator product line includes an A.C. output and two D.C. output models. The AC output unit features a single output while the DC models are available in a single or dual isolated output.

The output contact is capable of switching A.C. load from 40 mA to 500 mA at power factors from 0.3 to 1. The output contact will handle surges up to 5 amperes.

The devices are housed in non-combustible glass-filled polycarbonate cases with connecting terminals sloped at 45° angles for easy stacking of units. Input and Output terminals are easy access #10-32 studs.

SPECIFICATIONS

Input Voltage 120 ms $\pm 15\%$
125 Vdc $\pm 15\%$
1 Phase; 60 Hz $\pm 3\%$

AC MODEL	
Input Current	< 30 mA AC or 15 mA DC
Input Impedance	12,500 Ohms Minimum
Output Current	40 mA to 500 mA, 5 amp surge
Output Voltage	120 Vac rms. $\pm 15\%$
Input Voltage Threshold	> 70 Volts
Switching Time	Approximately 50 msec
T On	Approximately 65 msec.
Voltage Drop Across "Output Contacts"	4 Volts rms maximum
ISOLATION	
Input to Output	2500 V rms, 1 minute

DC MODELS	
Input Voltage Threshold	> 65 V
Input Impedance	20 K Ohms
Output Voltage	24, 48, or 125 Vdc $\pm 15\%$
Output Current	0.5 mA - 140 MA continuous @ rated output voltage. Surge capability of 2.0 A of 20 msec duration at 5 sec intervals.
Leakage Current	100uA max. with 1 K Ohm load.
Switching Time - T On	Approximately 40 msec.
T Off	Approximately 20 msec.
Voltage Drop Across "Output Contacts"	4 Volts rms maximum
Power Dissipation	1W @ 140 mA
Isolation	
Input to Output	2500 V rms, 1 minute
Output to Output	2500 V rms, 1 minute

MECHANICAL

Dimensions - AC or DC Single Output Unit 1.9" W x 2.0" H x 7.0" L
DC Dual Output Case 3.9" W x 2.0" H x 7.0" L
Weight - Single Output .75 lbs
DC Dual Output Unit 1.5 lbs
Terminal Connection 10-32 studs accommodate ring or spade lugs of #12 AWG wire

ENVIRONMENTAL CHARACTERISTICS:

Operating Temperature -55° To 100° Celsius
Storage -55° to 150° Celsius
Relative Humidity 0 to 95% R.H. non-condensing
Surge Withstand Capability: ANSI C37.90.1 1999
Quality Certification: ISO 9001:2000