INTEC
CONTROLS

DPCM

DUAL CHANNEL PWM CONTROLLER MODULE

FEATURES

❖ **Jumper selectable analog input**
❖ **Jumper selectable output pulse timing**
❖ **Two 24V AC pwm Triac outputs**

APPLICATIONS

❖ **0 - 20 mA to pulse width modulation**
❖ **0 - 10V DC to pulse width modulation**
❖ **Phase cut to pulse width modulation**
❖ **Dual PWM valve or damper operation**

DESCRIPTION

The DPCM is a 2 channel analog to pulse width modulation controller module built on the DFCM PC board. It's available in two versions; voltage and milii-Amp input to PWM 24V AC triac outputs, and phase cut input to PWM 24V AC triac outputs. The DPCM has two output time bases for each of the independent PWM outputs. The DPCM uses state of the art micro controller technology that provides superior system performance. The DPCM is useful when interfacing to PWM damper actuators, valves, or other PWM input devices.

OPERATION

The DFCM's 24V AC input uses a half-wave rectifier configuration, which is filtered and regulated to provide power for the on-board circuitry and to supply a 15V DC reference voltage on terminal 7. The DPCM uses an embedded micro controller to interpret the input signals and provide a corresponding PWM output signals. The analog inputs may be configured to accept 2-10V DC or 4 to 20mA signal by making a jumper selection on the voltage version. The phase cut version accepts a 10 to 90% phase cut signal. The PWM output signals can be configured for either of two time bases, 10 or 30 seconds, other time bases are available upon request.

The DPCM scales the analog input signal to 1 to 5V DC for the micro controller. It is then processed digitally and a PWM output signal is generated. The PWM output is updated every 10 or 30 seconds based on time base jumper selected, an 100% input will result in a pulse that is 85% of the selected time base.
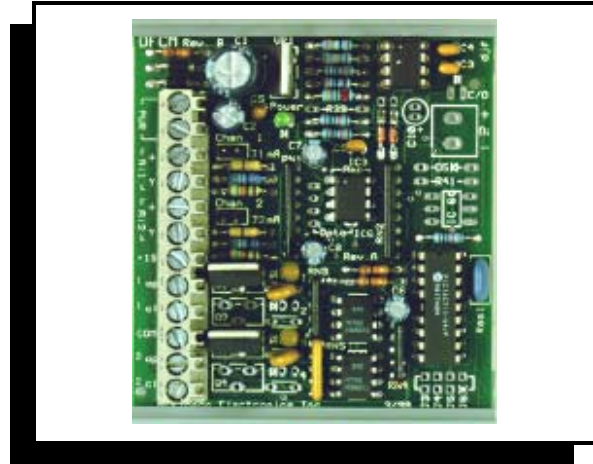

SPECIFICATIONS

SIZE:	2.75" L x 3" W x 1.1" H
MOUNTING:	3" RDI snap-track (supplied)
POWER:	24V AC, ±10%, 50/60Hz, 2VA
INPUTS:	10 - 90% Phase Cut 4 - 20 mA, 2 - 10V DC
OUTPUTS:	PWM @ 10 and 30 seconds Other time bases available upon Request.
OUTPUT RATINGS:	24V AC Triac @ 4Amps
AMBIENT TEMP:	0 to 50° C

WIRING CONFIGURATION

DPCM

INTEC CONTROLS
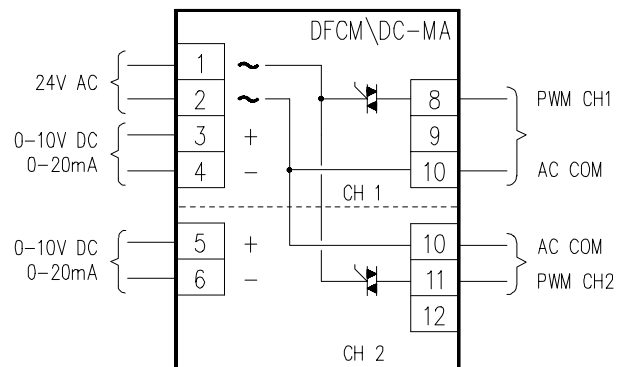
ORDERING INFORMATION

DPCM/XXX/PWM/XXX

Time Base Option Code
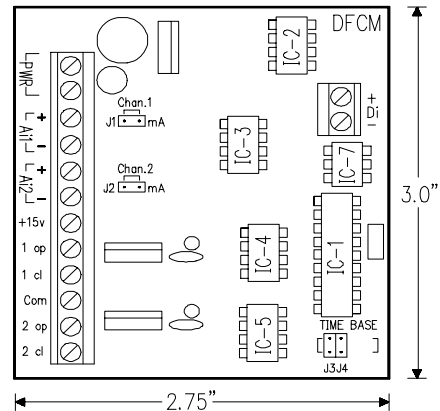PWM Ouput
Input Option Code
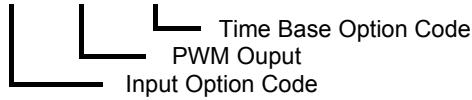
INPUT ORDERING CODE

V-mA   -   2 to 10V DC, 4 to 20mA inputs.
PC   -   10 to 90% phase cut, (isolated).

OPTION ORDERING CODE

TB1   -   10 sec and 30 sec PWM time base
TVC   -   "CONTROLLI" Thermic valve program
TBC   -   Custom PWM time base ranges
          (2.5, 5, 10, 15, 30, 60, & 120 seconds).
Op1   -   Tracking or change over option.

JUMPER DEFINITION

J1   -   Ch 1 voltage & mA input selection jumper. (Open - 2 to 10V, Closed - 4 to 20mA input).
J2   -   Ch 2 voltage & mA input selection jumper. (Open - 2 to 10V, Closed - 4 to 20mA input).
J3   -   Ch 1 output time base. (Open - 10 sec base, Closed - 30 sec base).
J4   -   Ch 2 output time base. (Open - 10 sec base, Closed - 30 sec base).
J6   -   Manual change over option, Ch 2's output controlled by Ch 1's input and will track Ch 1's output (same as Op1).

ORDERING CODE EXAMPLES

DPCM/V-mA/TB1   -   2 to 10V DC or 4 to 20mA input to 24V AC PWM 10/30 second output pulse.
DPCM/PC/TB1   -   10 to 90% phase cut input to 24V AC PWM 10/30 second output pulse.
DPCM/PC/TBC-OP1   -   10 to 90% phase cut input & optional isolated change over input with custom PWM time base
                      (specify two time base values, changes made in software in the micro controller).

PHYSICAL CONFIGURATION