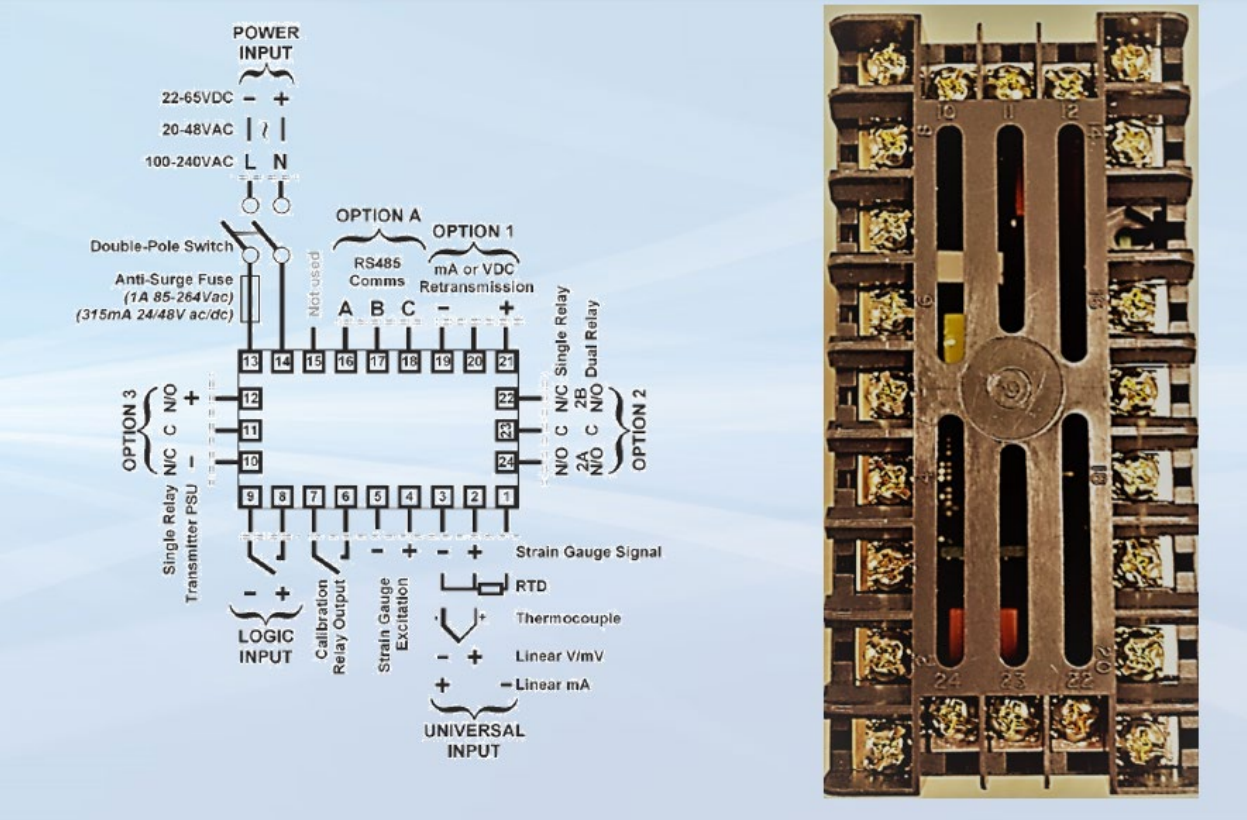
Dynisco model 1480 and 1490 wiring & quick start instructions (for millivolt transducers)

Terminal Schematic:



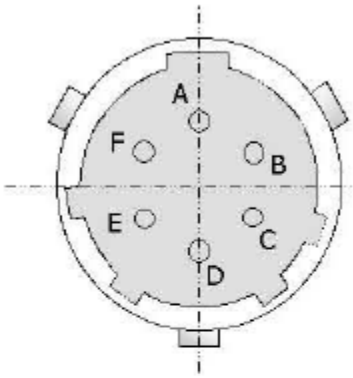
Terminal connections:

Terminal number	Wire color	6 Pin	8 Pin
2 (Sig +)	Red	A	B
3 (Sig -)	Black	B	D
4(Exc +)	White	C	A
5(Exc -)	Green	D	C
6 (Rcal)	Blue	E	E
7 (Rcal	Orange	F	F
			G (no connection)
			H (no connection)

Milivolt transducer electrical connections:

6-Pin Connector
PT460 Series

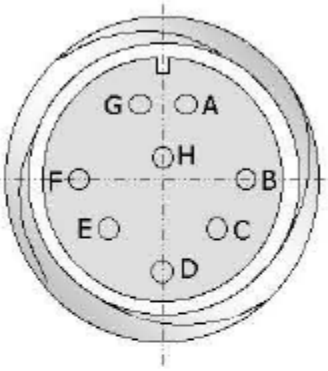
Conector 6-Pin
Serie PT460



A = Sig	+	Red/Rojo
B = Sig	-	Black/Negro
C = Exc	+	White/Blanco
D = Exc	-	Green/Verde
E = R-Cal		Blue/Azul
F = R-Cal		Orange/Naranja

8-Pin Connector
PT420 Series

Conector 8-Pin
Serie PT420



A = Exc	+	White/Blanco
B = Sig	+	Red/Rojo
C = Exc	-	Green/Verde
D = Sig	-	Black/Negro
E = R-Cal		Blue/Azul
F = R-Cal		Orange/Naranja

G = No Connection
No Conexión

H = No Connection
No Conexión

Mating Connector

Bendix PTo6A-10-6S (SR)
Dynisco P/N 711600

Bendix PCo6A-12-8S (SR)
Dynisco P/N 710700

Set up parameters:

Note: At first power-up the message Go to ConF is displayed, as described in section 3 of this manual. Access to other menus is denied until configuration mode is completed

2. SELECT MODE

Select mode is used to access the configuration and operation menu functions.
It can be accessed at any time by holding down ↺ and pressing △. *The SELCt legend is shown for 1 second, followed by the legend for the current mode.*
Press △ or ▽ to choose the required mode, then press ↺ to enter.
An unlock code is required to prevent unauthorised entry to Configuration, & Setup modes. Press △ or ▽ to enter the unlock code, then press ↺ to proceed.

Mode	Legend *for 1 sec followed by* →	Set Value	Description	Default Unlock Codes
Operator	SELCt	OPtr	Normal operation	None
Set Up		SEtUP	Tailor settings for application	10
Configuration		ConF	Configure instrument for use	20
Product Info		inFo	Instrument information	None
Calibration		UCAL	Calibrate Strain Gauge input	10
Special		SPECL	Special	None

Procedure

Press △ or ▽ to choose the required mode, then press ↺ to enter.

1. Enter “ConF” via select menu
2. Unlock code is 20(press △ till you see 20, then press ↺)
3. Continue through section 3 below, for parameter settings

(default input is STR_G for strain gauge)

3. CONFIGURATION MODE

First select Configuration mode from Select mode *(refer to section 2)*.
Press ↻ to scroll through the parameters. *While this key is pressed, and up to 1 second after, the parameter legend is shown, followed by the current value.*
Press △ or ▽ to set the required value. Press ↻ to display YESP, press △ to accept the change, otherwise parameter will revert to previous value. To exit from Configuration mode, hold down ↻ and press △, to return to Select mode.
Note: Parameters displayed depend on how instrument has been configured. Refer to user guide (available from your supplier) for further details. Parameters marked * are repeated in Setup Mode.

Parameter	Legend *for 1 sec followed by* →	Set Value	Adjustment Range & Description	Default Value
Mode Default	dF Pn	d iSA EnAb	Enables or Disables Defaulting of Values within Mode	d iSA
Input Range/Type	inPut	*See following table for possible codes*		Str_G

Code	Input Type & Range	Code	Input Type & Range	Code	Input Type & Range
bC	B: 100 - 1824 °C	LF	L: 32.0 - 999.9 °F	PtF	Pt100: –328 - 1472 °F
bF	B: 211 - 3315 °F	nC	N: 0 - 1399 °C	Pt.C	Pt100: –128.8 - 537.7 °C
CC	C: 0 - 2320 °C	nF	N: 32 - 2551 °F	Pt.F	Pt100: –199.9 - 999.9 °F
CF	C: 32 - 4208 °F	rC	R: 0 - 1759 °C	0_20	0 - 20 mA DC
JC	J: –200 - 1200 °C	rF	R: 32 - 3198 °F	4_20	4 - 20 mA DC
JF	J: –328 - 2192 °F	SC	S: 0 - 1762 °C	0_50	0 - 50 mV DC
J.C	J: –128.8 - 537.7 °C	SF	S: 32 - 3204 °F	10.50	10 - 50 mV DC
J.F	J: –199.9 - 999.9 °F	tC	T: –240 - 400 °C	0_5	0 - 5 V DC
KC	K: –240 - 1373 °C	tF	T: –400 - 752 °F	1_5	1 - 5 V DC
KF	K: –400 - 2503 °F	t.C	T: –128.8 - 400.0 °C	0_10	0 - 10 V DC
K.C	K: –128.8 - 537.7 °C	t.F	T: –199.9 - 752.0 °F	2_10	2 - 10 V DC
K.F	K: –199.9 - 999.9 °F	P24C	PtRh20% vs. 40%: 0 - 1850 °C	Str_G	-10mV-50mV
LC	L: 0 - 762 °C	P24F	PtRh20% vs 40%: 32 - 3362 °F		
LF	L: 32 - 1403 °F				
L.C	L: 0.0 - 537.7 °C	PtC	Pt100: –199 - 800 °C		

Note: Decimal point shown in table indicates temperature resolution of 0.1°

Parameter	Legend *for 1 sec followed by* →	Set Value	Adjustment Range & Description	Default Value
Scale Range Upper Limit	rUL	Scale Range Lower Limit +100 to Range Maximum		Max (Lin = 1000)
Scale Range Lower Limit	rLL	Range Minimum to Scale Range Upper Limit -100		Min (Lin = 0)
Decimal point position	dPoS	0=XXXX, 1=XXX.X, 2=XX.XX, 3=X.XXX	*(non-temperature ranges only)*	0
*Multi-Point Scaling	MP PS	EnAb	Enables or disables the input multi-point scaling feature	dISA
		dISA		
Alarm 1Type	ALM1	P_Hi	Process High Alarm	P_Hi
		P_Lo	Process Low Alarm	

*** Scale range upper and lower limit should match the value of the transducer that is connected***

		nonE	No alarm	
High Alarm 1*	PhA 1	Alarm 1 value, adjustable within scaled range, in display units		Max
Low Alarm 1*	PLA 1			Min
Alarm 1 Hysteresis*	AHY 1	1 LSD to full span in display units on safe side of alarm		10
Alarm 2Type	ALM2	Options as for alarm 1		nonE
High Alarm 2*	PhA 2			Max
Low Alarm 2*	PLA 2	Options as for alarm 1		Min
Al 2 Hysteresis*	AHY 2			10
Output 1 Usage	USE 1	rEtP	Retransmit PV Output	rEtP
		dc 10	0 to 10VDC (adjustable) transmitter power supply*	
Output 1 PV Retransmit Type	tYP 1	0_5	0 to 5 V DC output	0_10
		0_10	0 to 10 V DC output	
		2_10	2 to 10 V DC output	
		0_20	0 to 20 mA DC output	
		4_20	4 to 20 mA DC output	
Retransmit OP 1 Scale maximum	rtHG 1	Display value between, -1999 & 99999 at which Output 1 will be at maximum		Range max
Retransmit OP 1 Scale minimum	rtLo 1	Display value between, -1999 & 99999 at which Output 1 will be at minimum		Range min
TxPSU 1 level	PSU 1	Output 1 Power Supply (0 to 10VDC)*		10.0

Output 2A Usage	USE2A	A1 nd	Alarm 1, direct, non-latching	A Ind
		A1 nr	Alarm 1, reverse, non-latching	
		A1 Ld	Alarm 1, direct, latching	
		A1 Lr	Alarm 1, reverse, latching	
		A2 nd	Alarm 2, direct, non-latching	
		A2 nr	Alarm 2, reverse, non-latching	
		A2 Ld	Alarm 2, direct, latching	
		A2 Lr	Alarm 2, reverse, latching	
		Or 12d	Logical Alarm 1 OR 2, direct	
		Or 12r	Logical Alarm 1 OR 2, reverse	
		Any d	Any active alarm, direct	
		Any r	Any active alarm, reverse	
Output 2B Usage	USE2b	As for Output 2 Usage		A2nd
Display Strategy	diSP	0, 1, 2, 3, 4 or 6 *(refer to section 8)*		0
Serial Communications Protocol	Proto	Mbno	Modbus with no parity	Mbno
		MbEn	Modbus with Even parity	
		Mbod	Modbus with Odd parity	
Serial Communication Bit Rate	bAud	1.2	1.2 Kbps	4.8
		2.4	2.4 Kbps	
		4.8	4.8 Kbps	
		9.6	9.6 Kbps	
		19.2	19.2 Kbps	
Comms Address	Addr	1	1 to 255 (Modbus)	1
Comms Write	CoEn	rWrt	Read/Write	rWrt
		rOnLY	Read Only	
Logic Input Usage	diG1	rELAY	Reset latched relay(s)	rrLY
		tArE	Initiate Tare (zero display)	
		rESPu	Reset min/max PV values	
		rESAt	Reset Alarm 1 elapsed time	
		rPuAt	Reset Alarm 1 elapsed time & min/max PV values	
Logic Input State	diG d	CLoSE	Close contact activates logic state	CLS
		OPn	Open contact activates logic state	
Config Lock	C Loc	Config Mode lock code, 0 to 9999		20

4. SETUP MODE

Note: Configuration must be completed before adjusting Setup parameters.
First select Setup mode from Select mode *(refer to section 2)*. Press ↺ to scroll through the parameters *(while this key is pressed, and for 1 sec after, the parameter legend is shown, then the current value)*. Press △ or ▽ to change the value.
To exit from Setup mode, hold down ↺ and press △ to return to Select mode.
Note: Parameters displayed depends on how instrument has been configured.

Parameter	Legend *for 1 sec followed by* →	Set Value	Adjustment Range & Description	Default Value
Mode Default	dF MN		Enables or Disables Defaulting of Values within Mode	d.SA

Input Filter Time Constant	F iLt	Off or 0.5 to 100.0 secs	0.5
Alarm Filter time Constant	ALMF	0.5 to 100.0 secs	0.5
Input fail Mode	InPFL	When input fails PV should go Low or High scale reading	H iGh
Process Variable Offset	OFF S	±Span of controller	0.0
Raw PV value	S iGnL	Linear input value, un-scaled (mA, mV or VDC)	
High Alarm 1	PhA 1	Alarm 1 value, adjustable within scaled range, in display units	Max
Low Alarm 1	PLA 1		Min
Alarm 1 Hysteresis	AHY 1	1 LSD to full span in display units on safe side of alarm	10
High Alarm 2	PhA 2	Options as for alarm 1	Max
Low Alarm 2	PLA 2		Min
AI 2 Hysteresis	AHY 2		10
Scaling Breakpoint 1	ScAL 1	Multi-point scaling breakpoint 1 value, adjustable from 0 to 100 in % of span	100
Display Value 1	d iSP 1	Value to be displayed at multi-point scaling breakpoint 1, in display units	Range Max
Scaling Breakpoint 2	ScAL2	Multi-point scaling breakpoint 2, adjustable up to 100% of span. Must be >ScA 1 value	
Display Value 2	d iSP2	Value to be displayed at Multi-point scaling breakpoint 2, in display units	
Scaling Breakpoint 3	ScALn . .9	Multi-point scaling breakpoint *n*..9, adjustable up to 100% of span. Must be >ScALn . .9 value	
Display Value 3	d iSPn . .9	Value to be displayed at Multi-point scaling breakpoint *n*..9, in display units	
Tare Feature	tArE	EnAb / d iSA — Enables or disables the input auto-zero Tare feature	d iSA
Setup Lock Code	S Loc	0 to 9999	10

5. STRAIN GAUGE CALIBRATION MODE

Note: Configuration must be completed before adjusting Calibration parameters.

First select Calibration mode from Select mode *(refer to section 2)*. Press ↺ to scroll t through the parameters *(while this key is pressed, and for 1 sec after, the parameter legend is shown, then the current value)*. Press △ ▽ to change the value.

To exit from Calibration mode, hold down ↺ and press △ to return to Select mode.

Note: Calibration mode will only be displayed if input type is set to Str_G

Parameter	Legend *for 1 sec followed by* →	Set Value	Adjustment Range & Description	Default Value
Mode Default	dF_Mn	d_SA EnAb	Enables or Disables Defaulting of Values within Mode	d_SA
Shunt Resistor	Shunt	d_SA EnAb	Enables or Disables use of shunt resistor	EnAb
Calibration Resistor Value	rCAL	40% to 100% (appears only when Shunt isEnAb)		80
Start Low Calibration	CLobJ	Press △ and ▽ to start calibration		0.0
Start High Calibration	CH_Gh	Press △ and ▽ to start calibration making sure to apply the high range signal if ShNt is set d_SA (Can only be accessed once a succesful low cailbration has been completed)		10000
Calibration Lock Code	r_Loc	0 to 9999		10

When the calibration procedure begins ---- appears on the screen. Once Calibration is complete donE appears on screen.

If there are any Faults with the calibration an error message will appear either ErSht or ErCAL.

ErCAL means the low calibration will fail if the offset is less than -10mV or greater than +10mV. This signifies potential faulty sensors or the high calibration will fail if the count value is less than +20mV or greater than +50mV. This signifies potential faulty sensors

ErSht means the high calibration will fail if the mV value is within 10mV of the low calibration value. This is a potential RCAL failure.