)hms Connector Option (-177)

the Option -163 circuit card module. ve terminals per channel for 20 chan- D and resistance input wires.

ifications, Six Classes

fined high resolution Platinum RTDs
solution Platinum 385 DIN RTDs
fined high temperature Platinum RTDs
nperature Platinum 385 DIN RTDs
Copper RTDs, not grounded, lly insulated
Copper RTDs, grounded (special, 'actory)

perature	System		
	Resolu-tion	Accu-racy*	Repeat-ability*
to +150°C	0.006°C	0.1°C**	0.04°C**
to +420°C	0.006°C	0.15°C**	0.04°C**
to +150°C	0.006°C	0.10°C**	0.04°C**
to +420°C	0.006°C	0.15°C**	0.04°C**
o +600°C	0.05°C	0.27°C***	0.16°C***
o +600°C	0.05°C	0.27°C***	0.16°C***
+150°C	0.06°C	0.3°C**	0.17°C**
+150°C	0.06°C	1.25°C**	0.3°C**

ment Accuracy, 15°C to 35°C for 90 days.
erature ≤150°C
erature ≤600°C
A and C allow the user to perform an ice tion and improve total system accuracy to repeatability plus 0.03°C for 390 and 392 me procedure for a 385 DIN RTD yields ccuracy to be the sum of repeatability plus e RTD probe conformity error.

cifications Option (-163,-177)

o- on	±(% of Rdg + Ω)	
	Accuracy	Repeatability
mΩ	0.017% + 5.7 mΩ	0.0065% + 5.7 mΩ
mΩ	0.017% ±38 mΩ	0.0060% ±38 mΩ
Ω	0.06% ±1.22Ω	0.0075% ±1.22Ω

ent Accuracy, 15°C to 35°C for 90 days.

ns, & Strain Excitation 54)

it current sources for measuring resistances and a constant voltage easuring strain. Channels are con- roups of four for either voltage or ation. These current sources are ured for 1 mA output and are user- other ranges. The voltage supply ctable for either 2V or 4V and can 250 mA. A bridge completion net- ided for ½- and ¼-bridge strain res Connector Option -174. Option plug together and occupy one I/O or 2281A, usually adjacent to the Scanner Option -162, which is

RTDs, Ohms, & Strain Connector Option (-174)

Channels: Twenty 5-wire sets of screw terminals for connections to RTDs or strain gages. Terminals also provide access to the bridge completion network of Option -164
Compatibility: Plugs onto excitation module, Option -164

Ohms Mode Specifications Option (-164, -174)

Max Resis-tance	Accuracy* ±(% of Rdg + mΩ)	Reso-lution	Excitation Current
64Ω	0.02% + 7	1 mΩ	1 mA
512Ω	0.02% + 30	10 mΩ	1 mA
Other ranges that may be set by user			
5.12 kΩ	Depends on	0.1Ω	0.1 mA
51.2 kΩ	user's resistor	1Ω	0.01 mA

**Total Instrument Accuracy, 15°C to 35°C for 90 days.*

RTD Mode Specifications Option (-164, -174)

RTD channel definitions allow you to tailor the instrument to the known characteristics of your probe with a conformity error less than 0.05°C
Resolution: 0.02°C
Temperature Measurement Accuracy*

RTD Type & Range	Maximum Instrument Error
100Ω Platinum RTDs	
-200°C to +200°C	0.1°C
200°C to 600°C	0.15°C
10Ω Copper RTDs	
-75°C to +150°C	1.0°C

**Total Instrument Accuracy, 13°C to 33°C for 90 days.*

Repeatability: ±0.08°C for Platinum RTDs, ±0.2°C for Copper RTDs
Temperature Coefficient: ±10 ppm/°C

Strain Mode Specifications Option (-164, -174)

Full-Bridge Strain
Capacity: Twenty 350Ω or 120Ω bridges with 2V supply or ten 120Ω bridges with 4V supply
Resolution: 0.25 microstrain
Total System Accuracy: ±(0.05% of rdg + 2 microstrain)*
Temperature Coefficient: ±10 ppm/°C

½-Bridge Strain
Capacity: Twenty 350Ω or 120Ω bridges
Resolution: 0.5 microstrain
Total System Accuracy: ±(0.05% of rdg + 13 microstrain)*
Temperature Coefficient: ±15 ppm/°C

¼-Bridge Strain
Capacity: Twenty 350Ω or 120Ω bridges
Resolution: 0.5 microstrain
Total System Accuracy: ±(0.05% of rdg + 25 microstrain)*
Temperature Coefficient: ±20 ppm/°C

**20°C to 30°C for 90 days*

Frequency Measurement and Event Totalization (-167) (2286A only)

Channels: Six
Functions: Event counting and frequency measurement, selectable per channel pair

Inputs
Signal Types: TTL, CMOS, contacts, analog waveforms
Adjustments: Threshold, deadband, and de-bouncing
Isolation: Each group of six channels isolated from ground
Frequency Measurement: 400 kHz maximum frequency, 0.001% resolution

Event Counting
Maximum Counts: 8,388,607
Counting Rate: DC to 400 kHz
Operation: Count is reset after each scan
Connector: Screw terminal connector supplied

Frequency Measurement and Event Totalization (-167/AA)

Channels: Four
Functions: Event counting and frequency, selectable by channel

Inputs
Signal Types: TTL or contacts
Adjustments: None
Isolation: Each group of four channels isolated from ground
Frequency Measurement: 1000 kHz maximum frequency, 1 Hz resolution

Event Counting
Maximum Counts: 65,534
Operation: Count is reset after each scan. Pseudo channels are used for count accumulation
Counting Rate: DC to 1 kHz
Connector: Uses -179 Digital/Status & Input Connector (not supplied)

Digital & Status Inputs & Outputs

Digital Input/Output Module Option (-168)

For controlling up to 20 input or output lines. Handles either 20 status inputs, 5 groups of 4-wire BCD digit inputs, or one 17-bit binary number (and sign). Or handles 20 status outputs.
Inputs: Zero volts or contact closures for low, +6 volts maximum for high
Common Mode Voltage: 30V rms ac or dc, maximum
Outputs: Open collector NPN transistors, diode clamped, 28V maximum, 100 mA at 1V
Compatibility: Requires connector Option -179 for inputs or connector Option -169 for outputs

Digital/Status Input Connector Option (-179)

Channels: Twenty 2-wire pairs of terminals for Option -168 plus terminals to select BCD and binary clocking format