CARBON POTENTIAL TRANSMITTER — MSI7P

Direct display of carbon potential
Input : Oxygen probe
Thermocouple (K, R, S)
Outputs : 2~5 x 4~20 mA (or voltage) outputs
Input/supply/outputs mutually isolated
Supply : 85~265 V AC/DC or 20~35 V DC
Calibration through keys - no trimpots
2 x 16 character LCD display
RS485/MODBUS RTU option

SPECIFICATIONS

All specifications at ambient of 25 C, unless specified otherwise

INPUTS

Temperature	K, R, S thermocouple
Oxygen sensor	Zirconia probe
Range limits	See Table 1

MONITORING

Sensor break protection	User programmable for each input

ACCURACY

Display, outputs	
Carbon potential	0.02 %C
Temperature	See Table 1
Oxygen probe output	2 mV
Resolution	
Carbon potential	0.01% C
Temperature	1 °C
Oxygen probe output	1 mV
Cold junction compensation	Automatic (for thermocouples)
Temperature effect on accuracy	0.01% of span per C

OUTPUTS

No. of outputs	2~5
Output types	
Standard	
Current	0~20 mA, 4~20 mA, 20~0 mA, 20~4 mA (load : 0~500)
Voltage	0~1 V DC, 0~5 V DC, 0~10 V DC
Non - Standard	Please specify
	Note : For EACH output, one of the Std or Non-std outputs MUST be specified
Output assignment (each output)	Carbon potential Temperature (°C) Oxygen probe (mV)

CALIBRATION

ZERO and SPAN through front panel keys for each input and output (no trimpots used)

ISOLATION

Between input, supply and any output, and between any two outputs	a) 1000 V AC RMS, 50 hz / 1 minute b) 250 V AC RMS, 50 hz, continuous

POWER SUPPLY

Supply voltage	85~265 V AC, 50 hz OR 20~35 V DC

COMMUNICATION

Port	RS485
Protocol	Modbus RTU
Slave ID	User programmable

ENCLOSURE

Material	ABS plastic
Dimensions	100(W) x 75(H) x 110(D)
Mounting	Snap on for 35 mm DIN rail to DIN 46277
Connection, single/ stranded wires	2.5 mm^2, AWG 14
Protection	IP20

TEMPERATURE, HUMIDITY

Ambient, storage	-22 ~ +85 C
Ambient, operation	0 ~ 50 C
Relative humidity	0 ~ 95%

OTHER

Programming	With 3 keys & built-in display
Keypad	Tactile, 3 keys
Display	2x16 character LCD display, backlit

PROGRAMMABLE PARAMETERS

Thermocouple type	K, R, S
Unit (temperature)	°C, °F, °K
Temperature Hi scale	For output scaling
Temperature Lo scale	
CP Hi scale	
CP Lo scale	
mV Hi scale	
mV Lo scale	
Gas type	Methane, Propane
Enable/Disable output	Provided for each output
Sensor break	Upscale, Downscale for each input
Preset out	Sensor break output value
Digital filter	Provided for CP

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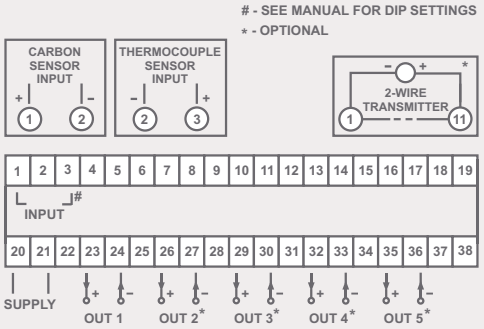
PROGRAMMABLE SIGNAL ISOLATOR — MSI7P

TABLE 1

SENSOR / INPUT	RANGE LIMITS (°C / mV)		RANGE IN WHICH ACCURACY IS SPECIFIED		TYPICAL ACCURACY AT 30 °C (°C / mV)	WORST CASE ACCURACY (°C / mV)
	LOW SCALE	HIGH SCALE	LOW SCALE	HIGH SCALE		
Chromel / Alumel (K)	-270	1372	-50	1200	± 1	± 3
Pt / Pt - 13% Rh (R)	0	1760	0	1760	± 2	± 6
Pt / Pt - 10% Rh (S)	0	1760	0	1760	± 2	± 6
Oxygen probe	0	2000 mV	1400 mV	2090 mV	± 1 mV	± 2 mV

CONNECTION DIAGRAM



ORDERING INFORMATION

2141 | A | B | C | D | E | F | G

A	Output1 type
0	0/4~20 mA
1	0~1 V DC
2	0~5 V DC
3	0~10 V DC
4	Other *

B	Output2 type
0	None
1	0/4~20 mA
2	0~1 V DC
3	0~5 V DC
4	0~10 V DC
5	Other *

C	Output3 type
0	None
1	0/4~20 mA
2	0~1 V DC
3	0~5 V DC
4	0~10 V DC
5	Other *

D	Output4 type
0	None
1	0/4~20 mA
2	0~1 V DC
3	0~5 V DC
4	0~10 V DC
5	Other *

E	Output5 type
0	None
1	0/4~20 mA
2	0~1 V DC
3	0~5 V DC
4	0~10 V DC
5	Other *

F	Communication
0	Not Provided
1	RS485

G	Supply voltage
0	85~265 V AC
1	20~35 V DC

* Please specify

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BARODA	C : 0-9376215882	HP	C : 0-9316460869		T : 011-25786350
CHANDIGARH	C : 0-9316460869	HYDERABAD	C : 0-9391053480	ORISSA	C : 0-9337002344
CHENNAI	C : 0-9381056345	INDORE	C : 0-9301995060	PUNE	C : 0-9371113404
CHHATISGARH	C : 0-9329418246	KARNATAKA	C : 0-9341063831		T : 020-24479759
COIMBATORE	C : 0-9380284497	KERALA	C : 0-9341273814	PUNJAB	C : 0-9316460869
GOA	C : 0-9371439090	NAGPUR	C : 0-9322245543		

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