

Input Registers (Read-Only Parameters)														
Parameter	MODBUS Address	Values												
Process Value	1561 to 1564 (4 Channels)	<table><tr><th>Value</th><th>PV Error Type</th></tr><tr><td>-32768</td><td>Under Range</td></tr><tr><td>+32752</td><td>Over Range</td></tr><tr><td>+32767</td><td>Sensor Open</td></tr></table>	Value	PV Error Type	-32768	Under Range	+32752	Over Range	+32767	Sensor Open				
	Value		PV Error Type											
-32768	Under Range													
+32752	Over Range													
+32767	Sensor Open													
	1561 to 1568 (8 Channels)													
Alarm-1 Status	1577	<table><tr><th>Bit 15</th><th>...</th><th>Bit 7</th><th>...</th><th>Bit 1</th><th>Bit 0</th></tr><tr><td colspan="6"></td></tr></table> (n = 1, 2, 3, 4) Alarm-n Status for Channel-1 Alarm-n Status for Channel-2 Alarm-n Status for Channel-8	Bit 15	...	Bit 7	...	Bit 1	Bit 0						
Bit 15	...		Bit 7	...	Bit 1	Bit 0								
														
Alarm-2 Status	1578													
Alarm-3 Status	1579													
Alarm-4 Status	1580	<table><tr><th>Bit Value</th><th>Status</th></tr><tr><td>0</td><td>Alarm OFF</td></tr><tr><td>1</td><td>Alarm ON</td></tr></table> For 4 Ch Version (AIMS Plus-4X), ignore Bit-4 to Bit-15 For 8 Ch Version (AIMS Plus-8X), ignore Bit-8 to Bit-15	Bit Value	Status	0	Alarm OFF	1	Alarm ON						
Bit Value	Status													
0	Alarm OFF													
1	Alarm ON													
Ambient Temperature	82	Signed integer values from -30000 to +30000 representing the measured Ambient Temperature through the semi-conductor sensor mounted on the Module. The measured value is always in °C with 0.1 resolution. For example, 30.0°C is represented as 300.												

Holding Registers (Read / Write Parameters)																																																																				
Parameter	MODBUS Address	Settings (Default Value)																																																																		
Input Type	83 to 86 (4 Channels)	Applicable for Input Type TC / RTD Pt100 / V / mV / mA <table><thead><tr><th>Value</th><th>Type</th></tr></thead><tbody><tr><td>0</td><td>Type J Thermocouple</td></tr><tr><td>1</td><td>Type K Thermocouple</td></tr><tr><td>2</td><td>Type T Thermocouple</td></tr><tr><td>3</td><td>Type R Thermocouple</td></tr><tr><td>4</td><td>Type S Thermocouple</td></tr><tr><td>5</td><td>Type B Thermocouple</td></tr><tr><td>6</td><td>Type N Thermocouple</td></tr><tr><td>7</td><td>Type E Thermocouple</td></tr><tr><td>8</td><td>RTD Pt100, 3-wire</td></tr><tr><td>9</td><td>0 to 20 mA</td></tr><tr><td>10</td><td>4 to 20 mA</td></tr><tr><td>11</td><td>0 to 80 mV</td></tr><tr><td>12</td><td>Reserved (Default: 0 to 80 mV)</td></tr><tr><td>13</td><td>0 to 1.25 V</td></tr><tr><td>14</td><td>0 to 5 V</td></tr><tr><td>15</td><td>0 to 10 V</td></tr><tr><td>16</td><td>1 to 5 V</td></tr><tr><td>17</td><td>0 to 160 mV</td></tr><tr><td>18 to 20</td><td>Reserved (Default: 0 to 160 mV)</td></tr><tr><td>21</td><td>RTD Pt1000, 3-wire</td></tr></tbody></table> (Default : 0 to 10 V) Applicable for Input Type RTD Pt100 <table><thead><tr><th>Value</th><th>Type</th></tr></thead><tbody><tr><td>0</td><td>RTD Pt100, 3-wire (This is a Read Only parameter)</td></tr></tbody></table> Applicable for Input Type TC / mV <table><thead><tr><th>Value</th><th>Type</th></tr></thead><tbody><tr><td>0</td><td>Type J Thermocouple</td></tr><tr><td>1</td><td>Type K Thermocouple</td></tr><tr><td>2</td><td>Type T Thermocouple</td></tr><tr><td>3</td><td>Type R Thermocouple</td></tr><tr><td>4</td><td>Type S Thermocouple</td></tr><tr><td>5</td><td>Type B Thermocouple</td></tr><tr><td>6</td><td>Type N Thermocouple</td></tr><tr><td>7</td><td>Type E Thermocouple</td></tr><tr><td>8</td><td>0 to 80 mV</td></tr></tbody></table> (Default : Type K)	Value	Type	0	Type J Thermocouple	1	Type K Thermocouple	2	Type T Thermocouple	3	Type R Thermocouple	4	Type S Thermocouple	5	Type B Thermocouple	6	Type N Thermocouple	7	Type E Thermocouple	8	RTD Pt100, 3-wire	9	0 to 20 mA	10	4 to 20 mA	11	0 to 80 mV	12	Reserved (Default: 0 to 80 mV)	13	0 to 1.25 V	14	0 to 5 V	15	0 to 10 V	16	1 to 5 V	17	0 to 160 mV	18 to 20	Reserved (Default: 0 to 160 mV)	21	RTD Pt1000, 3-wire	Value	Type	0	RTD Pt100, 3-wire (This is a Read Only parameter)	Value	Type	0	Type J Thermocouple	1	Type K Thermocouple	2	Type T Thermocouple	3	Type R Thermocouple	4	Type S Thermocouple	5	Type B Thermocouple	6	Type N Thermocouple	7	Type E Thermocouple	8	0 to 80 mV
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8	0 to 80 mV																																																																			
	83 to 90 (8 Channels)																																																																			

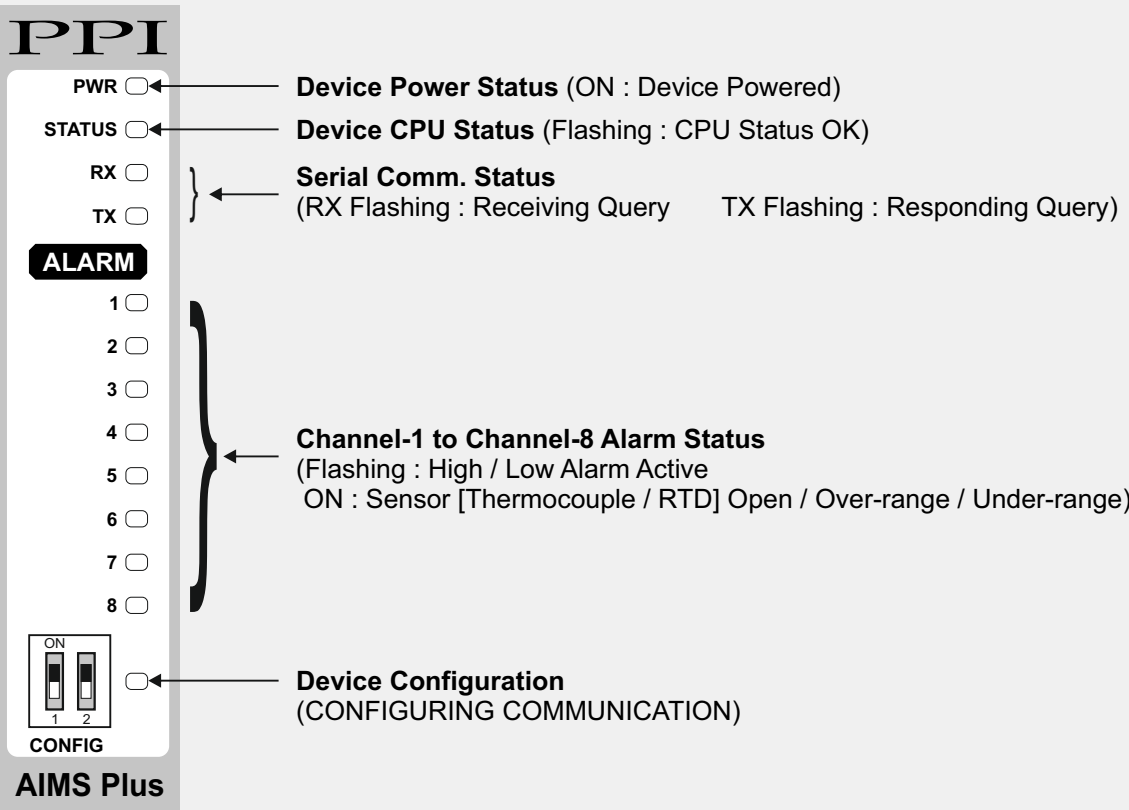
Parameter	MODBUS Address	Settings (Default Value)																											
Input Type	83 to 86 (4 Channels)	Applicable for Input Type V / mA <table><tr><th>Value</th><th>Type</th></tr><tr><td>0</td><td>0 to 20 mA</td></tr><tr><td>1</td><td>4 to 20 mA</td></tr><tr><td>2</td><td>0 to 1.25 V</td></tr><tr><td>3</td><td>0 to 5 V</td></tr><tr><td>4</td><td>0 to 10 V</td></tr><tr><td>5</td><td>1 to 5 V</td></tr></table> (Default : 0 to 10 V)	Value	Type	0	0 to 20 mA	1	4 to 20 mA	2	0 to 1.25 V	3	0 to 5 V	4	0 to 10 V	5	1 to 5 V													
	Value		Type																										
	0		0 to 20 mA																										
	1		4 to 20 mA																										
	2		0 to 1.25 V																										
	3		0 to 5 V																										
	4		0 to 10 V																										
5	1 to 5 V																												
83 to 90 (8 Channels)																													
Temperature Units	99 to 102 (4 Channels)	Conditional Parameter <table><tr><th>Value</th><th>Unit</th></tr><tr><td>0</td><td>°C</td></tr><tr><td>1</td><td>°F</td></tr></table> (Default : °C)	Value	Unit	0	°C	1	°F																					
	Value		Unit																										
	0		°C																										
1	°F																												
99 to 106 (8 Channels)																													
DC Resolution	115 to 118 (4 Channels)	Conditional Parameter <table><tr><th>Value</th><th>Resolution</th></tr><tr><td>0</td><td>1</td></tr><tr><td>1</td><td>0.1</td></tr><tr><td>2</td><td>0.01</td></tr><tr><td>3</td><td>0.001</td></tr><tr><td>4</td><td>0.0001</td></tr></table> (Default : 1 Unit for DC Linear input & 0.1 for Thermocouple & RTD)	Value	Resolution	0	1	1	0.1	2	0.01	3	0.001	4	0.0001															
	Value		Resolution																										
	0		1																										
	1		0.1																										
	2		0.01																										
	3		0.001																										
	4		0.0001																										
115 to 122 (8 Channels)																													
Signal Low	501 to 504 (4 Channels)	Conditional Parameter <table><tr><th>Input Type</th><th>Settings</th><th>Default</th></tr><tr><td>0 to 20 mA</td><td>0.00 to Signal High</td><td>0.00</td></tr><tr><td>4 to 20 mA</td><td>4.00 to Signal High</td><td>4.00</td></tr><tr><td>0 to 80 mV</td><td>0.00 to Signal High</td><td>0.00</td></tr><tr><td>0 to 160 mV</td><td>0.0 to Signal High</td><td>0.0</td></tr><tr><td>0 to 1.25 V</td><td>0.000 to Signal High</td><td>0.000</td></tr><tr><td>0 to 5 V</td><td>0.000 to Signal High</td><td>0.000</td></tr><tr><td>0 to 10 V</td><td>0.00 to Signal High</td><td>0.00</td></tr><tr><td>1 to 5 V</td><td>1.000 to Signal High</td><td>1.000</td></tr></table>	Input Type	Settings	Default	0 to 20 mA	0.00 to Signal High	0.00	4 to 20 mA	4.00 to Signal High	4.00	0 to 80 mV	0.00 to Signal High	0.00	0 to 160 mV	0.0 to Signal High	0.0	0 to 1.25 V	0.000 to Signal High	0.000	0 to 5 V	0.000 to Signal High	0.000	0 to 10 V	0.00 to Signal High	0.00	1 to 5 V	1.000 to Signal High	1.000
	Input Type		Settings	Default																									
	0 to 20 mA		0.00 to Signal High	0.00																									
	4 to 20 mA		4.00 to Signal High	4.00																									
	0 to 80 mV		0.00 to Signal High	0.00																									
	0 to 160 mV		0.0 to Signal High	0.0																									
	0 to 1.25 V		0.000 to Signal High	0.000																									
	0 to 5 V		0.000 to Signal High	0.000																									
	0 to 10 V		0.00 to Signal High	0.00																									
1 to 5 V	1.000 to Signal High	1.000																											
501 to 508 (8 Channels)																													
Signal High	517 to 520 (4 Channels)	Conditional Parameter <table><tr><th>Input Type</th><th>Settings</th><th>Default</th></tr><tr><td>0 to 20 mA</td><td>Signal Low to 20.00</td><td>20.00</td></tr><tr><td>4 to 20 mA</td><td>Signal Low to 20.00</td><td>20.00</td></tr><tr><td>0 to 80 mV</td><td>Signal Low to 80.00</td><td>80.00</td></tr><tr><td>0 to 160 mV</td><td>Signal Low to 160.0</td><td>160.0</td></tr><tr><td>0 to 1.25 V</td><td>Signal Low to 1.250</td><td>1.250</td></tr><tr><td>0 to 5 V</td><td>Signal Low to 5.000</td><td>5.000</td></tr><tr><td>0 to 10 V</td><td>Signal Low to 10.00</td><td>10.00</td></tr><tr><td>1 to 5 V</td><td>Signal Low to 5.000</td><td>5.000</td></tr></table>	Input Type	Settings	Default	0 to 20 mA	Signal Low to 20.00	20.00	4 to 20 mA	Signal Low to 20.00	20.00	0 to 80 mV	Signal Low to 80.00	80.00	0 to 160 mV	Signal Low to 160.0	160.0	0 to 1.25 V	Signal Low to 1.250	1.250	0 to 5 V	Signal Low to 5.000	5.000	0 to 10 V	Signal Low to 10.00	10.00	1 to 5 V	Signal Low to 5.000	5.000
	Input Type		Settings	Default																									
	0 to 20 mA		Signal Low to 20.00	20.00																									
	4 to 20 mA		Signal Low to 20.00	20.00																									
	0 to 80 mV		Signal Low to 80.00	80.00																									
	0 to 160 mV		Signal Low to 160.0	160.0																									
	0 to 1.25 V		Signal Low to 1.250	1.250																									
	0 to 5 V		Signal Low to 5.000	5.000																									
	0 to 10 V		Signal Low to 10.00	10.00																									
1 to 5 V	Signal Low to 5.000	5.000																											
517 to 524 (8 Channels)																													
Range Low	131 to 134 (4 Channels)	Conditional Parameter -30000 to 30000 (Default : 0)																											
	131 to 138 (8 Channels)																												
Range High	147 to 150 (4 Channels)	Conditional Parameter -30000 to 30000 (Default : 1000)																											
	147 to 154 (8 Channels)																												
Offset for PV	163 to 166 (4 Channels) 163 to 170 (8 Channels)	-30000 to 30000 (Default : 0)																											
Alarm-1 Type	179 to 182 (4 Channels) 179 to 186 (8 Channels)	<table><tr><th>Value</th><th>Type</th></tr><tr><td>0</td><td>None</td></tr><tr><td>1</td><td>Process Low</td></tr><tr><td>2</td><td>Process High</td></tr></table> (Default : None)	Value	Type	0	None	1	Process Low	2	Process High																			
	Value		Type																										
0	None																												
1	Process Low																												
2	Process High																												
Alarm-2 Type	243 to 246 (4 Channels) 243 to 250 (8 Channels)																												
	Alarm-3 Type		307 to 310 (4 Channels) 307 to 314 (8 Channels)																										
Alarm-4 Type		371 to 374 (4 Channels) 371 to 378 (8 Channels)																											

Parameter	MODBUS Address	Settings (Default Value)								
Alarm-1 Set-point	195 to 198 (4 Channels) 195 to 202 (8 Channels)	Min. to Max. Range specified for the selected Input Type Refer Table 1 (Default : Min or Max Range depending on the Alarm type)								
Alarm-2 Set-point	259 to 262 (4 Channels) 259 to 266 (8 Channels)									
Alarm-3 Set-point	323 to 326 (4 Channels) 323 to 330 (8 Channels)									
Alarm-4 Set-point	387 to 390 (4 Channels) 387 to 394 (8 Channels)									
Alarm-1 Hysteresis	211 to 214 (4 Channels) 211 to 218 (8 Channels)	1 to 30000 (Default : 20)								
Alarm-2 Hysteresis	275 to 278 (4 Channels) 275 to 282 (8 Channels)									
Alarm-3 Hysteresis	339 to 342 (4 Channels) 339 to 346 (8 Channels)									
Alarm-4 Hysteresis	403 to 406 (4 Channels) 403 to 410 (8 Channels)									
Alarm-1 Inhibit	227 to 230 (4 Channels) 227 to 234 (8 Channels)	<table><tr><th>Value</th><th>Inhibit</th></tr><tr><td>0</td><td>Disable</td></tr><tr><td>1</td><td>Enable</td></tr></table> (Default : Disable)	Value	Inhibit	0	Disable	1	Enable		
Value	Inhibit									
0	Disable									
1	Enable									
Alarm-2 Inhibit	291 to 294 (4 Channels) 291 to 298 (8 Channels)									
Alarm-3 Inhibit	355 to 358 (4 Channels) 355 to 362 (8 Channels)									
Alarm-4 Inhibit	419 to 422 (4 Channels) 419 to 426 (8 Channels)									
Enable Bottom Clipping	435 to 438 (4 Channels) 435 to 442 (8 Channels)	<table><tr><th>Value</th><th>Enable</th></tr><tr><td>0</td><td>No</td></tr><tr><td>1</td><td>Yes</td></tr></table> (Default : No)	Value	Enable	0	No	1	Yes		
Value	Enable									
0	No									
1	Yes									
Bottom Clip Value	451 to 454 (4 Channels) 451 to 458 (8 Channels)	-30000 to 30000 (Default : 0)								
Enable Top Clipping	467 to 470 (4 Channels) 467 to 474 (8 Channels)	<table><tr><th>Value</th><th>Enable</th></tr><tr><td>0</td><td>No</td></tr><tr><td>1</td><td>Yes</td></tr></table> (Default : No)	Value	Enable	0	No	1	Yes		
Value	Enable									
0	No									
1	Yes									
Top Clip Value	483 to 486 (4 Channels) 483 to 490 (8 Channels)	-30000 to 30000 (Default : 1000)								
ADC Sample Time	1557	<table><tr><th>Value</th><th>Type</th></tr><tr><td>0</td><td>146 mS</td></tr><tr><td>1</td><td>79 mS</td></tr><tr><td>2</td><td>45 mS</td></tr></table> (Default : 45 mS for AIMS Plus 4D / 8D versions and 146 mS for other versions.)	Value	Type	0	146 mS	1	79 mS	2	45 mS
Value	Type									
0	146 mS									
1	79 mS									
2	45 mS									

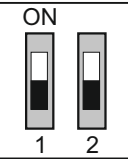
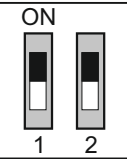
Configuring Communication Parameters																	
Parameter	MODBUS Address	Settings (Default Value)															
Modbus Slave ID	1	1 to 127 (Default : 1)															
Baud Rate	2	<table><tr><th>Value</th><th>Baud Rate</th></tr><tr><td>0</td><td>2400 bps</td></tr><tr><td>1</td><td>4800 bps</td></tr><tr><td>2</td><td>9600 bps</td></tr><tr><td>3</td><td>19200 bps</td></tr><tr><td>4</td><td>38400 bps</td></tr><tr><td>5</td><td>57600 bps</td></tr></table> (Default : 9600 bps)		Value	Baud Rate	0	2400 bps	1	4800 bps	2	9600 bps	3	19200 bps	4	38400 bps	5	57600 bps
Value	Baud Rate																
0	2400 bps																
1	4800 bps																
2	9600 bps																
3	19200 bps																
4	38400 bps																
5	57600 bps																
Parity	3	<table><tr><th>Value</th><th>Parity</th></tr><tr><td>0</td><td>None</td></tr><tr><td>1</td><td>Even</td></tr><tr><td>2</td><td>Odd</td></tr></table> (Default : Even)		Value	Parity	0	None	1	Even	2	Odd						
Value	Parity																
0	None																
1	Even																
2	Odd																

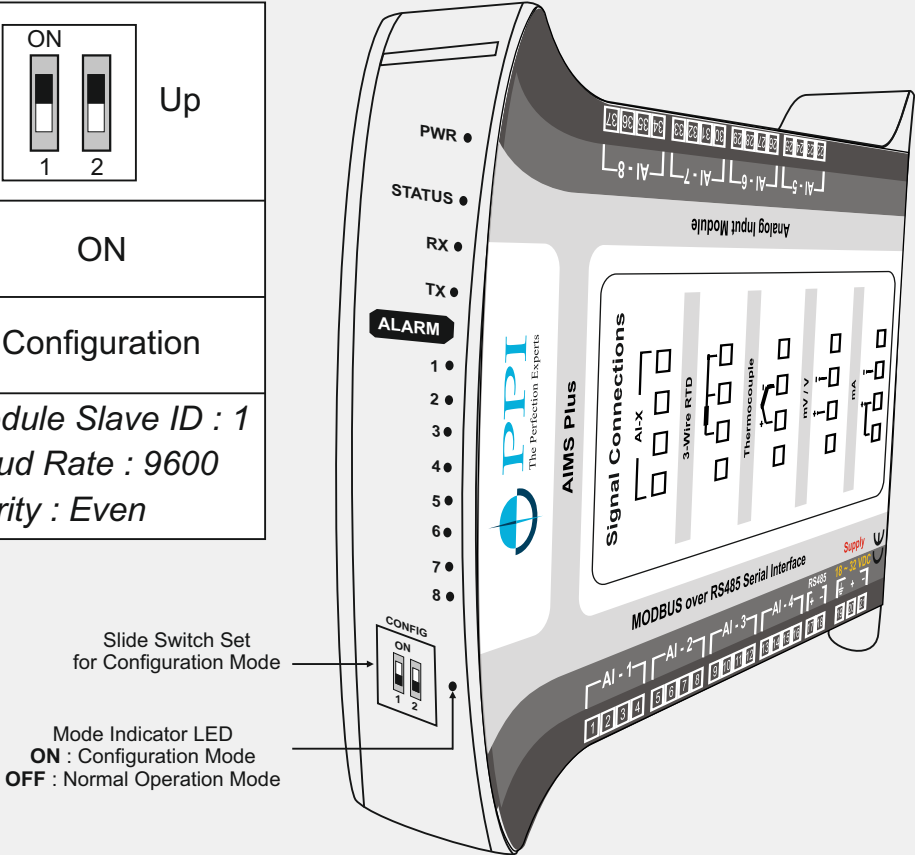
Table 1		
Input Type	Range (Min. to Max.)	Resolution
Type J Thermocouple	0 to +960.0°C / +32.0 to +1760.0°F	0.1 °C / °F
Type K Thermocouple	-200.0 to +1376.0°C / -328.0 to +2508.0°F	
Type T Thermocouple	-200.0 to +387.0°C / -328.0 to +728.0°F	
Type R Thermocouple	0 to +1771.0°C / +32.0 to +3219.0°F	
Type S Thermocouple	0 to +1768.0°C / +32.0 to +3214.0°F	
Type B Thermocouple	0 to +1826.0°C / +32.0 to +3318.0°F	
Type N Thermocouple	0 to +1314.0°C / +32.0 to +2397.0°F	
Type E Thermocouple	-200 to +1000.0°C / -328.0 to +1832.0°F	
2 / 3-wire, RTD Pt100	-199.0 to +850.0°C / -328.0 to +1562.0°F	
2 / 3-wire, RTD Pt1000		
0 to 20mA DC current	-30000 to 30000 units	1 0.1 0.01 0.001 0.0001 Units
4 to 20mA DC current		
0 to 80mV DC voltage		
0 to 160mV DC voltage		
0 to 1.25V DC voltage		
0 to 5.0V DC voltage		
0 to 10.0V DC voltage		
1 to 5.0V DC voltage		

FRONT PANEL

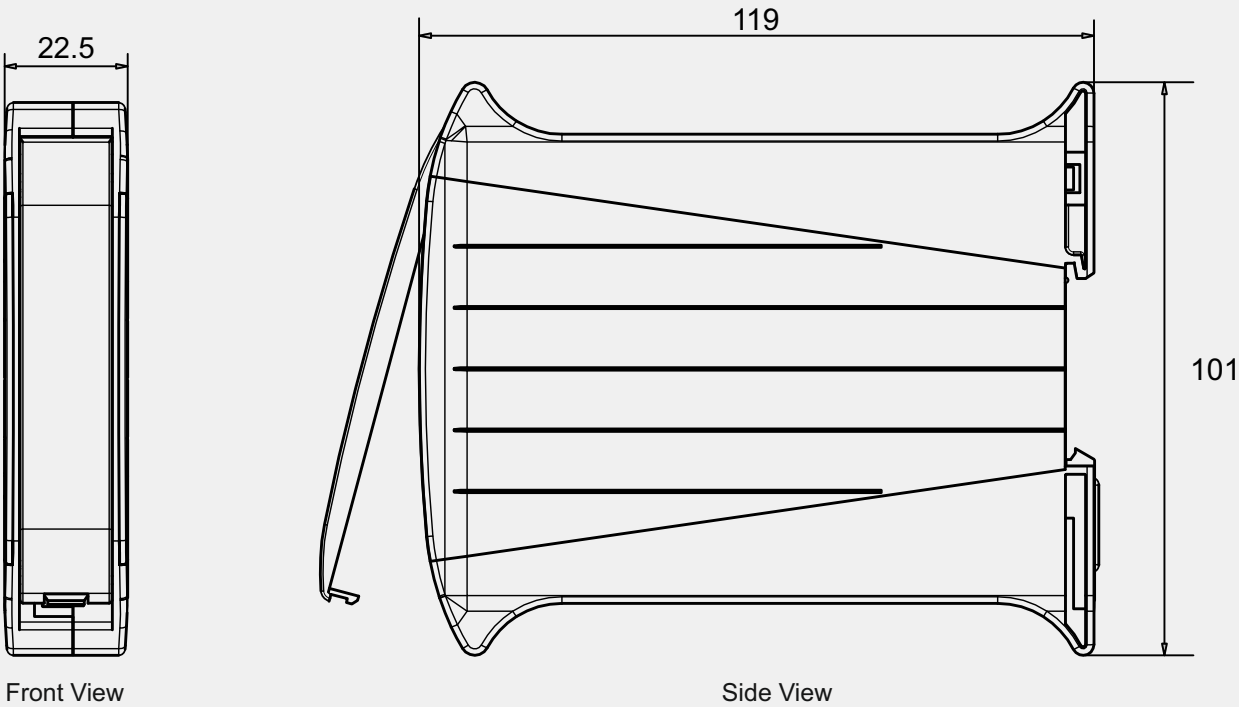


CONFIGURING COMMUNICATION

Switch Position	 Down	 Up
Mode Indicator	OFF	ON
Operation Mode	Normal	Configuration
Communication Parameter Values	User Set values for Module Slave ID, Baud Rate & Parity	Module Slave ID : 1 Baud Rate : 9600 Parity : Even

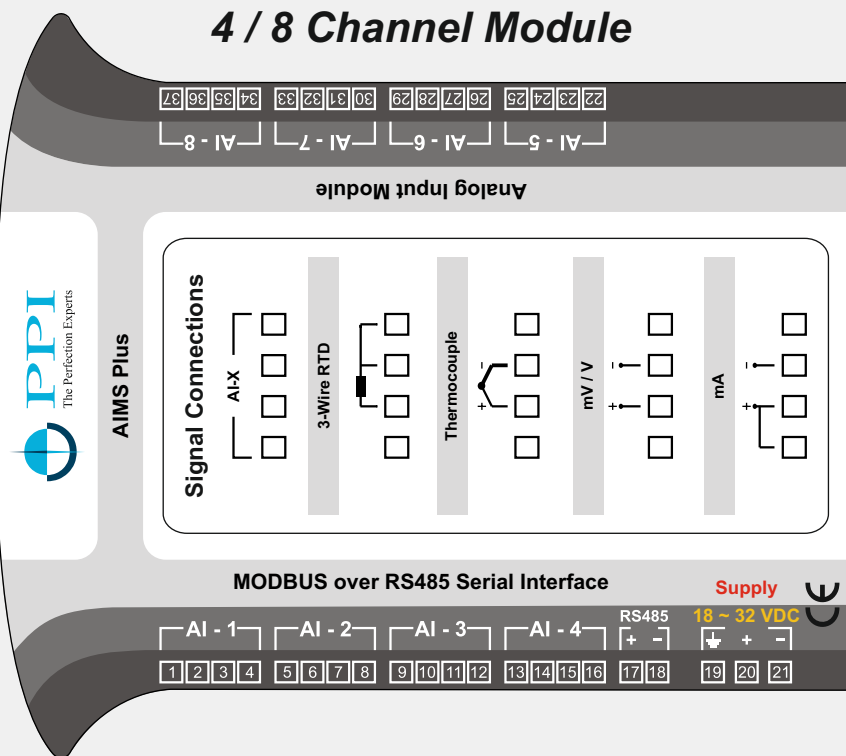


OVERALL DIMENSION



Width (W) : 22.5 mm	Height (H) : 101.0 mm	Depth (D) : 119.0 mm
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ELECTRICAL CONNECTIONS



Note : For 4 Channel Version the connectors from AI-5 to AI-8 are not fitted.