5 Volt Logic Voltage Only

AC INPUT

12 - 32 VAC	IDC5P
90 - 140 VAC	IAC5P

AC OUTPUT

12 - 140 VAC	OAC5P

DC INPUT

10 - 32 VDC	IDC5P
90 - 140 VDC	IAC5P

DC OUTPUT

5 - 60 VDC	ODC5P

DESCRIPTION

The Flat Pak AC input modules are used for sensing ON/OFF alternating current (AC) voltage levels. All AC input modules are designed with filtering on the input and a hysteresis amplifier for high noise rejection and transient free "clean" switching. Each module provides up to 4000 V_{rms} of optical isolation between the field inputs and the logic side of the circuit.

The Flat Pak module are typical used on user-designed printed circuit boards where the standard single channel or Quad Pak module do not provide an exact fit. The Flat Pak modules are also ideal for circuit boards designed for computer chassis (i.e., Intel's MultiBus, STD bus, etc.) because of its low profile.

Typical uses and applications include sensing the presence or absence of voltage or sensing contact closures from sources such as:

Proximity Switches
Limit Switches
Selector Switches
Push Button And Toggle Switches
Thermostats

FEATURES

Industry standard plug-in module
4000 VAC optical isolation
UL recognized #E58169
CSA certified #35852
Operating temperature: -30 to 70° C
Built-in filtering for transient suppression and noise rejection

ORDERING GUIDE

Input Voltage VAC	Logic Voltage	Part Number
12 - 32	5	IDC5
90 - 140	5	IAC5

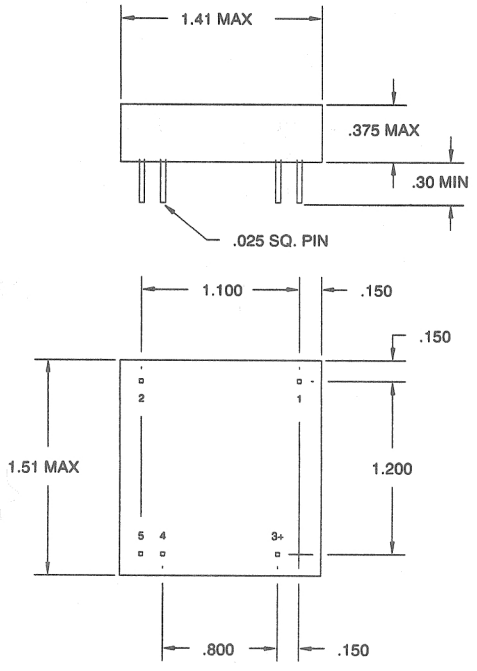
SPECIFICATIONS

GENERAL - Applies To All Models

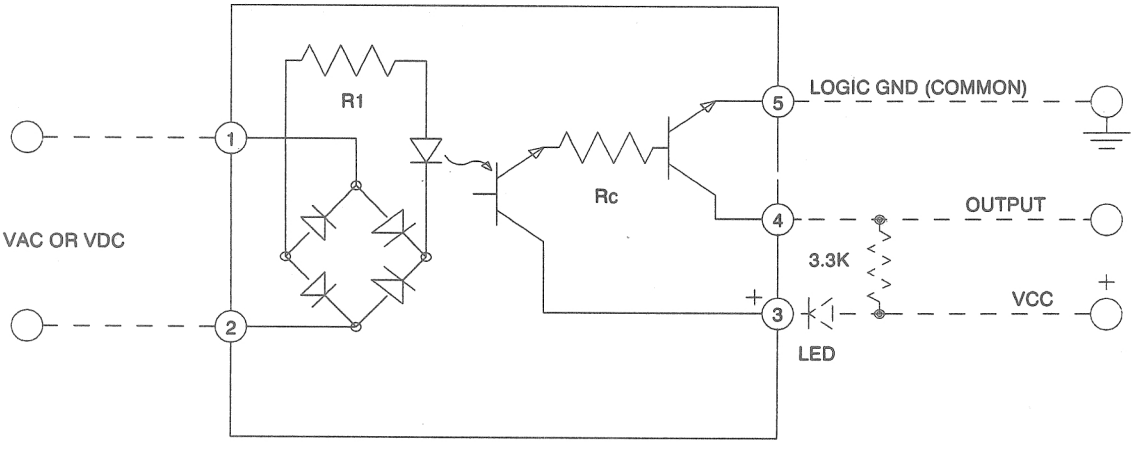
Operating Ambient Temperature:	-30 to 70° C
Isolation Input-To-Output:	4000 V_{rms}
Output Voltage Drop:	0.4 Volts @ 50 milliamperes
Output Current:	50 milliamperes
Output Leakage With No Input:	100 microamperes maximum @ 30 VDC
Output Transistor:	30 Volts breakdown

	Units	IDC5P	IAC5P
Input Voltage Range:	VAC	12 - 32	90 - 140
Input Current @ Maximum Line:	mA	25	11
Turn-on Time:	msec	5	20
Turn-off Time:	msec	5	20
Input Allowed For No Output:	mA, V	1, 3	3, 45
Logic Supply Voltage-Nominal:	VDC	5	5
Logic Supply Voltage Range:	VDC	4.5 - 6	4.5 - 6
Logic Supply Current: @ Nominal Logic Voltage*	mA	12	12
Input Resistance: (R1 in Schematic Diagram)	Ohms	1.5k	14k
Control Resistance: (Rc in Schematic Diagram)	Ohms	220	220

DIMENSIONS



SCHEMATIC



EQUIVALENT
CIRCUIT ONLY
NEGATIVE TRUE LOGIC

DESCRIPTION

The Flat Pak AC output modules are used for controlling or switching AC loads. Each module provides up to 4000 V_{rms} of optical isolation between the field devices and the control logic. With the exception of the OAC5A5 module, all AC output modules are equivalent to a single pole, single throw, normally open contact (FORM A, SPST-NO, Make). The OAC5A5 is equivalent to a single pole, single throw, normally closed contact (FORM B, SPST-NC, Break). All AC output modules feature zero voltage turn-on and zero current turn-off.

The Flat Pak module are typical used on user-designed printed circuit boards where the standard single channel or Quad Pak module do not provide an exact fit. The Flat Pak modules are also ideal for circuit boards designed for computer chassis (i.e., Intel's MultiBus, STD bus, etc.) because of its low profile.

Typical uses and applications for AC output modules include switching the following loads:

Relays
Solenoids And Contactors
Motor Starters
Heaters
Lamps Or Indicators

FEATURES

Industry standard plug-in module
4000 VAC optical isolation
Current rating: 3 amperes @ 45° C
Withstands one cycle surge of 80 amperes
UL recognized #E58169
CSA certified #35852
Operating temperature: -30 to 70° C
Zero voltage turn-on
Zero current turn-off

ORDERING GUIDE

Line Voltage VAC	Logic Voltage	Part Number
12 - 140	5	OAC5P

SPECIFICATIONS

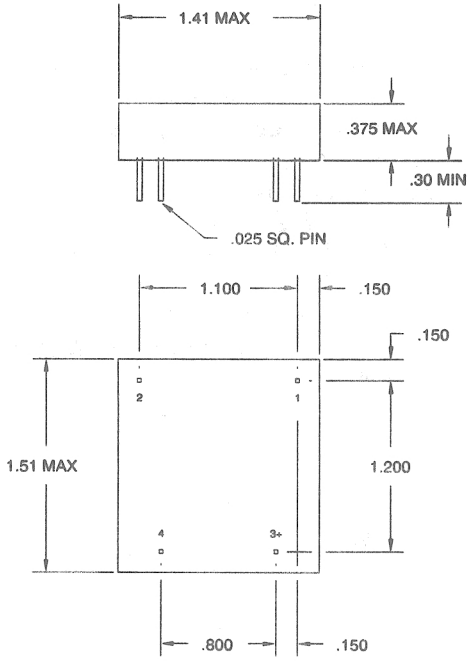
GENERAL - Applies To All Models

Current Rating:	
@ 45° C Ambient	3 amperes
@ 70° C Ambient	2 amperes
One Cycle Surge:	80 amperes peak
Peak Repetitive Voltage:	500 Volts
Operating Ambient Temperature:	-30 to 70° C
Isolation Input-To-Output:	4000 V_{rms}
Minimum Load Current:	20 milliamperes
Operating Frequency:	25 - 65 Hz
Turn-on Time:	1/2 cycle maximum - Zero Voltage
Turn-off Time:	1/2 cycle maximum - Zero Current
DV/DT - Off-state:	200 Volts/microsecond
DV/DT - Commutating:	Snubbed for rated 0.5 power factor load
Output Voltage Drop Maximum Peak:	1.6 Volts
Off-state Leakage:	5 milliamperes, rms

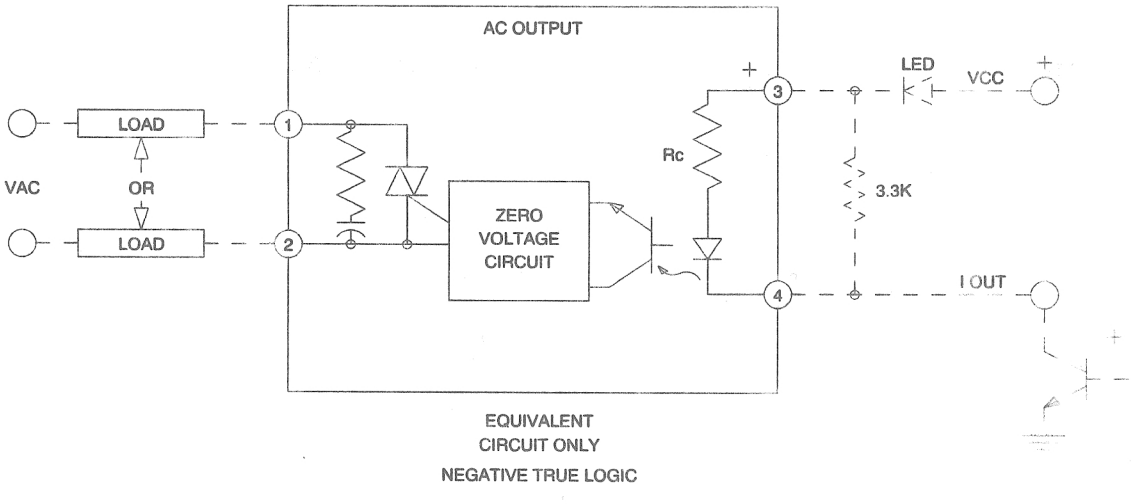
OAC5P

Line Voltage - Nominal:	120 VAC
Operating Voltage Range:	12 - 140 VAC
Logic Voltage - Nominal:	5 VAC
Logic Voltage Range (V_{cc}):	2.5 - 8 VDC
Logic Pickup Voltage:	2.55 VDC
Logic Dropout Voltage:	1 VDC
Logic Input Current:	12 mA
@ Normal Logic Voltage	
(I_{out} in Schematic Diagram)	
Control Resistance:	220 Ohms
(R_C in Schematic Diagram)	

DIMENSIONS



SCHEMATIC



DESCRIPTION

The Flat Pak DC input modules are used for sensing ON/OFF DC voltage levels. All DC input modules with the exception of the IDC5B and the IDC5D are designed with filtering on the input and a hysteresis amplifier for high noise rejection and transient free "clean" switching. The IDC5B module is a fast switching input module for signals produced by photoelectric switches, encoders, DC proximity switches or TTL level devices. The IDC5D is a low cost, DC only, input module for use in data acquisition applications. Each module provides up to 4000 V_{rms} of optical isolation between the field inputs and the logic side of the circuit.

The Flat Pak module are typical used on user-designed printed circuit boards where the standard single channel or Quad Pak module do not provide an exact fit. The Flat Pak modules are also ideal for circuit boards designed for computer chassis (i.e., Intel's MultiBus, STD bus, etc.) because of its low profile.

Typical uses and applications include sensing the presence or absence of voltage or sensing contact closures from sources such as:

Proximity Switches
Limit Switches
Selector Switches
Push Button And Toggle Switches
Photoelectric Switches
TTL Compatible Devices

FEATURES

Industry standard plug-in module
4000 VAC optical isolation
UL recognized #E58169
CSA certified #35852
Operating temperature: -30 to 70° C

ORDERING GUIDE

Input Voltage VDC	Logic Voltage	Part Number
10 - 32	5	IDC5P
90 - 140	5	IAC5P

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