

FUZYPRO 6100 Product Specification

FUZYPRO P6100 $\frac{1}{16}$ Din Process Controller



With its improved interface, technical functionality and field flexibility, the FUZYPRO 6100 gives you the best in comprehensive control for most temperature and process control loops.

- Jumperless Configuration
- Auto Detected Hardware
- Process & Loop Alarms
- Modbus & ASCII Comms
- Auto or Manual Tuning
- Heat/Cool Operation
- Ramping Setpoint
- Remote/Dual Setpoint Options



Technical Data

Features

Control Types	Full PID with Pre-tune, Self-tune, manual tuning, or On-Off control. Heat only or heat & cool
Auto/Manual	Selectable from front panel or via digital input, with bumpless transfer
Output Configuration	Up to 3 possible, for control, alarm, 24VDC transmitter power supply or retransmit of process value or setpoint
Alarm 1 & 2 Types	Process high, process low, SP deviation, band, logical OR / AND. Also 1 loop alarm for process control security. Process alarms have adjustable hysteresis.
Human Interface	4 button operation, dual 4 digit 10mm & 8mm high LED displays, optional choice of colours (Red/Red, Red/Green, Green/Red or Green/Green), plus 5 LED indicators
PC Configuration	Off-line configuration from PC serial port to dedicated config socket (comms option not required). Configuration Software for Windows 98 or higher. West Part Number: PS1-CON

Input

Thermocouple	J, K, C, R, S, T, B, L, N & PtRh20%vsPtRh40%.
RTD	3 Wire PT100, 50Ω per lead maximum (balanced)
DC Linear	0 to 20mA, 4 to 20mA, 0 to 50mV, 10 to 50mV, 0 to 5V, 1 to 5V, 0 to 10V, 2 to 10V. Scaleable -1999 to 9999, with adjustable decimal point
Impedance	>10MΩ for Thermocouple and mV ranges, 47KΩ for V ranges and 5Ω for mA ranges
Accuracy	±0.1% of input range ±1 LSD (T/C CJC better than 1°C)
Sampling	4 per second, 14 bit resolution approximately
Sensor Break Detection	<2 seconds (except zero based DC ranges), control O/P's turn off, high alarms activate for T/C and mV ranges, low alarms activate for RTD, mA or V ranges

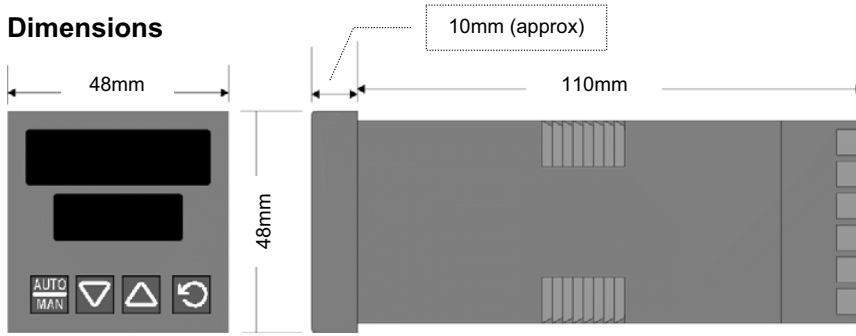
Outputs & Options

Control & Alarm Relays	Contacts SPDT 2 Amp resistive at 240V AC, >500,000 operations
Control SSR Driver Outputs	Drive capability >10V DC in 500Ω minimum
Triac Outputs	0.01 to 1 Amp AC, 20 to 280Vrms, 47 to 63Hz
DC Linear Outputs	0 to 20mA, 4 to 20mA into 500Ω max, 0 to 10V, 2 to 10V, 0 to 5V into 500Ω min. Control outputs have 2% over/under drive applied. Accuracy ±0.25% at 250Ω (degrades linearly to 0.5% for increasing burden to specified limits)
Transmitter Power Supply	Output 24VDC (nominal) into 910Ω minimum to power external devices
Communications	2 Wire RS485, 1200 to 19200 Baud, Modbus and ASCII protocol (selectable)
Digital Input	Selects between 2 setpoints or Auto/Manual control. Volt free or TTL input
Remote Setpoint Input	0 to 20mA, 4 to 20mA, 0 to 5V, 1 to 5V, 0 to 10V or 2 to 10V. Scaleable -1999 to 9999. Local/Remote setpoint selected from front panel

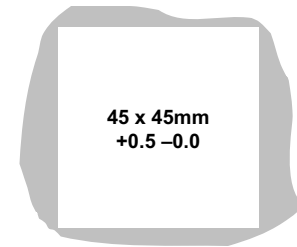
Operating & Environmental

Temperature & RH	0 to 55°C (-20 to 80°C storage), 20% to 95% RH non-condensing
Power Supply	100 to 240V 50/60Hz 7.5VA (optional 20 to 48V AC 7.5VA/22 to 65V DC 5 watts)
Front Panel Protection	IEC IP66 (Behind panel protection is IP20)
Standards	CE, UL & ULC recognised

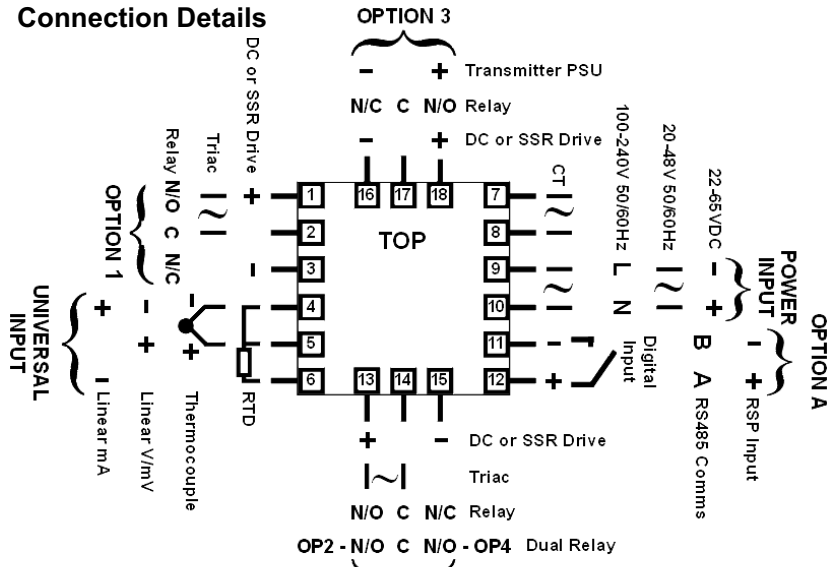
Dimensions



Cut-out



Connection Details



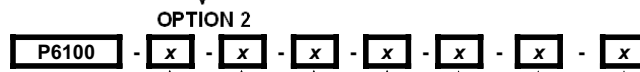
Field Reconfiguration

Input

Jumper-free configuration for any type (no extra parts required)

Option Slot 1	Part Number
Relay Output.....	PO1-C10
Linear mA/V DC Output.....	PO1-C21
SSR Driver Output.....	PO1-C50
Triac Output.....	PO1-C80
Option Slot 2	Part Number
Relay Output.....	PO2-C10
Linear mA/V DC Output.....	PO2-C21
SSR Driver Output.....	PO2-C50
Triac Output.....	PO2-C80
Option Slot 3	Part Number
Relay Output.....	PO2-C10
Linear mA/V DC Output.....	PO2-C21
SSR Driver Output.....	PO2-C50
24VDC Transmitter PSU.....	PO2-W08
Option Slot A	Part Number
Digital Input.....	PA1-W03
Remote Setpoint Input (Basic).....	PA1-W04
RS485 Comms.....	PA1-W06

Order Code



Input Type

3 Wire RTD or DC mV	1
Thermocouple	2
DC mA	3
DC Voltage	4

Option Slot 1

Not fitted	0
Relay	1
DC for SSR	2
DC 0-10V	3
DC 0-20mA	4
DC 0-5V	5
DC 2-10V	6
DC 4-20mA	7
Triac	8

Option Slot 2

Not fitted	0
Relay	1
DC Driver for SSR	2
DC 0-10V	3
DC 0-20mA	4
DC 0-5V	5
DC 2-10V	6
DC 4-20mA	7
Triac	8

Display Colour

0	Red Upper & Lower
1	Green Upper & Lower
2	Red Upper, Green Lower
3	Green Upper, Red Lower

Power Supply

0	100-240V AC
2	24-48V AC or DC

Option Slot A

0	Not fitted
1	RS485 Communications
3	Digital Input
4	Basic Remote Setpoint Input

Option Slot 3

0	Not fitted
1	Relay
2	DC Driver for SSR
3	DC 0-10V
4	DC 0-20mA
5	DC 0-5V
6	DC 2-10V
7	DC 4-20mA
8	Transmitter Power Supply

FUZYPRO 2300

1/32 DIN Indicator & Controller



The FUZYPRO 2300 is available as an indicator or controller. Small size does not come at the expense of features, they have large 10mm high displays, 2 amp relays and full 3-wire PT100 inputs. The controller features our hands-free Easy Tune PID algorithm.

- **Red or Green Display**
- **Two process alarms**
- **Setpoint Lock**
- **RS485 comms**
- **3-Wire PT100 or T/C**
- **Manual or Easy Tune**
- **On Control Indicator**
- **0.1% Accuracy**



Technical Data

Features

Functions	Three term PID controller, indicator with alarms or indicator only versions available
Control Types	Controller versions have PID with Easy-tune, manual tuning plus pre-tune or On-Off control
Setpoint Lock	Limits operator access to the controller setpoint value
Output Configuration	Up to 3 Total. Max 1 for control, max 2 for Alarms
Alarm 1 & 2 Types	Process high, process low, setpoint deviation and band
Human Interface	3 button operation, 4 digit 10mm high LED display (available in either red or green), plus on-control, set-up, alarm and setpoint indicators
Dual Setpoint Selection	Front panel selection of SP1 and SP2 on controller versions

Input

Thermocouple	J, K, R, S, T, B, & N
RTD	3 Wire PT100, 50Ω per lead maximum (balanced)
DC Linear	0-20mA, 4-20mA, 0-50mV, 10-50mV. Scaleable -1999 to 9999, decimal point as required
Impedance	>10MΩ for Thermocouple and mV ranges, 4.7Ω for mA ranges
Accuracy	+/- 0.1% of input span (0.25% for J & T T/C) +/- 1 LSD (T/C CJC better than 0.7°C)
Sampling	4 per second, 14 bit resolution approximately
Sensor Break Detection	<2 seconds (except on 0-20mA range), control O/P's turn off, high alarms activate for T/C and mV ranges, low alarms activate for RTD, mA ranges

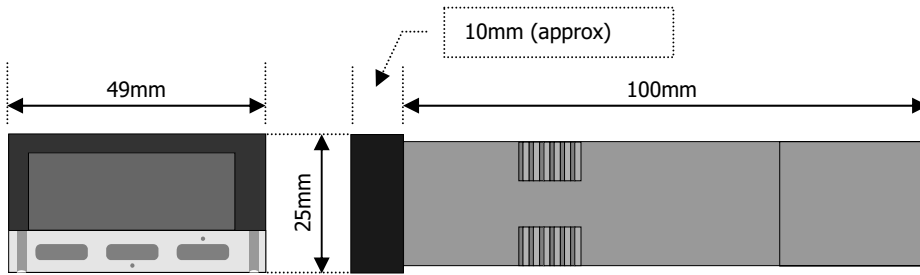
Outputs & Options

Control & Alarm Relays	Contacts SPDT 2Amp resistive at 240V AC, >500,000 operations (if comms or 2 nd relay is fitted, all relay contacts become SPST)
Control SSR Outputs	Drive capability >10V DC into 500Ω minimum
Communications	2 Wire RS485, 1200 to 9600 Baud, Modbus

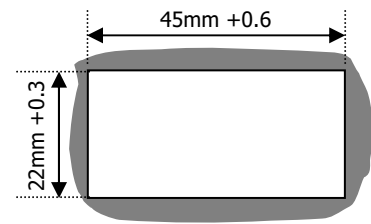
Operating & Environmental

Temperature & RH	0 to 55°C (-20 to 80°C storage), 20% to 95%RH non-condensing
Power Supply	100 to 240V 50/60Hz (optional 12 to 24V AC/12 to 30V DC), approx 4 Watts
Front Panel Protection	IEC IP66 (Behind panel protection is IP20)
Approvals and Certification	CE, UL & ULc

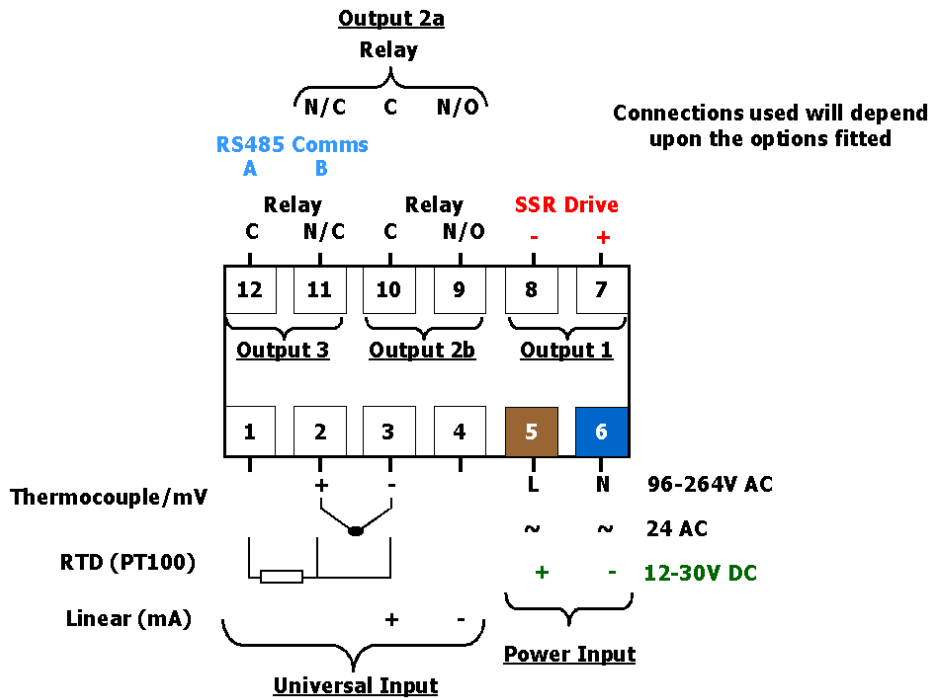
Dimensions



Panel Cut-out



Connection Details



Field Reconfiguration

Hardware options cannot be retrofitted to this model. Some re-configuration of existing features is possible

Input

Configurable to any available type.
No extra parts required

Control/Alarm 1 Output

Re-configurable on controller version only, as relay control with SSR alarm 1, or SSR control with relay alarm 1.

No extra parts required

Other Options

RS485 comms or alarm 2 relay is only available at time or order.

No field re-configuration is possible

Order Code



Output type

Indicator Only	00
Indicator + Alarm 1 (Relay)	01
Indicator + Alarm 1 (SSR)	02
Controller (Relay) + Alarm 1 (SSR)	12
Controller (SSR) + Alarm 1 (Relay)	21

Display Colour and Power Supply

0	Green Display/100-240V AC supply
1	Red Display/100-240V AC supply
2	Green Display/12-30VDC/24VAC supply
3	Red Display/12-30VDC/24VAC supply


Option

0	No Option Fitted
1	Alarm 2 Relay Output
2	RS485 Comms

In accordance with our policy of continuous improvement, we reserve the right to change specifications from those shown in this document.


FUZYPRO 6600

1/16 DIN Plastics Controller



The Fuzypro 6600 provides high quality control in applications requiring a heater break function or soft-start for process warm up. Heater current can also be displayed, removing the need for a separate ammeter.

- Heat/Cool operation
- Process & Heater alarms
- Soft Start
- Ramping setpoint
- Current "Quick Transfer"
- Current Display
- RS485 Comms
- PC configuration



Technical Data

Features

Control Types	Full PID with Pre-tune, Self-tune, Manual Tuning, or On-Off control. Heat only or heat & cool
Soft Start	Allows lower SP value and cycle time during the process start-up phase
Auto/Manual	Selectable from front panel, with bumpless transfer. Instant power-off feature also available as standard
Output Configuration	Up to 4 total. Max 2 for control (Heat & Cool), max 2 for Alarms, max 1 for retransmit Process value or Setpoint
Process Alarm Types	Process high, process low, SP deviation, band, logical OR
Heater Break Alarm Types	Current low or high, (in absolute amps or % of nominal current) plus contactor/thyristor short circuit
Human Interface	4 button operation, dual 4 digit 10mm & 8mm high LED displays, plus 3 LED indicators
PC Configuration	Off-line configuration from serial port to dedicated config socket (comms option not required)

Input

Thermocouple	J, K, R, S, T, B, L, & N.
RTD	3 Wire PT100, 50Ω per lead maximum (balanced)
Impedance	>100MΩ
Accuracy	+/- 0.25% of input span +/- 1 LSD (T/C CJC better than 0.7°C)
Sampling	4 per second, 14 bit resolution approximately
Sensor Break Detection	<2 secs, control O/P's turn off, high alarms activate for thermocouple ranges, low alarms activate for RTD
Heater Current	0-50mA secondary from external current transformer. Display is scaleable up to 100 amps

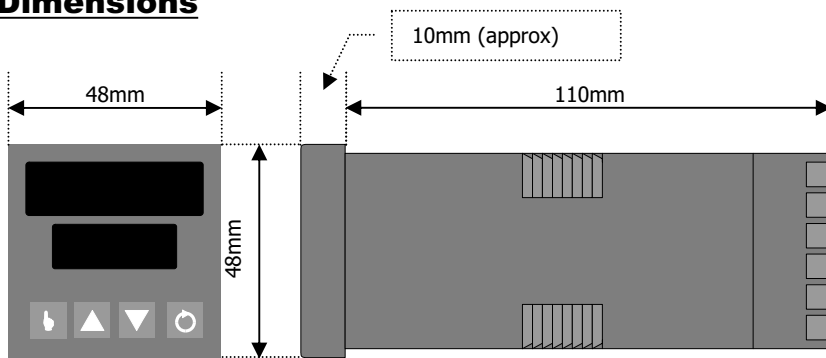
Outputs & Options

Ctrl & Alarm Relays	Contacts *SPDT 2Amp resistive at 240V AC, >500,000 operations.*Dual relay=SPST for O/P's 2 & 4
Control SSR Outputs	Drive capability, output 1>10V DC into 500Ω min, output 2>4.2V DC into 250Ω min
Solid State (Triac) Outputs	0.01 to 1 Amp AC 20 to 280V, 47 to 63Hz
Retransmit Outputs	0-20/4-20mA into 500Ω max, 0-10/0-5V into 500Ω min. Accuracy typically +/- 0.25%
Communications	2 Wire RS485, 1200 to 9600 Baud, Modbus or ASCII (Selectable)
Dual SP/Current Transfer	Volt free or TTL input. Selects between 2 setpoints or quick transfer of heater current as nominal value

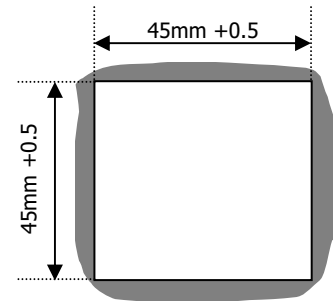
Operating & Environmental

Temperature & RH	0 to 55°C (-20 to 80°C storage), 20% to 95%RH non-condensing
Power Supply	100 to 240V 50/60Hz (optional 20 to 55V AC/22 to 65V DC), approx 4 Watts
Front Panel Protection	IEC IP66 (Behind panel protection is IP20)
Approvals and Certification	CE, UL & ULc

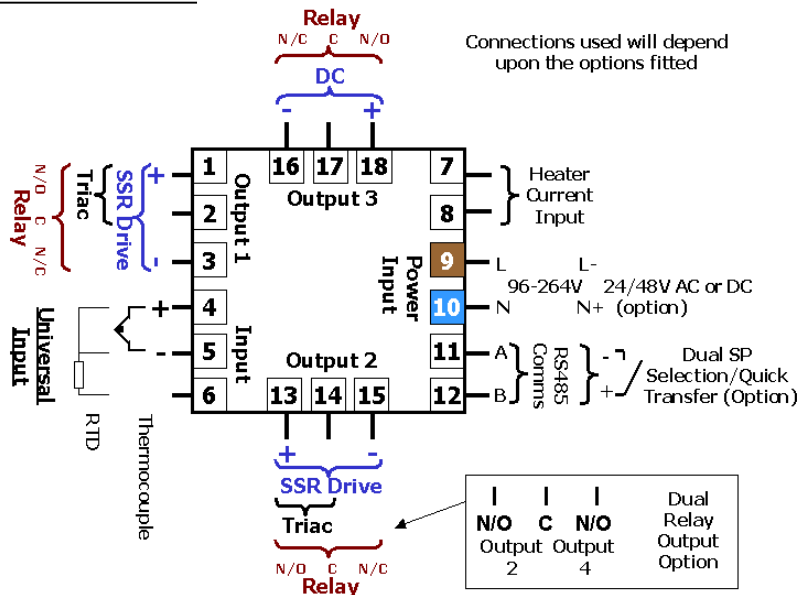
Dimensions



Panel Cut-out



Connection Details



Field Reconfiguration

Input

Configurable Thermocouple or RTD, no extra parts required

Output 1

Type is fixed as Relay/SSR (selectable)

Output 2 (and 4)

Configurable as Cool O/P or Alarm via plug-in Relay, SSR, Triac or DC Linear modules. A Dual Relay card is available which allows Cool O/P or Alarm on output 2 plus Heater Break Alarm on output 4

Output 3

Configurable as Alarm via plug-in Relay module, or retransmit using DC Linear module

Option Slot

Configurable as RS485 comms or dual setpoint selection/current transfer, via plug-in modules

Order Code

N6600 - **X** - **X** - **X** - **X** - **XX**

Input type

3 Wire RTD or DC mV	1
Thermocouple	2

Output 1

Relay Control	1
DC for SSR Control	2

Output 2 and 4

Not fitted	0
Relay Control or Alarm 2	1
DC for SSR Control or Alarm 2	2
Triac Control	8
Dual Relay for Control or Alarm, with Heater Break	9

Options and Power Supply

00	No Options/100-240V AC supply
02	No Options/24-48V AC or DC supply
10	RS485 Comms/100-240V AC supply
12	RS485 Comms/24-48V AC or DC supply
30	Dual SP or Current Transfer/100-240V AC
32	Dual SP or Current Transfer/24-48V AC or DC

Output 3

0	Not fitted
1	Relay Alarm 1 output
3	DC 0-10V Re-Transmit PV or SP
4	DC 0-20mA Re-Transmit PV or SP
5	DC 0-5V Re-Transmit PV or SP
7	DC 4-20mA Re-Transmit PV or SP

Current Transformers

25 Amp	Part Number	85258
50 Amp	Part Number	85259
100 Amp	Part Number	85260

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FUZYPRO 6700

1/16 DIN Limit Alarm Unit



The FUZYPRO 6700 provides a programmable safety cut out with optional outputs for annunciators and alarms. A latched relay cuts power to the process if it exceeds the safe value. The unit must be reset before the process can continue.

- **High or low trip**
- **5 amp latched relay**
- **Remote reset option**
- **2 Annunciators or alarms**
- **Exceed & relay indicators**
- **Configuration via PC**
- **RS485 comms**
- **PV retransmit option**



Technical Data

Features

Output Configuration

Alarm 1 & 2 Types

Limit Action

Output Reset Action

Annunciator Reset Action

Human Interface

PC Configuration

Input

Thermocouple

RTD

DC Linear

Impedance

Accuracy

Sampling

Sensor Break Detection

Outputs & Options

Limit Trip Relay

Alarm Relays

Retransmit Outputs

Communications

Remote reset option

Operating & Environmental

Temperature & RH

Power Supply

Front Panel Protection

Approvals and Certification

Up to 3 Total. 1 latching trip relay, max 2 alarms relays, max 1 DC linear retransmit (PV or limit value)

Process high, process low, setpoint deviation, band, logical OR alarms or trip annunciator.

Latching relay output when PV exceeds set value. Selectable for high or low trip activation.

Limit output can be reset only when exceed condition is absent. Local or remote reset options.

Annunciator output can be reset at any time. Local or remote reset options.

4 button operation, dual 4 digit 10mm & 8mm high LED displays. Exceed, output & alarm indicators

Off-line configuration from serial port to dedicated config socket (comms option not required)

J, K, R, S, T, B, L, & N.

3 Wire PT100, 50Ω per lead maximum (balanced)

0-20/4-20mA, 0-50/10-50mV, 0-5/1-5/0-10/2-10V. Scaleable -1999 to 9999, dec point available

>100MΩ for Thermocouple and mV ranges, 47KΩ for V ranges and 4.7Ω for mA ranges

+/- 0.25% of input span +/- 1 LSD (T/C CJC better than 0.7°C)

4 per second, 14 bit resolution approximately

<2 secs (except zero based DC ranges), control O/P's turn off, high alarms activate for T/C and mV ranges, low alarms activate for RTD, mA or V ranges.

Contacts SPDT 5Amp resistive at 240V AC, >100,000 operations

Contacts SPDT 2Amp resistive at 240V AC, >500,000 operations

0-20/4-20mA into 500Ω max, 0-10/0-5V into 500Ω min. Accuracy typically +/- 0.25%

2 Wire RS485, 1200 to 9600 Baud, ASCII

Allows remote latched relay and annunciator reset, using volt free or TTL input (Reset = -0.6 to 0.8V, or contact closure)

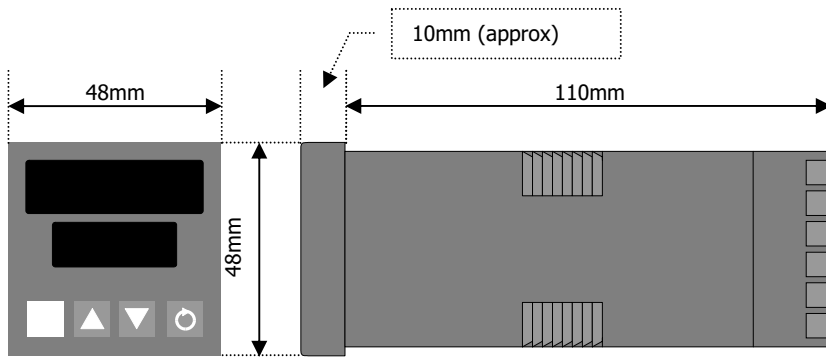
0 to 55°C (-20 to 80°C storage), 20% to 95%RH non-condensing

100 to 240V 50/60Hz (optional 20 to 55V AC/22 to 65V DC), approx 4 Watts

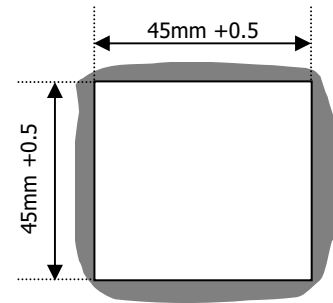
IEC IP66 (Behind panel protection is IP20)

CE, UL & ULc & FM

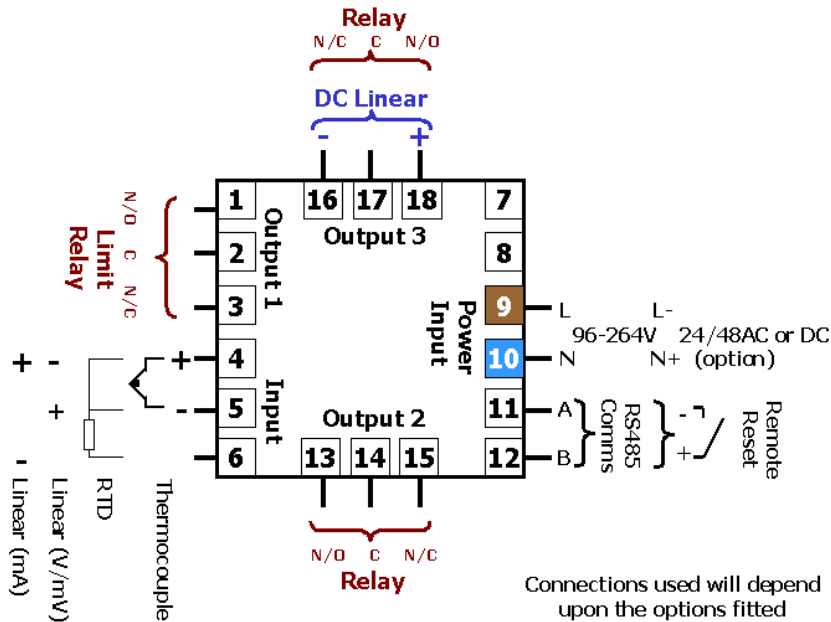
Dimensions



Panel Cut-out



Connection Details



Field Reconfiguration

Input

Configurable to any type, no extra parts required

Output 1

Type is fixed as Limit Relay

Output 2

Configurable as Alarm or Annunciator, via plug-in Relay

Output 3

Configurable as Alarm or Annunciator via plug-in Relay, or retransmit using DC Linear module

Option Slot

Configurable as RS485 comms or Remote Reset, via plug-in modules

Order Code

N6700 - x - x - x - x - xx

Input type

3 Wire RTD or DC mV	1
Thermocouple	2
DC mA	3
DC Voltage	4

Output 1

Limit Relay	1
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Output 2

Not fitted	0
Relay Alarm 2 or Annunciator	1

Options and Power Supply

00	No Options/100-240V AC line supply
02	No Options/24-48V AC or DC line supply
10	RS485 Comms/100-240V AC line supply
12	RS485 Comms/24-48V AC or DC supply
30	Remote Reset/100-240V AC line supply
32	Remote Reset /24-48V AC or DC supply

Output 3

0	Not fitted
1	Relay Alarm 1 or Annunciator
3	DC 0-10V Re-Transmit PV or SP
4	DC 0-20mA Re-Transmit PV or SP
5	DC 0-5V Re-Transmit PV or SP
7	DC 4-20mA Re-Transmit PV or SP

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FUZYPRO 6400

1/16 DIN Profiler Controller



The 6400 is one of the most powerful profilers of its size available. It features our proven RaPID fuzzy logic control algorithm, for faster, more accurate control. 4 programs can be held in memory.

- **Free-form programming**
- **Delayed start**
- **Guaranteed soak**
- **Power fail recovery**
- **Event/profile active outputs**
- **Remote Start**
- **Modbus comms**
- **PC support software**



Technical Data

Features

Control Types	PID with Pre-tune and RaPID fuzzy logic, or Manual Tuning. Heat or Heat/Cool, applications
Auto/Manual	Selectable from front panel, with bumpless transfer
Output Configuration	Up to 3 total. Max 2 for control (Heat & Cool), max 2 for Alarms, max 1 for retransmit PV or SP
Alarm 1 & 2 Types	Process high, process low, setpoint deviation and band
Human Interface	4 buttons, 10mm & 8mm high LED's, plus run-hold, tune, event & profile/control status LED's
PC Configuration	Off-line configuration & profile editing via config socket (comms option not required)

Profiles

Number of Programs	4, each with 16 free-form segments (Ramp/Dwell/End). Max segment length 99 hours 59 minutes
Delayed Start	Max 99 hours 59mins delay from initiation to program start
Guaranteed Soak	Holds program if PV is outside of specified hold band during dwell segments.
Program Cycles	1 to 9999 or infinite (continuously re-starts program at end)
Ramp Rate Definition	Either ramp rate, or time to final setpoint
Power Loss Recovery	Hot (continue profile from point of power fail) or Cold (end profile and return to controller mode)

Input

Thermocouple	J, K, R, S, T, B, L, & N.
RTD	3 Wire PT100, 50Ω per lead maximum (balanced)
DC Linear	0-20/4-20mA, 0-50/10-50mV, 0-5/1-5/0-10/2-10V. Scaleable -1999 to 9999, dec point available
Impedance	>100MΩ for Thermocouple and mV ranges, 47KΩ for V ranges and 4.7Ω for mA ranges
Accuracy	+/- 0.25% of input span +/- 1 LSD (T/C CJC better than 0.7°C)
Sampling	4 per second, 14 bit resolution approximately
Sensor Break Detection	<2 secs (except zero based DC ranges), control O/P's turn off, *high alarms activate (*low for RTD)

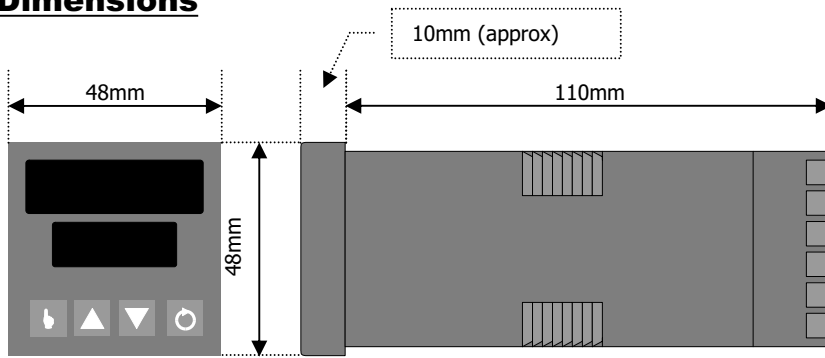
Outputs & Options

Control/Alarm/Event Relay	Contacts SPDT 2Amp resistive at 240V AC, >500,000 operations
DC for SSR	Drive capability >4.2V DC in 1KΩ (10V 500Ω version available)
DC Control/Retransmit	0-20/4-20mA into 500Ω max, 0-10/0-5V into 500Ω min. Control OP +/- 0.5%, Retransmit +/- 0.25%
Solid State (Triac)	0.01 to 1 Amp AC 20 to 280V, 47 to 63Hz
Remote Run-Hold	Volt free or TTL input (Hold = -0.6 to 0.8V or contact open, Run = 2 to 24V or contact close)
Communications	2 Wire RS485, 1200 to 9600 Baud, Modbus

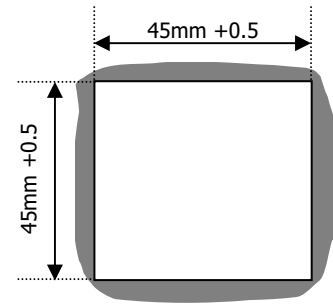
Operating & Environmental

Temperature & RH	0 to 55°C (-20 to 80°C storage), 20% to 95%RH non-condensing
Power Supply	100 to 240V 50/60Hz (optional 20 to 55V AC/22 to 65V DC), approx 4 Watts
Front Panel Protection	IEC IP66 (Behind panel protection is IP20)
Approvals and Certification	CE, UL & Ulc

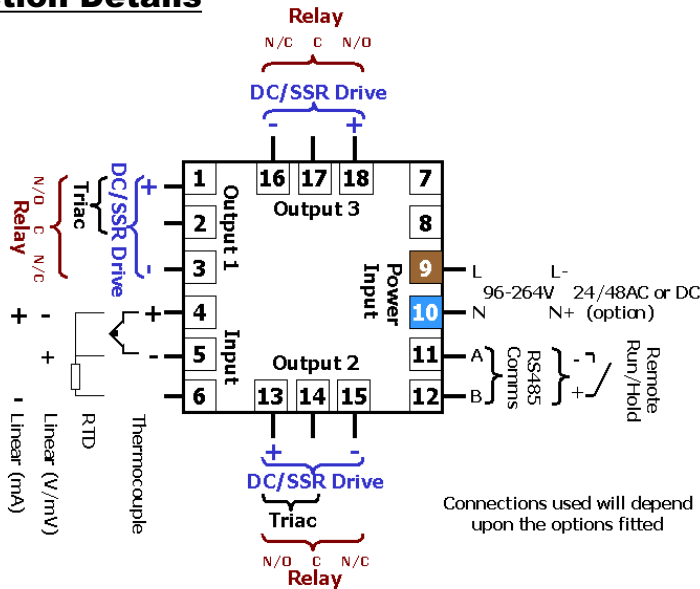
Dimensions



Panel Cut-out



Connection Details



Field Reconfiguration

Input

Configurable to any type, no extra parts required

Output 1

Type is fixed as ordered. Either Relay/SSR (selectable), Triac or DC Linear (selectable for mV, mA, Volts)

Output 2

Configurable as Cool O/P or Alarm, Event or Profile Active via plug-in Relay, Cool O/P or Alarm via plug-in SSR module, or Cool O/P only via Triac or DC Linear modules

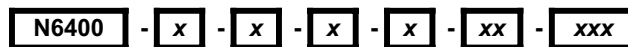
Output 3

Configurable as Alarm, Event or Profile Active via plug-in Relay, Alarm via plug-in SSR module, or retransmit using DC Linear module

Option Slot

Configurable as RS485 comms or remote run-hold, via plug-in modules

Order Code



Input type

3 Wire RTD or DC mV	1
Thermocouple	2
DC mA	3
DC Voltage	4

Output 1

Relay Control	1
DC for SSR Control	2
DC 0-10V Control	3
DC 0-20mA Control	4
DC 0-5V SP Control	5
DC 4-20mA Control	7
Triac Control	8

Output 2

Not fitted	0
Relay Ctrl, Alarm 2, Event or Profile Active	1
DC for SSR Control or Alarm 2	2
DC 0-10V Control	3
DC 0-20mA Control	4
DC 0-5V Control	5
DC 4-20mA Control	7
Triac Control	8

Special Variants

Blank	Special variant not required
S14	10V DC SSR outputs (requires SSR output codes)

Options and Power Supply

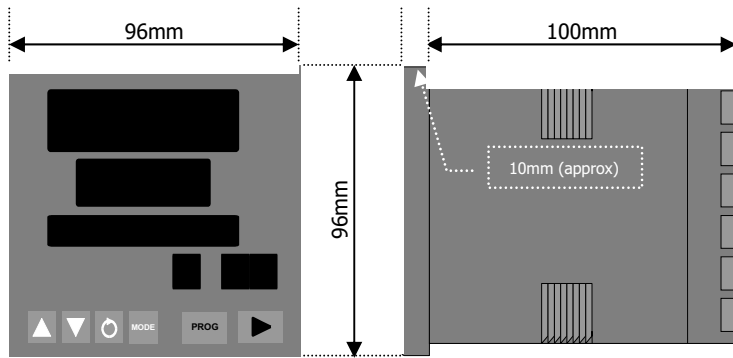
00	No Options/100-240V AC line supply
02	No Options/24-48V AC or DC line supply
10	RS485 Comms/100-240V AC line supply
12	RS485 Comms/24-48V AC or DC line supply
30	Remote Run-Hold/100-240V AC line supply
32	Remote Run-Hold/24-48V AC/DC line supply

Output 3

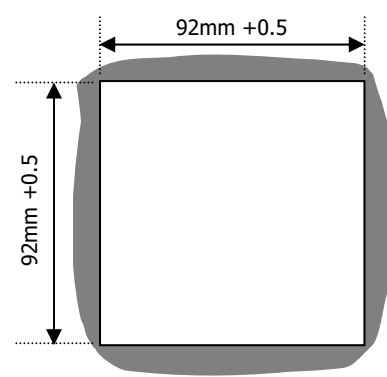
0	Not fitted
1	Relay Ctrl, Alarm 1, Event or Profile Active
2	DC for SSR Alarm 1 output
3	DC 0-10V Re-Transmit PV or SP
4	DC 0-20mA Re-Transmit PV or SP
5	DC 0-5V Re-Transmit PV or SP
7	DC 4-20mA Re-Transmit PV or SP

In accordance with our policy of continuous improvement, we reserve the right to change specifications from those shown in this document.

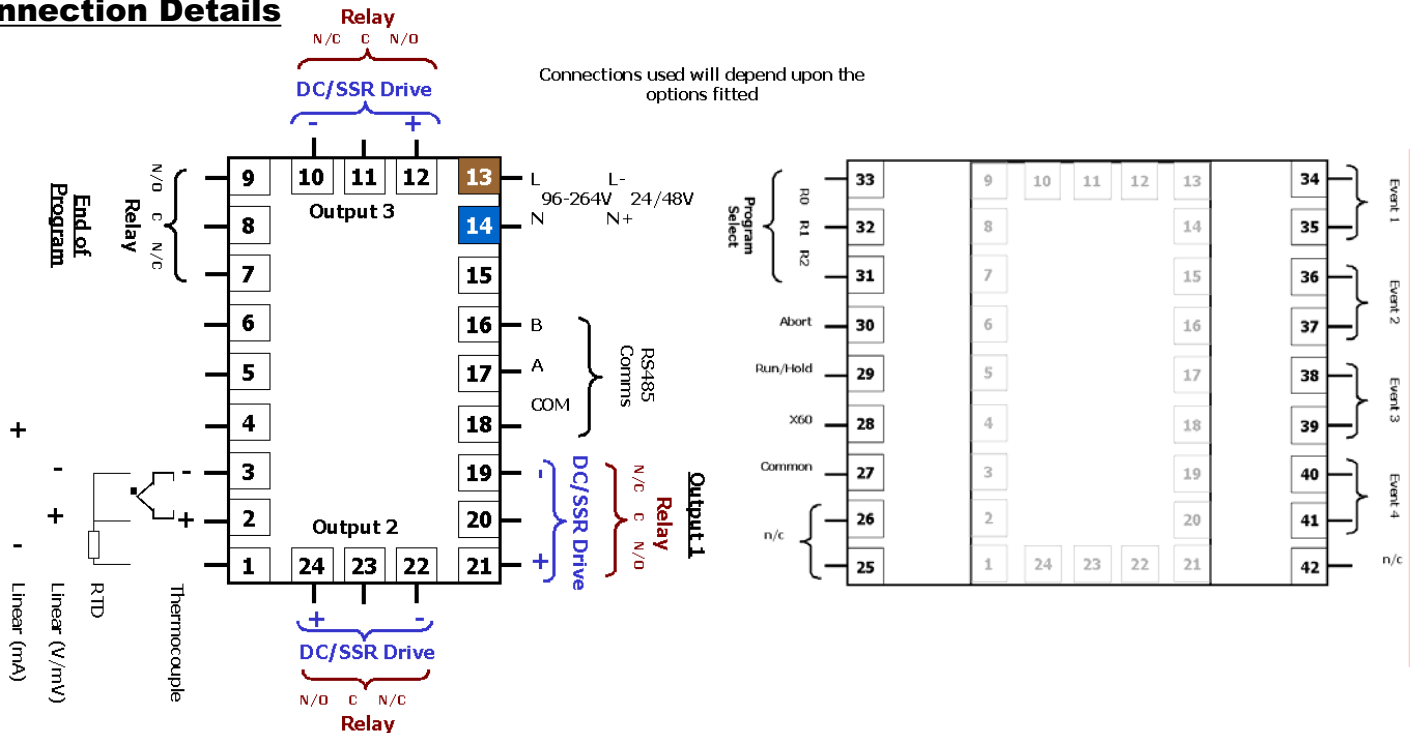
Dimensions



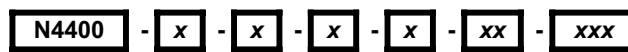
Panel Cut-out



Connection Details



Order Code



Input type

3 Wire RTD or DC mV	1
Thermocouple	2
DC mA	3
DC Voltage	4

Output 1

Relay Control	1
DC for SSR Control	2
DC 0-10V Control	3
DC 0-20mA Control	4
DC 0-5V SP Control	5
DC 4-20mA Control	7

Output 2

Not fitted	0
Relay Control or Alarm 2	1
DC for SSR Control or Alarm 2	2
DC 0-10V Control	3
DC 0-20mA Control	4
DC 0-5V Control	5
DC 4-20mA Control	7

Advanced Options

000	Not fitted
001	Real Time Clock (RTC)
010	Remote Programme Control
100	4 Event Outputs
011	Remote Prog Control/Real Time Clock
101	4Event Outputs Real/Time Clock
110	4 Event Outputs/Remote Prog Control
111	4 Event Outputs/Remote Prog/RTC

Options and Power Supply

00	No Options/100-240V AC supply
02	No Options/24-48V AC or DC supply
10	RS485 Comms/100-240V AC supply
12	RS485 Comms/24-48V AC or DC supply

Output 3

0	Not fitted
1	Relay Alarm 1
2	DC for SSR Alarm 1
3	DC 0-10V Re-Transmit PV or SP
4	DC 0-20mA Re-Transmit PV or SP
5	DC 0-5V Re-Transmit PV or SP
7	DC 4-20mA Re-Transmit PV or SP

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Fuzypro Temperature Controllers

The **FuzyPro Temperature Controllers** can easily be configured to provide precise control. The advanced Smarter Logic "Fuzzy" allows processes to be controlled better than ever before, with virtually no initial overshoot or temperature variations.

As the control detects a process disturbance the fuzzy logic continuous decision making function quickly returns the process value to the setpoint. A single ramp/soak function prevents rapid temperature changes that could damage the product being heated. An optional dwell timer enables an event to be timed on or off when preset temperature is attained. In addition self-diagnostic capabilities, sensor linearization and cold junction compensation are all performed by the powerful, single chip microprocessor.



FuzyPro 1/16 DIN Fuzzy Logic Temperature Controllers Features:

- 48mm by 48mm Smarter Logic for superior control
- Automatic tuning of PID parameters
- Splash & chemical resistant sealed mylar front panel
- External lockout PID heating and PID cooling
- A11 control parameters front panel adjustable
- Auto/manual operation, F or C display, 3 year warranty
- Selectable input, optional alarm or on/off delay timer

FuzyPro 1/16 DIN Fuzzy Logic Temperature Controllers Specifications:

INPUT

Thermocouple	Type J,K,T,E,B,R,S,N (selectable)
RTD	PT100 ohm (DIN or JIS)
Linear	10-60mV configurable input other voltage or current
Display	In temperature or engineering units.

OUTPUTS

Relay	SPDT relay rated 3A,240v maximum resistive load
Pulsed Voltage	32VDC, 20mA maximum
Current	4-20mA, 0-20mA maximum load 500ohms
Voltage	0-10V load 500k ohms
Alarm	14 selectable alarm modes; Process deviation and band, SPST relay rated 2A,240V maximum resistive load with adjustable hysteresis.

CONTROL FEATURES

Temperature Range	Selectable
Set Point	Full range adjustable
Alarm Set Point	Full range selectable
Control Modes	Selectable control modes On/Off, Proportional(P), Proportional/Integral(P/I) Proportional with manual reset Proportional Derivative(PD) Proportional/Integral/Derivative(PID)
Proportional Band	0-100% of span
Manual Reset	0 to (P x span/100)
Integral (Reset)	0 to (P x span/100)
Derivative (Rate)	0-1000 seconds
Anti-Reset Wind-up	0-1000 seconds
On/Off	Adjustable hysteresis from 0-25.5% of span
Manual Mode	Configurable as open loop control should sensor no longer function.
Cycle Time	0-120 seconds
Sensor Break Protection	Configurable status of control and alarms
Control Action	Selectable-Direct action for cooling Reverse action for heating.

INDICATION

Display	4 digit red 1/2" LED Process value Display; Green 3/8" LED Set Value display Selectable decimal placement for normal or high resolution display. Example: 0000;000.0; 00.00 or 0.000
Status Indicator	2 LED's Output: Green Alarm: Red
Sample Rate	333 milliseconds F/C: Selectable
Power Supply	80-260VAC 50/60Hz Consumption: Less than 5VA
Data Retention	10 years (EEPROM)
Control Stability	0.15%(typical) of full scale
Accuracy	±0.25% of range: ±-1°C or 0.5% in high resolution
Cold Junction Compensation	0.1%/ambient
Ext Resistance	100 ohms, maximum
Normal Mode Rejection	60dB Common Mode Rejection:120dB
Operating Temperature	14°F - 122°F (-10°C - 50°C) Humidity: 0-90% RH
Vibration	10-55Hz, amplitude 1 mm Shock: 200m.s(20g)

STOCK LIST FOR TEMPERATURE CONTROLLERS

SIZE	DIMENSIONS	INPUT	OUTPUT	ALARM	MODEL
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1/16 DIN TEMPERATURE / PROCESS CONTROLS

1/16 DIN	1.88 X 1.88	48 mm X 48 mm	Universal	Relay	YES 1	F16 101
1/16 DIN	1.88 X 1.88	48 mm X 48 mm	Universal	Volt DC	YES 1	F16 201
1/16 DIN	1.88 X 1.88	48 mm X 48 mm	Universal	4- 20 ma	YES 1	F16 301
1/16 DIN	1.88 X 1.88	48 mm X 48 mm	Universal	Triac	YES 1	F16 401
1/16 DIN	1.88 X 1.88	48 mm X 48 mm	Universal	0 – 10 V	YES 1	F16 501
1/16 DIN	Programmable controllers 2 Patterns 8 Steps Each RAMP SOAK					F6 212P
1/16 DIN	Programmable Controllers 4 Patterns 8 Steps Each RAMP SOAK					6400
1/16 DIN	Controls Any input any Outputs Retransmit Excitation Power supply					P6100
1/16 DIN	HI LIMIT	Controller FM approved	Universal	RELAY	YES 2	6700

1/8 DIN Process / Temperature Controls

1/8 DIN	1.88 X 3.77	48 mm X 96 mm	Universal	Relay	YES 2	F18 112
1/8 DIN	1.88 X 3.77	48 mm X 96 mm	Universal	Volt DC	YES 2	F18 212
1/8 DIN	1.88 X 3.77	48 mm X 96 mm	Universal	4 – 20 mA	YES 2	F18 312
1/8 DIN	1.88 X 3.77	48 mm X 96 mm	Universal	Triac	YES 2	F18 412
1/8 DIN	1.88 X 3.77	48 mm X 96 mm	Universal	0 – 10 V	YES 2	F18 512

1/4 DIN CONTROLS

1/4 DIN	3.77 X 3.77	96 mm X 96 mm	Universal	Relay	YES 2	F14 112
1/4 DIN	3.77 X 3.77	96 mm X 96 mm	Universal	Volt DC	YES 2	F14 212
1/4 DIN	3.77 X 3.77	96 mm X 96 mm	Universal	4– 20 mA	YES 2	F14 312
1/4 DIN	3.77 X 3.77	96 mm X 96 mm	Universal	Triac	YES 2	F14 412
1/4 DIN	3.77 X 3.77	96 mm X 96 mm	Universal	0 – 10 V	YES 2	F14 512
1/4 DIN	LIMIT CONTROL		Universal	Relay	YES 3	4700 2111
1/4 DIN	Programmable Controllers 8 patterns 16 Steps each RAMP SOAK					4400
1/4 DIN	3.77 X 3.77	96 mm X 96 mm	Universal	0 – 10 V	YES 2	F14 512

Horizontal 1/8 DIN controllers

1/8 DIN	1.88 X 3.77	48 mm X 96 mm	Universal	Relay	YES	2	F18H 112
1/8 DIN	1.88 X 3.77	48 mm X 96 mm	Universal	Volt DC	YES	2	F18H 212
1/8 DIN	1.88 X 3.77	48 mm X 96 mm	Universal	4 – 20 mA	YES	2	F18H 312
1/8 DIN	1.88 X 3.77	48 mm X 96 mm	Universal	Triac	YES	2	F18H 412
1/8 DIN	1.88 X 3.77	48 mm X 96 mm	Universal	0 – 10 V	YES	2	F18H 512
1/8 DIN	Indicator with retransmit and Recorder out put transmitter power supply						
	RS 485 option With Jumper less option boards						P 8010

32 nd DIN	1 " X 1.88	24 mm X 48 mm	Universal	RELAY	YES	1	2300 212
32 nd DIN	1 " X 1.88	24 mm X 48 mm	Universal	DC	YES	1	2300 221
32 nd DIN	1 " X 1.88	24 mm X 48 mm	Universal	RELAY DC & RS 485			2300 212RS

MISCELLANEOUS CONTROLLERS

Controls working On 24 VAC / DC Power Supply							
1/16 DIN	1.88 X 1.88	48 mm X 48 mm	Universal	Relay	YES	2	F16 101 24
1/16 DIN	1.88 X 1.88	48 mm X 48 mm	Universal	DC output	YES	2	F16 201 24
1/16 DIN	1.88 X 1.88	48 mm X 48 mm	Universal	4- 20 mA	YES	2	F16 301 24
1/8 DIN	1.88 X 3.77	48 mm X 96 mm	Universal	Relay	YES	2	F18 512 24
1/8 DIN	1.88 X 3.77	48 mm X 96 mm	Universal	DC Volts	YES	2	F18 212 24
1/8 DIN	1.88 X 3.77	48 mm X 96 mm	Universal	4 – 20 mA	YES	2	F18 312 24
1/8 DIN	1.88 X 3.77	48 mm X 96 mm	Universal	0 – 10 V	YES	2	F18 512 24
1/4 DIN	3.77 X 3.77	96 mm X 96 mm	Universal	Relay	YES	2	F14 112 24
1/4 DIN	3.77 X 3.77	96 mm X 96 mm	Universal	Volt DC	YES	2	F14 212 24
1/4 DIN	3.77 X 3.77	96 mm X 96 mm	Universal	4– 20 mA	YES	2	F14 312 24
1/4 DIN	3.77 X 3.77	96 mm X 96 mm	Universal	Triac	YES	2	F14 412 24