



Masibus Product Selection Guide

DATA ACQUISITION MODULE | MINT INTELLIGENT I/OS | ON-OFF AND PID CONTROLLERS |
INDICATORS | FLOW INDICATOR TOTALIZER | CALIBRATORS | SIGNAL ISOLATORS |
FIELD INTERFACE BOARDS (FIB) | TEMPERATURE AND HUMIDITY TRANSMITTERS

Data Acquisition Module

- 1 8204 - 4 Channel Scanner/DAQ Module
- 2 8208 - 8 Channel Scanner/DAQ Module
- 3 85XX* - 24 Channel Scanner/DAQ Module
- 4 85XX - 24 Channel Scanner/DAQ Module
- 5 8040 - 128 Channel Data Logger/DAQ Module

MINT INTELLIGENT I/Os

- 1 MINT DI 16 - 16 Channel Digital Input Module
- 2 MINT AI 08 - 8 Channel Analog Input Module
- 3 MINT DO 16 - 16 Channel Digital Output Module
- 4 MINT AO 08 - 8 Channel Analog Output Module

On-Off Controllers

- 1 5002U - Legacy On/Off Controller
- 2 LC5296 - Dual Display On/Off Controller
- 3 5006-RN - Single Display On/Off Controller
- 4 LC5296H - Compact On/Off Controller
- 5 LC5296-XP - FLP Controller
- 6 LC5248 - Tiny On/Off Controller
- 7 LC4248 - Compact Controller

PID Controllers

- 1 LC5248-AT - Tiny On/Off Controller
- 2 LC5296-AT - Auto-tune PID Controller
- 3 LC5296-XP-AT - FLP Auto Tune PID Controller
- 4 PID 5030 - Legacy PID Controller
- 5 5040 - Single Loop Controller
- 6 5040-AM - Auto Manual Station

Indicators

- 1 LI4248 - Compact Indicator
- 2 408 - M - Legacy Indicator
- 3 409 - Smart Indicator
- 4 408-2IN - Large Display Indicator
- 5 405-4IN - Large Display Indicator
- 6 RDU-64 - Remote Display Unit
- 7 40005 - Bar Graph Indicator
- 8 LPI-1 - Loop Power Indicator

Flow Indicator Totalizer

- 1 1006 - 6 digit Flow Indicator Totalizer
- 2 1008S - 8 digit Flow Indicator Totalizer
- 3 1008V - 8 digit Flow Indicator Totalizer

Calibrators

- 1 3001M - Universal Calibrator
- 2 TCS 4050M - Loop Calibrator
- 3 TCS 4070 - Thermocouple Calibrator
- 4 LC 12 - The Ultimate Loop Calibrator

Signal Isolators

- 1 9000U-S/DOP - Signal Isolator Single/Dual Output
- 2 9000U-T/FOP - Signal Isolator Three/Four Output
- 3 ET7S10 - Loop Powered Electrical Transmitter
- 4 ET7S11 - Aux Powered Electrical Transmitter

Field Interface Boards

- 1 MAS-AI-RTD-08-D - 8 Channel RTD Input Board
- 2 MAS-AI-08-D - 8 Channel Analog Input Board
- 3 MAS-AO-08-D - 8 Channel Analog Output Board
- 4 MAS-DI-16-D - 16 Channel Digital Input Board
- 5 MAS-DO-RL-08-D - 8 Channel Relay Output Board

Temperature Transmitters

- 1 TT7S10 - Loop Powered DIN Rail Mount Temperature Transmitter
- 2 TT7S10-H - Loop Powered Head Mount Temperature Transmitter
- 3 TT7S11 - Aux Powered DIN Rail Mount Temperature Transmitter
- 4 UT-94 - Universal Transmitter

Humidity Transmitters






- 1 HT 7 S00 - Humidity Transmitter
- 2 HT 7 S10 - Humidity Transmitter with RTD Output
- 3 HT 7 S11 - Humidity + Temperature Transmitter

Data Acquisition Module

Product Models		8204	8208	85XX ⁺	85XX	8040
Technical Specifications	Channels (Max)	4	8	24		128
	Resolution	16 Bit		17 Bit	15 ½ Bit	16 Bit
	ADC	1 / 4 Channel	1 / 8 Channel	3 / 24 Channel	1 / 24 Channel	1 / 16 Channel
	Accuracy	0.1 % of FS				
	Sampling Speed	100 mSec / 200 mSec (RTD)		50 mSec / 100 mSec (RTD)	250 mSec / 500 mSec (RTD)	100 mSec
	CH-CH Isolation	X	X	X	O	O
	Thermocouple	E, J, K, T, B, R, S, N		E, J, K, T, B, R, S, N	E, J, K, T, B, R, S	
	RTD	Pt-100		Pt-100, Ni-120	Pt-100, Pt-46, Cu-53	Pt-100
	Current	0/4-20mA				
	Voltage	-10-20mV, 0-75/100mV, 0/0.4-2V, 0/1-5V, 0-10V		-10-20mV, 0-100mV, 0/1-5V, 0-10V	0/1-5V	
	Input Impedance	> 1 MΩ				
Temp-co	100 ppm					
Display	7-Segment	0.56" (5 digit)	0.56" (4 digit)	0.56" (4 digit)	0.56" (4 digit)	Separate (16X 2) LCD based O.T.U. (O)
	Alpha Numeric	X	X	0.3" (6 digit)	X	X
	Resolution	0.1 °C/ 1 Count				
Keys	4	5	8	9	24	
Analog Output	Accuracy	0.25%		X	0.25%	X
	Types	0/4-20mA, 0/1-5V, 0-10V		X	4-20mA	X
	Mapping	✓	✓	X	✓	X
	Number of Output	1 Max		X	4 Max	X
Load Resistance Current/Voltage	< 500 Ω (Current)/3 KΩ (Voltage)		X	< 500 Ω (Current)	X	
Digital Output	Channels (Max)	X	X	24	48	32
	Mapping	X	X	✓	X	✓
	Output Loading	X	X	30V DC @ 100mA		
Relay	Relay Nos (Max)	4		8	12	16
	Contact Rating	250V AC/30V DC @ 2A			250V AC @ 2A, 220V DC @ 0.1A	250V AC/30V DC @ 2A
Serial Communication	Ports	1		2 (O)	1	2 (O)
	RS485	✓	✓	✓	✓	✓
	Protocol	Modbus RTU				
	Speed (bps)	9600, 19200				
Ethernet Communication	Ports	X	X	1(O)	1 (O)	1 (O)
	Protocol	X	X	Modnet		
	Isolation	X	X	1500V AC		
	Speed	X	X	10 Mbps	100 Mbps	
Field Interface	Prefab Cable	X	X	✓	✓	✓
	Back Plate	X	X	X	✓(Detachable)	X

O: Optional
X: Not Available
✓: Available

Data Acquisition Module

Product Models		8204	8208	85XX ⁺	85XX	8040
Technical Specifications						
Power Supply	Voltage Supply	85-265V AC 18-36V DC (O)				85-265V AC
	Power Consumption	10 VA				35 VA
Physical Dimension	Size - mm (H x W)	48 x 96	96 x 96	144 x 72	192 x 96	135 x 445(Full)
	Depth - mm	130	110	225	250	300
	Mounting	Panel Mount				19" Rack
	IP Rating	IP20/IP65 (O)				IP20
	Terminal	Screw Type		Prefab Cable	Screw Type/Prefab Cable	Prefab Cable
Isolation	Input to Logic	500V DC				
	Logic to RS485	500V DC				
	Rs485 to Input	500V DC				
	Input to Digital O/P	X	X	1500 V AC	X	X
	Input to Analog O/P	500 V DC		X	500 V DC	X
Special Function	Modular	X	X	✓	✓	✓
	Expandable	X	X	✓	✓	✓
	Data Logging	X	X	X	✓	✓
	Square root	X	X	✓	✓	X
	Configuration Software	X	X	✓	✓	✓
EMI/EMC Test	X	X	✓	✓	X	
RoHS Complied	X	X	✓	X	X	








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MINT INTELLIGENT I/Os

Product Models		MINT DI 16	MINT AI 08	MINT DO 16	MINT AO 08
Technical Specifications	Type of I/P OR O/P	Digital Input	Analog Input	Digital Output	Analog Output
	Channels (Max)	16	8	16	8
	Resolution	32 Bit Counter	16 Bit	10 msec (Pulse Width)	16 Bit
	Accuracy	X	0.1% of FS	X	0.05% of FS
	Sampling Speed	500 µSec	50 mSec / 100 mSec (RTD)	100 mSec to 5 Sec	200 mSec
	Voltage / type	Up/Down (1 KHz max)	-10V to +10V, -100mV to +100mV, -50mV to +50mV, -250mV to +250mV, -1V to +1V	Open Collector 24V @100 mA per channel	0-10/ 2-10V @ 2KΩ min
	Thermocouple	X	E, J, K, T, B, R, S, N		X
	RTD	X	Pt 100 (3 wire), Cu53, NI120		X
	Resistor Input	X	0 - 2KΩ		X
	Current	X	0-20mA/4-20mA	X	0-20mA/ 4-20mA @ 750Ω max
	Input Impedance	2200 Ω	>1MΩ		X
	Temp-co	X	100 ppm	X	100 ppm
Status Indication	Power, Module Status, Communication, Channel Status				
Power Supply	Voltage Supply	18 - 36V DC			
	Power Consumption	<2W	<3W		
Serial Port 1	Ports	1 - RS485			
	Protocol	Modbus RTU			
	Speed	9600, 19200, 38400,57600,115200 BPS			
Serial Port 2	Ports	1 - RS485 / 1 - Profibus / 1 - Ethernet (O)			
	Protocol	Modbus RTU / Profibus DPV0 / Modnet			
	Speed	9600 to 115200 BPS / 9600 BPS to 12 MBPS / 10 - 100 MBPS			
Physical Dimension	Size - mm (H x W)	101 x 22.5			
	Depth - mm	120			
	Mounting	DIN Rail			
	DIN width - mm	22.5 for 2 - RS485 48.5 for 1 RS485 + 1 Profibus/Modnet port			
	Terminal	Screw terminal for 1.5 mm ² Wire			
Isolation	Field to Logic	1500V AC			
	Logic to RS485	1500V AC			
	RS485 to Field	1500V AC			
Configuration Software	✓				

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 ✓: Available

On-Off Controllers

Product Models		5002U	LC 5296	5006-RN	LC5296H	LC5296-XP	LC5248	LC4248	
Technical Specifications									
Analog Input	Channels (Max)	1							
	Resolution	15 ½ Bit	16 Bit						
	Accuracy	0.1% of FS	0.1% of FS for linear Input/ 0.25% of FS for other Input						
	Sampling Speed	400 mSec	250 mSec						
	Thermocouple	E, J, K, T, B, R, S, N	J, K, T, R, S			E, J, K, T, B, R, S		J, K	
	RTD	Pt100							
	Current	0/4-20mA							
	Voltage	0/1-5V							
	Input Impedance	Voltage Input: >1 MΩ, Current Input: 250Ω							
	Temp-co	150 ppm							
Display	7-Segment (4 Digits)	0.56" (PV) / 0.4" (SV)	0.56" (PV)	0.56" / 0.8" (PV)	0.56" (PV) / 0.4" (SV)	0.4" (PV) / 0.28" (SV)	0.56" (PV)		
	Resolution	0.1 °C / 1 Count							
Keys	4			5		3			
Analog Output	Number of Output	1 (O)	2 (O)	1 (O)	2 (O)	X	X		
	Types	4-20mA	0/4-20mA, 0/1-5V, 0-10V			X	X		
	Accuracy	0.25% of FS				X	X		
	Load Resistance Current/Voltage	250 Ω (Current)	500 Ω (Current)			< 500 Ω (Current)/> 3 KΩ (Voltage)			
Relay	Relay Nos	3	2						
	Contact Rating	250 V AC / 30 V DC @ 2A (Resistive Load)							
TPS (CL)	24V DC (30 mA)				X	24V DC (30 mA)			
Power Supply	Voltage Supply	85-265V AC 18-36V DC (O)				85-265V AC		85-265V AC	
	Power Consumption	<10 VA				<5 VA			
Serial Communication	Ports	1 - RS485 (O)				X	X		
	Protocol	Modbus RTU				X	X		
	Speed (bps)	9600, 19200	9600, 19200, 38400			X	X		
Physical Dimension	Size - mm (H X W)	96 X 96		48 X 96	180 X 180	48 X 48	48 X 96		
	Depth - mm	200	65	75/120 (0.8")	140	75	85		
	Mounting	Panel			Wall		Panel		
	IP Rating	IP20			IP20	IP65/FLP	IP20		
	Terminal	Screw Type	Barrier Type			Screw Type	Barrier Type		
Isolation	Input to Logic	X	X	X	X	X	X	X	
	Logic to RS485	500V DC				X	X		
	Input to Analog O/P	500V DC				X	X		

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✓: Available

PID Controllers






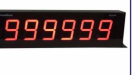


Product Models		LC5248-AT	LC5296-AT	LC5296-XP-AT	PID 5030	5040	5040-AM	
Technical Specifications	Channels (Max)	1						
	Resolution	16 Bit			15 ½ Bit	17 Bit		
	Accuracy	0.1% of FS for linear Input/ 0.25% of FS for other Input				0.1 % of FS		
	Sampling Speed	250 mSec			400 mSec	250 mSec		
	Thermocouple	J, K	E, J, K, T, B, R, S					
	RTD	Pt100						
	Current	0/4-20mA						
	Voltage	0/1-5V						
	Input Impedance	Voltage Input: > 1 MΩ, Current Input: 250Ω						
	Temp-co	100 ppm	150 ppm				150 ppm	
Digital Input Channels	X	X	X	X	4 [24V DC@5mA Max]			
Display	7-Segment (4 Digits)	0.4"(PV) / 0.28"(SV)			0.56"(PV) / 0.4"(SV)			
	Resolution	0.1/1.0 °C						
Keys	3	5	5	5				
Analog Output	Load Resistance Current/Voltage	X	< 500 Ω (Current)/> 3 KΩ (Voltage)		< 500 Ω (Current)/> 2 KΩ (Voltage)			
	Isolation	500V DC						
	Accuracy	X	0.25% of FS					
	Types	X	0/4-20mA, 0/1-5V, 0-10V				0/4-20mA, 0/1-5V	
	Number of Output	X	2 (O)		1 (O)	2		
Digital Output	Channels	X	X	X	X	4	4	
	Mapping	X	X	X	X	✓	✓	
	O/C	X	X	X	X	24V DC @ 50mA Max		
Control Output	RL (Ht)	RL (Ht)		RL (Ht/Cl,F/R)			X	
	SSR	✓ (O)						X
	Linear	X	0/4-20mA, 0/1-5V, 0-10V			0/4-20mA, 0-10V DC		X
Relay	Relay Nos	2			4			
	Contact Rating	250 V AC / 30 V DC @ 2A (Resistive Load)						
Alarm	Alarm Output	1	1 or 2		2	2 or 4		
	Alarm Types	X	15		12	18	19	
Serial Comm.	Ports	X	1 - RS485 (O)					
	Protocol	X	Modbus RTU					
	Speed (bps)	X	9600, 19200, 38400		9600, 19200	9600, 19200, 38400		
TPS (CL)	X	24 V DC (30 mA)						
Power Supply	Voltage Supply	85-265V AC 18-36V DC (O)			85-265V AC	85-265V AC 18-36V DC (O)		
	Power Consumption	< 5 VA	< 10 VA		< 15 VA			
Physical Dimension	Size - mm (H X W)	48 X 48	96 X 96	180 X 180	96 X 96			
	Depth - mm	75	65	140	220	110		
	Mounting	Panel		Wall		Panel		
	IP Rating	IP20		IP65/FLP		IP20		
	Terminal	Barrier Type		Screw Type		35° angled Screw type	Barrier Type	
Isolation	Logic to RS485	X	500V DC					
	Rs485 to Input	X	500V DC					
	Input to Analog O/P	X	500V DC					
Special Function	Cascade	X	X	X	✓	✓	✓	
	Ratio	X	X	X	✓	✓	✓	
	Control Mode	P, PI, PID, On/Off			PID	P, PI, PID, On/Off		Auto/Manual
	Auto-tune	✓		✓	X	✓	X	
	Auto Manual	✓	✓	✓	✓	✓	✓	

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✓: Available

Indicators




Product Models		LI4248	408 - M	409	408-2IN	405-4IN	RDU-64	40005	LPI-1
Technical Specifications									
Analog Input	Channels (Max)	1						DC: 2, SC:1	1
	Resolution	16 Bit			12 Bit	15 ½ Bit	X	15 ½ Bit	12 (±4 µA)
	Accuracy	0.25% of FS		0.1 % of FS	0.25 % of FS	0.1 % of FS	X	0.1 % of FS	
	Sampling Speed	250 mSec	500 mSec	250 mSec	500 mSec		X	500 mSec	
	Thermocouple	J,K	J,K,T,R,S	E,J,K,T,B,R,S	J,K,T,R,S	E,J,K,T,B,R,S	X	E,J,K,T,B,R,S	X
	RTD	Pt100					X	Pt100	X
	Resistor Input	X		0-400/6000 Ω	X	0-400/6000 Ω		X	
	Current	0/4-20mA					X	0/4-20mA	
	Voltage	0/1-5V		-10-20mV, 0/0.4-2V, 0-75mV, 0/1-5V, 0-10V, ±75mV,	0/1-5V	-10-20mV, 0-75mV, ±75mV, 0-10V	X	0/1-5V	X
	Serial Input	X	X	X	X	Serial RS485		X	X
	Input Impedance	> 1 MΩ		>1M Ω for TC, RTD, >220 kΩ for Other	> 1 MΩ		X	> 1 MΩ	X
Temp-co	150 ppm					X	100 ppm		
Display	7-Segment	0.56" (4 Digits)	0.8" (4 Digits)	0.56" (4½ Digits)	1.8" (4 Digits)	4" (4 Digits)	4" (6 Digits)	0.3" (PV) (4 Digits)	LED: 0.56" LCD: 0.5" (4 Digits)
	Resolution	0.1 °C / 1 Count					X	0.1 °C / 1 Count	
Keys	3		4	3		X	3	3	
Analog Output	Accuracy	X	X	0.25% of FS	X	0.25% of FS	X	0.25% of FS	X
	Types	X	X	0/4-20mA, 0/1-5V, 0-10V	X	0/4-20mA, 0/1-5V, 0-10V	X	4-20 mA	X
	Load Resistance Current/Voltage	X	X	< 600 Ω(Current) > 2 kΩ(Voltage)	X	< 600 Ω(Current) > 2 kΩ(Voltage)	X	600 Ω (Current)	X
Relay	Relay Nos	X	X	2	X	2	X	DC: 4, SC: 2	X
	Contact Rating	X	X	230V AC @ 2A	X	230V AC @ 2A	X	230V AC @ 2A	X
Serial Communication	Ports	X	X	1 - RS485	X	1 - RS485			X
	Protocol	X	X	Modbus RTU	X	Modbus RTU			X
	Speed (bps)	X	X	4800/ 9600/ 19200/ 38400	X	2400/ 4800/ 9600	4800/ 9600/ 19200	9600/ 19200	X
TPS (CL)	24 V DC (30 mA)				24V DC(50 mA)		X	24V DC(30 mA)	X
Power Supply	Voltage Supply	85-265V AC 18-36V DC (O)			85-265V AC			85-265V AC 18-36V DC (O)	X
	Loop Powered	X	X	X	X	X	X	X	LED: < 5V, LCD: < 3V
	Power Consumption	< 5VA		< 10VA		< 12VA	< 10VA	< 15VA	X
Physical Dimension	Size - mm (H X W)	48 X 96			96 X 192	P- 177 X 483/ W- 300 X 500	P- 177.7 X 646/ W- 200 X 800	DC- 144 X 72 SC- 144 X 36	P- 48 X 96 W- 64 X 98
	Depth - mm	75	160	112	70	120	P - 82 ,W - 120	245	P - 68, W - 38
	Mounting	Panel				Panel/Wall		Panel	Panel/Wall
	IP Rating	IP20				IP20/IP65 (O)		IP20	P & W: IP65
	Terminal	Barrier Type				Screw Type			
Isolation	Input to Logic	X	X	500V AC	X	X	1500V AC	X	✓
	Logic to RS485	X	X	500V AC	X	500V DC	1500V AC	500V DC	X
	Rs485 to Input	X	X	500V AC	X	500V DC	500V DC	500V DC	X
	Input to Analog O/P	X	X	500V AC	X	500V DC	X	500V DC	X
Special Function - Sq. Root	X	X	✓	X	✓	X	✓	X	

O: Optional

X: Not Available

✓: Available

Flow Indicator Totalizer

Product Models		1006	1008S	1008V
Technical Specifications				
	Channels (Max)	1	3	1
Analog Input	Resolution	16 Bit		
	Accuracy Flow Reading Time Base	0.025% FS 100 ppm		
	Sampling Speed	250 mSec	100 mSec	250 mSec
	Current	0/4-20mA		
	Voltage	0/1-5V		
	Frequency	0-10KHz		
	5 Point Linearization	X	✓	✓
	Input Impedance Voltage Inputs Current Inputs	> 20 KΩ 250 Ω	> 300 KΩ 250 Ω	> 400 KΩ 250 Ω
	Temp-co	100 ppm		
	PT compensation	X	✓	✓
	Digital Input Channels	1 (O)	4 (O)	2 (O)
	Display	7-Segment PV Value	0.56" (4 digit)	0.56" (5 digit)
Display Total		0.4" (6 digit)	0.4" (8 digit)	0.36" (8 digit)
Resolution		1 Count		
Keys	4	4	6	
Analog Output	Number of output	1 (O)		
	Types	4-20mA @ 500 Ω		
Digital Pulse Output	X	✓	✓	
Relay	Relay Nos	2	4	4
	Flow/Batch Relay	2 (O)	2/2 (O)	
	Contact Rating	250V AC/30V DC @ 2A		
Serial Communication	Ports	1		
	RS485	O		
	Protocol	Modbus RTU		
	Speed (bps)	4800, 9600	9600, 19200	4800, 9600
TPS (CL)	24 V DC (50 mA)			
Power Supply	Voltage Supply	85-265V AC 18-36V DC (O)		
	Power Consumption	< 10 VA		
Physical Dimension	Size - mm (H X W)	96 X 96		144 X 72
	Depth - mm	175	110	175
	Mounting	Panel Mount		
	IP Rating	IP20		
	Terminal	Screw Type		
	Accessories	Mounting Clamps-02		
Special Function	Square Root	✓	✓	✓
	K-Factor	✓	✓	✓
	Mass Flow Measurement	X	✓	✓
Logic to RS485	500V DC			

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✓ : Available

Calibrators

Product Models		3001M	TCS 4050M	TCS 4070	iCAL LC 12
Technical Specifications	2W/4W Configuration	✓	✓	X	✓
	Channels (Max)	1			
	Resolution	18 Bit			
	Sampling Speed	400 mSec		250 mSec	100 mSec
	Thermocouple (Acc)	E, J, K, T (0.5°C) B (2°C), R, S (1°C)	X	B, E, J, K, R, S, T (0.5°C)	X
	RTD (Acc)	Pt100 or Cu-53 (0.5°C)	X	Pt100, Cu-53 (0.2°C)	X
	mV (Acc)	0-20/200 mV (0.03%)	0-200 mV (0.03%)	0-100 mV (0.01%)	0-200 mV (0.02%)
	Resistor Input (Acc)	0-2 K (0.03%)	X	X	X
	Current (Acc)	0-20/60 mA (0.03%)	0-200 mV (0.03%)	X	0-20 mA (0.02%)
	Voltage (Acc)	0-2/10V (0.03%)	X	X	0-24V (0.02%)
	Input Impedance	V, mV > 10 MΩ, mA: 10Ω		V, mV > 10MΩ	V, mV > 1MΩ, mA: 10Ω
	CJC Error	0.2 °C	X	0.2 °C	X
	Temp-co	± 0.002% rdg/°C		100 ppm	30 ppm
	Reverse I/P Protection	✓	✓	✓	✓
Display	Resolution	Ω: 0.1 Ω, T/C, RTD: 0.1°C, 20/60 mA: 1/10 uA, 20/60 mV: 1/10 uV, 2/10 V: 0.1/1 mV	mV: 10 uV, mA: 1 uA	T/C, RTD: 0.1°C, mV: 1uV	V DC: 1mV, mA: 1uA, mV: 10uV
	LCD/7- segment	0.56" (5 digit)	0.5" (4½digit)	16 X 2 LCD	2.4" Graphical TFT LCD, 240 x 320 pixels
Keys	18 Push Button & 3 Knobs	6 keys & 2 Slides Switch	10	6	
Source	mV (Acc)	0-20/200 mV (0.03%)	0-200 mV (0.03%)	0-100 mV (0.010 mV)	0-200 mV (0.02%)
	Current (Acc)	0-20/60 mA (0.03%)	0-200 mV (0.03%)	X	0-20 mA (0.02%)
	Voltage (Acc)	0-2/10V (0.03%)	X	X	0-12V
	Thermocouple (Acc)	E, J, K, T (0.5°C) B (2°C), R, S (1°C)	X	B, E, J, K, R, S, T (0.5°C)	X
	RTD (Acc)	Pt100 or Cu-53 (2°C)	X	Pt100(0.5 °C), Cu-53 (1°C)	X
	Load Resistance	mV: > 2K, mA: < 1K	mV: > 1K, mA: < 1K	> 2K For T/C and mV	mV: > 10K, mA: < 750Ω
O/P short Circuit Protection	✓	✓	✓	✓	
Serial Communication USB	X	X	X	✓	
Power Supply	Charger Supply	230V/110VAC ±10%, 50/60Hz		85-265V AC	100-240V AC
	Power Consumption	10V A		< 10V A	< 12V A
	Battery	Built-in Rechargeable 7.2V, 2.2AH Power pack	6 Nos. of 1.2V, 1200mAH rechargeable 'AA' size Ni-MH cells		Rechargeable Li-ion battery pack, 2300mAh 3.7V
	Battery life on full charge	Measurement mode → 5 Hrs. 20 mA Source mode → 4 Hrs.	Measurement mode → 20 Hrs. 20 mA Source mode → 4 Hrs.	8 Hrs. (Appx.)	Measurement mode → 18 Hrs. 20 mA Source mode → 8 Hrs.
	Battery charging time	14 to 16 hours			< 5 hours
Physical Dimension	Size - mm	135 (H) X 240 (W) X 185 (D)	40 (H) X 100 (W) x 200 (L)		39.5 (H) X 82.1 (W) X 161.7 (L)
	Mounting	Table Top		Hand Held	
	Terminal	BS4 Type Terminal			2mm Safety Terminal
Special Function	Data Logging	X	X	X	✓
	Square Root	X	X	X	✓
	Loop Power Output	X	✓	X	✓
	HART compatible	X	X	X	✓
	Switch Test	X	X	X	✓
	Ramp	X	X	X	✓
Step	X	X	✓	✓	
Isolation (Source to measure)	1500 V AC			500 V DC	

O: Optional

X: Not Available

✓: Available

Signal Isolators

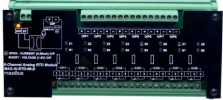




Product Models		9000U-S/DOP	9000U-T/FOP	ET7S10	ET7S11
Technical Specifications	Channels (Max)	1			
	Accuracy	0.1 % of FS			
	Resistor Input	10K Ω		X	X
	Current	$\pm 1\text{mA}$ to $\pm 100\text{mA}$		0/4 to 20 mA	
	Voltage	Min: 0 to $\pm 10\text{mV}$, Max: 0 to $\pm 600\text{V}$		1 to 5V/ 0 to 10V	
	Input Impedance Current /Voltage	< 51 Ω (Current) / > 1 M Ω (Voltage)		100 Ω (Current) / 1M Ω (Voltage)	47 Ω (Current) / 1M Ω (Voltage)
	Stability	0.1% / year			
	Temp-co	≤ 100 ppm		<150 ppm	
	Reverse I/P Protection	✓	✓	✓	✓
	Decreasing I/P	✓	✓	✓	✓
	Bi-Directional I/P	✓	✓	X	X
	I/P Selection	Factory Selectable		Field Selectable	
	Key	X	X	Six DIP Switch	
Analog Output	Types Voltage Current	Min: 0 to $\pm 100\text{mV}$, Max: 0 to $\pm 10\text{V}$ Min: 0 to $\pm 1\text{mA}$, Max: 0 to $\pm 10\text{mA}/+20\text{mA}$		4 to 20 mA	0/1 to 5V & 0 to 10V 0/4 to 20 mA
	Number of output	1 or 2	3 or 4	1	
	O/P Load I (Current)	0/4 to 20 mA $\leq 750 \Omega$		X	0/4 to 20 mA $\leq 750 \Omega$
	O/P Load V (Voltage)	0 /1 to 5V [Load $\geq 2\text{K}$] & 0 to 10V [Load $\geq 3.9\text{K}$]		X	0/1 to 5V [Load $\geq 2\text{K}$] & 0 to 10V [Load $\geq 3.9\text{K}$]
TPS (CL)	24 V DC (30mA)	24 V DC (30mA)	X	X	
Power Supply	Voltage Supply	85-265V AC 18-36V DC (O)			18-36V DC (O)
	Loop Powered	X	X	Loop (7.5-36V)	X
	Power Consumption	< 6 W	< 10 W	X	< 2V A
Physical Dimension	Size - mm (H X W)	75 x 55	75 x 100	99 x 12.5	75 x 22.5
	Depth - mm	110		115	110
	Mounting	Din Rail 35 mm			
	DIN width (mm)	55	100	12.5	22.5
	Terminal	Screw Type			
Calibration Z/S Adjustment	✓	✓	✓	✓	
Isolation	2000V AC		1500V AC	1500V AC	

O: Optional

X: Not Available

✓: Available

Field Interface Boards (FIB)

Product Models		MAS-AI-RTD-08-D	MAS-AI-08-D	MAS-AO-08-D	MAS-DI-16-D	MAS-DO-RL-08-D	
Technical Specifications							
	Channels (Max)	8			16	8	
	Accuracy	0.1% FS			NA		
	RTD	RTD (Pt 100)	X	X	X	X	
	Current	X	0-20mA/4-20mA			X	X
	Voltage	X	0/1-5V, 0-10V			X	X
	Input Impedance	>5MΩ	Current I/P: 100Ω; Voltage I/P: >5MΩ			X	X
	RTD Excitation Current	0.88mA	X	X	X	X	
	Stability	0.1% per year			NA		
	Temp-co	≤100ppm			X	X	
	Input Range	Zero (0-100°C) Span (100 to 600°C)	X			DC:12,24,48,110,220V, AC:110,220V	X
	Coil Rating	X			24V DC		
	I/P Connection	Screwed, up to 2.5 mm ² conductor					
	I/P Connection (Optional)	X	X	25 Pin D-Type Plug-in connection through prefab cable	X	X	
LEDs	LEDs	Red LED – Supply Healthy Status	Green LED: Supply Healthy Status; Red LED: Supply Fault Status; RED LED ON for channel fault Indication only for 4-20 mA		Green LED ON for Output ON	RED LED ON Coil ON	
	Types	1 to 5V@≥250K, 4-20mA@750Ω	0/4-20mA@750ΩMax, 0/1-5V@1KΩmin, 0-10V @3KΩmin		Sink / Source	Potential Free	
Output	No of Output	8			16	8	
	O/P Connection	Screwed, up to 2.5 mm ² conductor			20 Pin FRC connection through prefab cable	Screwed, up to 2.5 mm ² conductor	
	O/P Connection (Optional)	X	25 Pin D-Type Plug-in connection through prefab cable	X	X	X	
Relay Output	Relay Nos	X	X	X	X	Relay- SPST-NO, Plug-in type	
	Contact Rating	X	X	X	X	5A at 250VAC , 30VDC	
TPS (CL)	NA	24 V DC (30mA)	NA	NA	NA	NA	
Physical Dimension	Size - mm	180(H) X 90(W) X 75(D)	225(H) X 90(W) X 90(D)		200(H) X 90(W) X 60(D)	185(H) X 90(W) X 72(D)	
	Mounting	Din Rail 35mm					
	Profile Material	PVC					
Power Supply	Voltage Supply	18-36 V DC ±10%	18-36 V DC ±10%			X	
	Power Consumption	<4W	<18VA	<12VA	<4W	0.53W/ Relay	
	Fuse Rating	2A Fast Blown			X	5A Fast Blown 250VAC	
Calibration Z/S Adjustment	✓			X			
Isolation	500V AC - 2 Port	1500V AC-3 Port			1500V AC-2 Port		

O: Optional

X: Not Available




✓: Available

Temperature Transmitters

Product Models		TT7S10	TT7S10-H	TT7S11	UT-94
Technical Specifications	Channels (Max)	1			
	Resolution	16 Bit			17 Bit
	Accuracy	0.1 % of FS			
	Sampling Speed	300 mSec			50 mSec
	Thermocouple	E, J, K, T, B, R, S, N			
	RTD	Pt100			
	Resistor Input	0 - 2500 Ω			0 - 2000 Ω
	Current	0/4-20 mA			
	Voltage	0-75 mV/0-500 mV			-10-500mV/ 0-10V/ 0.4-2V/ 1-5V/ 0-5V
	Input Impedance	>1 MΩ			
	Stability	0.1% / year			
	Temp-co	150 ppm	150 ppm	100 ppm	150 ppm
	Display	7-Segment (4 Digits)	X	X	X
Resolution		X	X	X	0.1/1.0 °C
Key	X	X	X	3	
Analog Output	Accuracy	0.1% of FS			0.25% of FS
	Types	4-20 mA		0/4-20mA, 1-5V, 0-10V	
	Number of output	1		1 or 2	
Relay	Relay Nos	X	X	X	2
	Contact Rating	X	X	X	2A/230V AC
Serial Comm.	RS485	X	X	X	O
	Protocol	X	X	X	Modbus RTU
	Speed (bps)	X	X	X	4800,9600,19200
Rx o/p	Load Resistance	X	X	Current O/P: ≤750 Ω, Voltage O/P: ≥4 KΩ	
TPS (CL)	X	X	X	24 V DC (30 mA)	
Power Supply	Voltage Supply	X	X	18-36V DC (O)	85-265V AC 18-36V DC (O)
	Loop Powered	Loop (7.5-36V DC)			X
	Power Consumption	NA	NA	< 3 W	< 10 W
Physical Dimension	Size - mm (H X W)	12.5 x 99	28(H) x 46(D)	122.5 x 75	55 x 75
	Depth - mm	115	28	110	
	Mounting	35mm Din- Rail mounting	Din B- Head or larger	35mm Din- Rail mounting	
	DIN width (mm)	12.5	X	22.5	55
	Terminal	Screw Type			
Isolation	Input to Logic	X	X	X	1500VAC for 1 min
	Logic to RS485	X	X	X	1500VAC for 1 min
	Rs485 to Input	X	X	X	1500VAC for 1 min
	Isolation	1500V AC			
Special Fun.	Square Root	X	X	X	✓
	Configuration S/W	mTRAN			X

O: Optional
X: Not Available
✓: Available

Humidity Transmitters

Product Models		HT 7 S00	HT 7 S10	HT 7 S11
Technical Specifications				
	Channels (Max)	1		
Analog Input	Accuracy	± 2 %RH (0 to 90 %), ± 3 %RH (90 to 100 %) for RH	± 2 %RH (0 to 90 %), ± 3 %RH (90 to 100 %) for RH ± 0.2% of FS for Temperature	
	Stability	± 1 %RH typical at 50 %RH in 5 years		
	Temp-co	±0.007% RH/°C @ 0% RH 0.22% RH/°C @ 100 % RH (<1% RH effect typical in occupied space systems above 15 °C (59 °F))		
	Repeatability	± 0.6 %RH		
Analog Output	Types	4-20mA for RH	4-20mA for RH, Pt100(3W) for Temp	4-20mA for RH, 4 - 20mA for Temp
	No Of Output	1	2	
Physical Dimension	Size - mm (H X W)	80 x 82 (W + 160 mm for duct mount)		
	Depth - mm	55		
	Mounting	Wall or Duct Mounting		
	IP Rating	IP65		
	Terminal	Screw Type		
	Loop Powered	Loop (10-35V DC)		
	Hysteresis	± 1.3 %RH of Operating humidity span		

✓: Available X: Not Available O: Optional

Why Masibus



Process Domain



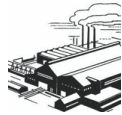
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