NAPOPC.M2M DA Server

User's Manual

Warranty

All products manufactured by ICP DAS are warranted against defective materials for a period of one year from the date of delivery to the original purchaser.

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1. General Information

1.1 NAPOPC.M2M Introduction

Overview

ICP DAS NAPOPC.M2M is an OPC software package operated as an OPC driver of a HMI or SCADA system. It provides seamless connection from GPRS RTU products (G-4500 RTU, GT-540...) from ICP DAS to SCADA system (InduSoft, Wonderware, iFix, Citec, LabView and etc) following OPC 2.0 Data Access Standards.

By using NAPOPC.M2M OPC server and ICP DAS RTU products not only monitors the data but sends them out in real time to the control center through GPRS or Ethernet Network. Also, by combining a GPS (optional) with G-4500, G-4500 suddenly becomes a tracking system which you can often find out in the car system, marine system, etc.



Application structure of the NAPOPC.M2M DA Server

NAPOPC.M2M Architecture

NAPOPC.M2M OPC server must be applied with M2M RTU Center software. M2M RTU Center is the administrator software to manager GPRS RTU products of ICP DAS. NAPOPC.M2M DA server would exchange data with M2M RTU software. As NAPOPC.M2M OPC server is running, M2M RTU Center would be executed automatically.



• Support Hardware

Product Type	Description
G-4500-SIM300 CR	Tri-band M2M Mini-Programmable Automation Controller (RoHS)
G-4500D-SIM300 CR	Tri-band M2M Mini-Programmable Automation Controller with LCD display (RoHS)
G-4500P-SIM300 CR	Tri-band M2M Mini-Programmable Automation Controller with GPS function (RoHS)
G-4500PD-SIM300 CR	Tri-band M2M Mini-Programmable Automation Controller with LCD display and GPS function (RoHS)
G-4500-SIM340 CR	Quad-band M2M Mini-Programmable Automation Controller (RoHS)
G-4500D-SIM340 CR	Quad-band M2M Mini-Programmable Automation Controller with LCD display (RoHS)
G-4500P-SIM340 CR	Quad-band M2M Mini-Programmable Automation Controller with GPS function (RoHS)
G-4500PD-SIM340 CR	Quad-band M2M Mini-Programmable Automation Controller with LCD display and GPS function (RoHS)
GD-4500-SIM340 CR	Quad-band M2M Mini-Programmable Automation Controller (RoHS)
GD-4500D-SIM340 CR	Quad-band M2M Mini-Programmable Automation Controller with LCD display (RoHS)
GD-4500P-SIM340 CR	Quad-band M2M Mini-Programmable Automation Controller with GPS function (RoHS)
GD-4500PD-SIM340 CR	Quad-band M2M Mini-Programmable Automation Controller with LCD display and GPS function (RoHS)

1.2 Software Installation of NAPOPC.M2M DA Server

The software Installation for NAPOPC.M2M DA Server is demonstrated in the following descriptions. After finishing the procedure, the software, demos and manual will be in your PC.

The software of NAPOPC.M2M DA Server can be used in Windows 2000 / XP environments. For these Windows operation systems, the recommended installation procedure is given as follows:

- Step 1: You can get the Installing software "NAPOPC.M2MServer.exe"
- Step 2: Please double-click "NAPOPC.M2MServer.exe" to run the setup.
- Step 3: The first screenshot of setup is shown as follows, please press "Next" button to continue the process.

NAPOPC M2M DA Server Se	tup 🛛
	Welcome to the NAPOPC.M2M DA Server Ver.1.1 for Windows XP Steup This wizard will install the NAPOPC.M2M DA Server Ver.1.1 on your computer. Click Next to continue, or Cancel to exit Setup Wizard.
	< <u>B</u> ack <u>Next</u> Cancel

Step 4: After confirm the Installation path, please press "Next" button.



Step 5: Please press "Install" button. The setup process will start.



Step 6: The setup process is running.

NAPOPC.M2M DA Server Setup	
Setup Status	N
NAPOPC.M2M DA Server Setup is performing the requested operations.	
Installing	
78%	
InstallShield	
	(Cancel)

Step 7: When finishing the setup process of NAPOPC.M2M DA Server, it will automatically install the OPC Data Access 2.0 Components software.



Step 8: Please press "Next" button to start setup process.



Step 9: Please press "Finish" button to finish the setup process.



The installing folder is in the following directory:

"C:\ICPDAS\ICP DAS OPC Suite\NAPOPC.M2M"

Step 10: Launch the OPC server from the start menu [Start]-[Programs]- [ICPDAS]-[IPC DAS OPC Suite]-[NAPOPC.M2M].

The program files picture is shown as follows.

abcd								
Internet	🎯 Set Program Access and Defaults							
河 Internet Explorer	💖 Windows Catalog							
E-mail	🌯 Windows Update		۲					
	m Accessories	•						
Set Program Access .	🛅 Games	×						
	🛅 GT-530 Utility	×						
G-4500_RTU_Utility	🛅 GT-540-OEM1 Utility	×						
	💼 ICPDAS	×		G-4500_RTU_Utility	•			
	🛅 Startup	×	G	ICP DAS OPC Suite	•	🛗 NAPOPC.M2M	×	WAPOPC.M2M
Nindows Media Playe	im WinRAR	×	•					TU_Center
	🥭 Internet Explorer							
🦞 Paint	💓 MSN Explorer							
	🇐 Outlook Express							
Windows Messenger	💫 Remote Assistance							
	📀 Windows Media Player							
All Programs 🜔	🔏 Windows Messenger							
	Log Off 🛛 🔯 Turn Off Com	pute	er					

1.3 NAPOPC.M2M DA Server Interface Introduction

ICPDAS NAPOPC.M2M DA Server - max.tdb				
<u>File Add Edit View Options H</u> elp				
New Open Save Save as Device Group Tag	Produce Search Monitor Debug Cut Copy	Paste Delete Preview Print Help	Web Mail About E	jo İxit
⊟- 1 GT-540_0	Name Device Type Location	Channel Type Channel	Value	Description
Image: Hard State State Image: Hard State <td< td=""><td>4⊕DO M-7080B 1</td><td>Digital Output *</td><td>0 (encertain)</td><td></td></td<>	4⊕DO M-7080B 1	Digital Output *	0 (encertain)	
Ready			DO has 1	Tags //

Software main screen

1.3.1 Screen Features - File

All configuration settings can be saved into configuration file by clicking the "File/ Save" or "File/ Save As ..." menu item. The OPC server will automatically load the last configuration file with every launch.

2 tilb 2 max.tilb.tilb 3 max.tilb 4 DEMO.tilb Exit Alt+F4	New Or Save Save As	Ctrl+N Ctrl+O Ctrl+S Ctrl+L	ave as	Device	Group	Tag
Exit Alt+F4	2 tdb 2 max.tdb. 3 max.tdb 4 DEMO.td	td b l b				
	Exit	Alt+F4				

1. New

Clean current project and create a new project

<u>ill</u> <u>E</u> dit	View	Options	Help				на з	d Edit	View	Options	Help			
<u>N</u> ew Onen Save	Ctrl+N Ctrl+O Ctrl+S	ave as	Device	Group	Tag	Prod	New	Open 1	Save	Save as	Jevice	Group	Tag	Pro
Save As	Ctrl+L			N	lame							Ē	Name	
1 a.tdb 2 max.tdb.tdb 3 max.tdb 4 DEMO.tdb														
Exit	Alt+F4													

2. Open

Load old NAPOPC.M2M project.

🜉 ICPDAS NA	POPC.	M2M DA	Server -	a.tdb			🦉 I	CPD/	S NA	POPC.	M2M D.	Server -	a.tdb		
<u>File A</u> dd <u>E</u> dit	t <u>V</u> iew	Options	<u>H</u> elp				File	<u>A</u> dd	Edit	∐iew	Options	<u>H</u> elp			
N Open Save Save As 1 a.tib 2 max.tib tib 3 max.tib 4 DEMO.tib	Cttl+N Cttl+O Cttl+S Cttl+L	ave as	Device	Group	Tag	Prod	N		Open	Ssee	Save as	Device	Group	Tag Tag	Pn
Exit	Alt+F4														

Select the project file you want, and then open.

Open		? 🛛
Look in:	New Folder	• 🔁 🖆 📰 •
File name: Files of type:	Untitled Tag Configuration Files (*.tdb)	Open Cancel

3. Save



4. Save As...

Save NAPOPC.M2M DA Server project as a new one



Give a new file name, and then save.

Save As	? 🛛
Save in: 🗀 New Folder	- E 🕂 🔳 -
To Untitled.tdb	
File name: Untitled	Save
Save as type: Tag Configuration Files (*.tdb)	Cancel

5. Exit

Click on the "File/ Exit " menu item or the "Exit" Toolbar to exit the

NAPOPC.M2M DA Server.



If some OPC clients are connecting to this server, it will show this warning message box to remind user to disconnect the OCP clients before closing the server.



1.3.2 Screen Features – Add

1. New Device

Create new device in NAPOPC.M2M DA Server



⊙ M2M Modules	OK
Module Setting Module G-4500 -	
Location 1 (1~65535)	

Device Name:

Please input your Device name

Module:

Select your connection module like G-4500 or GT-540...etc.

Location:

Please input the station ID of your module. It can't repeat the same station ID in the RTU Center. The station ID must match your connection module. (Range: $1 \sim 65535$)

2. New Group

Create new group in NAPOPC.M2M DA Server



3. New Tag

Create new tag in the NAPOPC.M2M DA Server

🚰 ICPDAS NAP	OPC.M2M DA Server - a	a, td b	🜉 ICPDAS NAPOPC	.M2M DA Server	- a.tdb
<u>File A</u> dd <u>E</u> dit	<u>V</u> iew Options <u>H</u> elp		<u>File Add Edit View</u>	Options <u>H</u> elp	
	🖻 🝙 🍠		New Device	Ctrl+D	
New Open	Save Save as Device	Group Tag Tod	Nev New <u>T</u> ag	Ctrl+T Jev-	Group Tag Pro
		Name	Search <u>M</u> odules	Ctrl+M	Name
	Tag Properties				
	Settinger Devel 9 13	n.a. 1			
	Keau &	/1100			
	Name 🔤	1			
	Description				
	Device Type —		· · · · · · · · · · · · · · · · · · ·		
	⊙ Host	Туре	Analog Input	_	
		Channel	0		
	O.M.7vvv	Madula	M-7016		
	U in their	Module	J		
		Location	1 (1~247)		
		Туре	Analog Input	~	
		Channel	0		
		🖂 únto	Scaling Enable		
		₩ Au	Scoung Englis		

Name:

Any "Tag Name" may be used, but avoid names with spaces or punctuation such as "|!.,". The clients will use the "Device Name" and "Tags" to access its value. Hence the "Tag Name" cann't be a duplicate of another tag in the same group. **Description:**

Users can specify the description text for this tag. This can be blank.

Host Type:

To specify the command to be used for this tag, it can select "Analog Input" or "Analog Output" or "Digital Input" or "Digital Output" or "Bit Input" or "Bit Output" to define the host type.

Host Type	Description
Analog Input	OPC server has received from the device data
	stored in this data item. The data can only be read
Analog Output	Client sends the data to write in this data item, OPC
	server put this data item which extracted from the
	data sent to the device, the client can not read data
	from this data item.
Digital Input	OPC server has received from the device data of all
(All Digital Input	Digital Input channels stored in this data item. The
channels)	data can only be read
Digital Output	Client sends the data of all Digital Output channels
(All Digital	to write in this data item, OPC server put this data
Output channels)	item which extracted from the data sent to the
	device, the client can not read data from this data
	item.
Bit Input	OPC server has received from the device data
(One Digital	stored in this data item. The data can only be read
Input channel)	
Bit Output	Client sends the data to write in this data item, OPC
(One Digital	server put this data item which extracted from the
Output channel)	data sent to the device, the client can not read data
	from this data item.

Host Channel:

Specify the channel number to be used for this tag according to the device. If users select "Digital Input" or "Digital Output", the "Host Channel" will be an invalid parameter.

miga Kean or while			
Name Tag4			
Description			
O Host	Туре	Analog Input	Ψ
	Channel	0	
⊙ M-7xxx	Module	M-7016	•
	Location	1 (1~2	47)
	Туре	Analog Input	•
	Channel	0	
	🗹 Auto	Scaling Enable	

M-7000 Module:

Select your Modbus module. If your Modbus module the list, you can select "Custom" to define the parameters of the Modbus device.

M-7000 Location:

Select the location of your Modbus module. (Range: 1 ~ 247)

M-7000 Type:

To specify the command to be used for this tag, it can select "Analog Input" or "Analog Output" or "Digital Input" or "Digital Output" or "Bit Input" or "Bit Output" to define the host type.

Host Type	Description
Analog Input	OPC server has received from the device data
	stored in this data item. The data can only be read
Analog Output	Client sends the data to write in this data item, OPC
	server put this data item which extracted from the
	data sent to the device, the client can not read data
	from this data item.
Digital Input	OPC server has received from the device data of all
(All Digital Input	Digital Input channels stored in this data item. The
channels)	data can only be read
Digital Output	Client sends the data of all Digital Output channels
(All Digital	to write in this data item, OPC server put this data

Output channels)	item which extracted from the data sent to the
	device, the client can not read data from this data
	item.
Bit Input	OPC server has received from the device data
(One Digital	stored in this data item. The data can only be read
Input channel)	
Bit Output	Client sends the data to write in this data item, OPC
(One Digital	server put this data item which extracted from the
Output channel)	data sent to the device, the client can not read data
	from this data item.

M-7000 Channel:

Specify the channel number to be used for this tag according to the device. If users select "Digital Input" or "Digital Output", the "Host Channel" will be an invalid parameter.

M-7000 Auto Scaling Enable:

When users use Modbus module of ICP DAS, users can select whether transform hex. value into physical value or not.

4. Search Modules

Search all devices in PC. This function can scan all devices in PC automatically and users don't need to configure the devices, groups and tags manually.



Click "Search" to start this procedure.

M2M Device	🗹 Clear Modules
☑ TCP Interface	
Status: Static	



After "Search" modules.

1.3.3 Screen Features – Edit

1. Cut

Cut the tag in NAPOPC.M2M DA Server



2. Copy

Copy the Tag in NAPOPC.M2M DA Server



3. Paste

Paste the Tag in NAPOPC.M2M DA Server



4. Delete

Delete the Device / Group / Tag in NAPOPC.M2M DA Server



5. Properties

Clicking the "Properties" menu item or double click the Device or Tag to edit the Device's or Tag's properties in NAPOPC.M2M DA Server





Configure M2M Device (for the detail, refer to "1.3.2")

Configure M2M Tag (for the detail, refer to "1.3.2")

ettings Read & Write			
Name Tagl			
Description			
Device Type		4 <u></u>	
O Host	Туре	Analog Input	-
	Channel	0	
О М-7хох	Module	M-7016	-
	Location	1 (1~247)	
	Туре	Analog Input	~
	Channel	0	
	🗹 Auto	Scaling Enable	
L			

1.3.4 Screen Features – View

ICPDAS NAPOPC.M2M DA Server - max.tdb							
ICEDAS NAPOPC. M2M DA Server - max.tdb File Add Edit Yew Oncions Halp New Open ✓ Monitor Chi+B Group Tag	Produce Search Name Top DO	Monitor Monitor Monitor Monitor Type M-7080B	Cut Copy Location	Paste Delate Preview Channel Type Digital Output	Print Help Channel *	Wab Wab Value 0 (uncertain)	Exit Description
E = M-7051 - = DI - = DI - = DO - = DO - = M-7045 - = DO - = M-7016 - = AIs - = AO - = DI							

Monitor :

Use the "Monitor" function to see values of tags by checking the "View/

Monitor" menu item. Uncheck the item to stop monitoring.

Status Bar :

To show or not show the Status Bar

Tool Bar :

To show or not show the Tool Bar

1.3.5 Screen Features – Help

w Options He	lp User's Manual ICP DAS O <u>n</u> line	Fl	.	* 0		Ø			
ve savers	Meal to ICP DAS	<u>1</u>	Location	Channel Type	Channel	Fieview	Value	Desi	ription
	About NAPOPC M2M DA	A Server		Bit Output	0				
	Ch01	Host		Bit Output	1				
	S ChUz	Host		Bit Output	2				

User's Manual / Help:

Click on the "Help/User's Manual" menu item or the "Help" Toolbar refer to the user's manual.

ICP DAS Online :

Click on the "Help/ ICP DAS Online" menu item or the "Wed" Toolbar to browse our web.

Mail to ICP DAS :

Click on the "Help/ Mail ICP DAS" menu item or the "Mail" Toolbar to contact us by Outlook Express.

About NAPOPC.M2M DA Server :

Click on the "Help/ About NAPOPC.M2M DA Server" menu item or the About Toolbar to see the "About NAPOPC. M2M DA Server" dialog box.



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2. Quick Start

2.1 Operational Guidelines for the initial

- Step 1. Install the NAPOPC.M2M DA server
- Step 2. Launch the OPC server by executing
 - " C:\ICPDAS\ICP DAS OPC Suite\NAPOPC.M2M \ NAPOPC.M2M.exe ".



Step 3. Search Modules. Refer to the "1.3.2 Screen Features – Add - Search Modules" to search devices in the PC.

arch Modules	
M2M Device	🗹 Clear Modules
Status: Static	



- Step 4. Save the Configuration. Save the configuration by clicking "File/Save" menu item.
- Step 5. Close OPC server. Close NAPOPC.M2M DA server by clicking "File/Exit" menu item.
- Step 6. Connect to NAPOPC.M2M DA server. Users can run the OPC client program to connect to the OPC server by linking the name of "NAPOPC.M2M".
- Step 10. When an OPC Client connects to "NAPOPC.M2M", the NAPOPC.M2M DA server will be executed automatically and minimized to the system tray.



2.2 Connect to NAPOPC.M2M DA Server

This OPC is defined by the OPC Foundation, so any client program supporting OPC can connect to the NAPOPC.M2M server.

2.2.1 FactorySoft OPC Client Program

Step 1: Click on the "OPC/ Connect..." menu item.

Step 2: Select the "NAPOPC.M2M (NAPOPC.M2M DA Server)" OPC server.

Server Name	OK
NAPOPC.M2M	Cancel
Server Node ("Werver" o	or "server" or "www.server.com")
	 Refresh List
Available servers	○ 1.0 ④ 2.0
NAPOPC M2M (NAPO	PC M2M DA Server
NAPOre.svi.1 (Mile	PC_ST DA server)

- Step 3: Click on the "OPC/ Add Item" menu item to add existing tags.
- Step 4: Browse the tree list, then double-click on the tag or click the Add Item button to add.

Add Item		
Access Path Item Name G-450		Add Item
Browse items:	Filter: *	Item Properties
Data Type © Use native type © Bool © Short	C Long C Double C String	

Step 5: Click on the "Done" button to close.

Step 6: The window shows the values of selected tags.

TAPOPC.M2M - FactorySoft OPC	Client		
Eile OPC View Help			
8			
2 3480 (3000) 64800 (3000) 64800 (0.447500) 64800 (0.447500)	Yahu Bad Bad Bad Bad Bad	Time 00224701 89 59 50 00224701 89 59 40 0025470 18 59 40 0022470 18 59 59 54 0025510 18 59 54 0022510 18 59 54 0025510 18 59 54	
Ready			1

2.2.2 InduSoft

Step 1: Before using the InduSoft OPC Client module, you need to install and configure the NAPOPC.M2M DA server in the machines you will run it.

ICPDAS NAPOPC.M2M DA Server - max.tdb		
<u>File A</u> dd <u>E</u> dit <u>V</u> iew Options <u>H</u> elp		
New Open Save Save as Device Group Tag	Produce Search Monitor Debug Cut Copy Patte Delate Proview P	Primit Help Web Meil About Exit
GT-540_0	Name Device Type Location Channel Type	Channel Value Description
Image: Second	₩-/J8UB 1 Digital Output	 U (mosthm)
Ready		DO has 1 Tags

Step 2: Run the InduSoft.



Step 3: In the Studio Workspace window, click the Comm tab, right-click the OPC folder, and click "Insert".

🔥 InduSoft Web Studio - [Display1]					
<u>File Edit View Insert Project Tools</u>	<u>W</u> indow <u>H</u> elp				
1 🏠 🥔 🖬 🖉 🕹 🛍 🗙 🗠		📴 🕎 100% 💽	₩?		14 2
	✓		可且常是王	= 11 0 % %	1
Workspace ×	Display1				
Drivers					and and a state and and and and a state and a state and

Step 4: Click on the Server Identifier: drop-down menu and select the

"NAPOPC.M2M",	or key in	"NAPOPC.M2M".
---------------	-----------	---------------

InduSoft Web Studio - [OPCCL	001.OPC]			
<u>File Edit View Insert Project To</u>	ols <u>W</u> indow <u>H</u> elp			
16 80 1 1 1 1 1 1	- 4 - * 2 6 9	iąį 100% 🗸 😽	🖌 🖌 🖬 🎲 i 🕨 i	- 🖳 🧰 🥐 🚍
+ → ⊗ @ A	•		H王二二10 福福県県111日	
urkspace 🔹	× OPE OPCCL001.OPC			
Droject APPL APP Droject APPL APP Droject APPL APP OPC OPC TCF/IP DDE	Description: Read Update Rate (ms) Hemore Server Hame	Server Identifier: Disable NAPDPC M2M V Percent Deadband Status: Percent Deadband Status Percent Percent Percent Percent Status Percent Percent Percen	e Item column	
		Tag Name	Item	Scan
	1 GT540_M7080_Cour	nter0		Always
	*			Always

The configuration table for OPC has the following entries:

Server Identifier: this field should contain the name of the server you want to connect to. If the server is installed in the computer, its name can be selected through the list box.

Disable: this field should contain a tag or a constant. If its value is different from zero, the communication with the OPC server is disabled.

Update Rate: this field indicates how often the server will update this group in milliseconds. If it is zero, the server will use the fastest practical rate.

Tag Name: these fields should contain the tags linked to the server items.

Item: these fields should contain the name of the server's items

- Step 5: In the first cell of the Tag Name column type the tag name created in database.
- Step 6: Right-click the first cell of the item column and select "OPC Browser" in the pop-up menu to get the OPC browser window.

💑 InduSoft Web Studio - [OPCCL001.	OPC]	
<u>File Edit View Insert Project Tools</u>	<u>W</u> indow <u>H</u> elp	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 🖨 💽 🧱 🗖 🏙 🖻 🔯 100% 🗹 💦	1 💽 🙀 🕹 🗐 🌆 1 🕨 = 🖳 🍘 🥔 🖉 🚍
← → ⊗ 健 🕼	💌 🕜 👘 💷 🗇 🎗 🖂	E 뉴 11 0 웹 웹 및 및 31 점
Workspace 🔹 🗙	OPC OPCCL001.OPC	
Project: APPL APP Drivers OFC OFC OFC DDE DDE	Description: Server Identifier: Disable: NAPOPC.M2M Image: Constraint of the server is a s	column
	Tag Name	Item
	1 GT540_M7080_Counter0	OPC Browser
		Image: Constraint of the second se

Step 7: Select a tag in the tree-view, and click the "OK" button or double click the tag to add this one.



Step 8: Repeat the step 7 ~ 11 to add more tags.

Step 9: From the project select status, then select the "OPC Client Runtime" in "Execution Tasks" tab. Click on the Startup button to setup the Startup as Automatic.

Task	Status	Startup	^	
📑 Background Task		Automatic		<u>S</u> tart
📸 Database Spy		Manual		
DDE Client Runtime		Manual		Stop
The DDE Server		Manual		
👬 Driver Runtime		Manual		
🎇 HDA OPC Server		Manual		Startup
🛤 Log Win		Manual		
ODBC Runtime		Manual		
CPC Client Ruptime		Automatic		
🐨 Studio Scada OPCServer		Manual	~	
2		>	_	

Step 10: Run the program InduSoft OPC Client, after running this program, a small icon will appear in your system tray, main screen will show as below.



3. Error Message

NAPOPC.M2M DA Server may show some error messages as below.

It means there are some error statuses in the system.

Detailed error code is as follows.

Error Code	Description
1	Don't establish the connection
2	Modbus Data are invalid
3	Initial fail
4	Station ID or Modbus Slave ID is invalid

4. Data format definiens

Data format	Description
0	engineering unit.
1	2's complement
2	hexadecimal
3	% of FSR
254	Counter hex
255	Unknown

5. Type code definiens

AI Type code

AI Type Code	Input Type	Data Format	+F.S	-F.S.
		Engineering unit	+15.000	-15.000
00	-15 to +15 mV	% of FSR	+100.00	-100.00
		2's comp HEX	7FFF	8000
		Engineering unit	+50.000	-50.000
01	-50 to +50 mV	% of FSR	+100.00	-100.00
		2's comp HEX	7FFF	8000
	100 to 1100	Engineering unit	+100.000	-100.000
02	-100 to +100	% of FSR	+100.00	-100.00
	mv	2's comp HEX	7FFF	8000
	500 (0.0500	Engineering unit	+500.00	-500.00
03	-500 to +500	% of FSR	+100.00	-100.00
	mv	2's comp HEX	7FFF	8000
		Engineering unit	+1.0000	-1.0000
04	-1 to +1 V	% of FSR	+100.00	-100.00
		2's comp HEX	7FFF	8000
		Engineering unit	+2.5000	-2.5000
05	-2.5 to +2.5 V	% of FSR	+100.00	-100.00
		2's comp HEX	7FFF	8000
		Engineering unit	+20.000	-20.000
06	-20 to +20 mA	% of FSR	+100.00	-100.00
		2's comp HEX	7FFF	8000
		Engineering unit	+20.000	+04.000
07	4 to 20 mA	% of FSR	+100.00	-100.00
		2's comp HEX	7FFF	8000
		Engineering unit	+10.000	-10.000
08	-10 to +10 V	% of FSR	+100.00	-100.00
		2's comp HEX	7FFF	8000
		Engineering unit	+5.0000	-5.0000
09	-5 to +5 V	% of FSR	+100.00	-100.00
		2's comp HEX	7FFF	8000
10	-1 to +1 V	Engineering unit	+1.0000	-1.0000
		% of FSR	+100.00	-100.00

		2's comp HEX	7FFF	8000
	500 to . 500	Engineering unit	+500.00	-500.00
11	-500 to +500	% of FSR	+100.00	-100.00
	mv	2's comp HEX	7FFF	8000
	150 to 1150	Engineering unit	+150.00	-150.00
12	-150 10 +150	% of FSR	+100.00	-100.00
		2's comp HEX	7FFF	8000
		Engineering unit	+20.000	-20.000
13	-20 to +20 mA	% of FSR	+100.00	-100.00
		2's comp HEX	7FFF	8000
		Engineering unit	+760.00	-210.00
14	-210 to 760 °C	% of FSR	+100.00	-027.63
		2's comp HEX	7FFF	DCA2
		Engineering unit	+1372.0	-0270.0
15	-270 to 1372 °C	% of FSR	+100.00	-019.68
		2's comp HEX	7FFF	E6D0
		Engineering unit	+400.00	-270.00
16	-270 to 400 °C	% of FSR	+100.00	-067.5
		2's comp HEX	7FFF	A99A
		Engineering unit	+1000.0	-0270.0
17	-270 to 1000 °C	% of FSR	+100.00	-027.00
		2's comp HEX	7FFF	DD71
		Engineering unit	+1768.0	+0000.0
18	0 to 1768 °C	% of FSR	+100.00	+000.00
		2's comp HEX	7FFF	0000
		Engineering unit	+1768.0	+0000.0
19	0 to 1768 °C	% of FSR	+100.00	+000.00
		2's comp HEX	7FFF	0000
		Engineering unit	+1820.0	+0000.0
20	0 to 1802 °C	% of FSR	+100.00	+000.00
		2's comp HEX	7FFF	0000
		Engineering unit	+1300.0	-0270.00
21	-270 to 1300 °C	% of FSR	+100.00	-020.77
		2's comp HEX	7FFF	E56B
		Engineering unit	+2320.0	+0000.0
22	0 to 2320 °C	% of FSR	+100.00	+000.00
		2's comp HEX	7FFF	0000
23	-200 to 800 °C	Engineering unit	+800.00	-200.00

		% of FSR	+100.00	-025.00
		2's comp HEX	7FFF	E000
		Engineering unit	+100.00	-200.00
24	-200 to 100 °C	% of FSR	+050.00	-100.00
		2's comp HEX	4000	8000
		Engineering unit	+900.00	-200.00
25	-200 to 900 °C	% of FSR	+100.00	-022.22
		2's comp HEX	7FFF	E38E
		Engineering unit	+20.000	+00.000
26	0 to 20 mA	% of FSR	+100.00	+000.00
		2's comp HEX	FFFF	0000
		Engineering unit	+150.00	-150.00
27	-150 to +150 V	% of FSR	+100.00	-100.00
		2's comp HEX	7FFF	8000
		Engineering unit	+50.000	-50.000
28	-50 to +50 V	% of FSR	+100.00	-100.00
		2's comp HEX	7FFF	8000
		Engineering unit	+100.00	-100.00
32	-100 to 100 °C	% of FSR	+100.00	-100.00
		2's comp HEX	7FFF	8000
		Engineering unit	+100.00	-100.00
33	0 to 100 °C	% of FSR	+100.00	-100.00
		2's comp HEX	7FFF	0000
		Engineering unit	+200.00	+000.00
34	0 to 200 °C	% of FSR	+100.00	+000.00
		2's comp HEX	7FFF	0000
		Engineering unit	+600.00	+000.00
35	0 to 600 °C	% of FSR	+100.00	+000.00
		2's comp HEX	7FFF	0000
		Engineering unit	+100.00	-100.00
36	-100 to 100 °C	% of FSR	+100.00	-100.00
		2's comp HEX	7FFF	8000
		Engineering unit	+100.00	+000.00
37	0 to 100 °C	% of FSR	+100.00	+000.00
		2's comp HEX	7FFF	0000
		Engineering unit	+200.00	+000.00
38	0 to 200 °C	% of FSR	+100.00	+000.00
		2's comp HEX	7FFF	0000

39 0 to 600 °C Engineering unit +600.00 +000.00 39 0 to 600 °C % of FSR +100.00 +000.00 40 -80 to 100 °C % of FSR +100.00 -080.00 40 -80 to 100 °C % of FSR +100.00 -080.00 41 0 to 100 °C % of FSR +100.00 +000.00 41 0 to 100 °C % of FSR +100.00 +000.00 42 -200 to 600 °C % of FSR +100.00 +000.00 42 -200 to 600 °C % of FSR +100.00 -200.00 43 -20 to 150 °C % of FSR +100.00 -013.33 2'S comp HEX 7FFF D556 44 0 to 200 °C % of FSR +100.00 -013.33 2'S comp HEX 7FFF D556 Engineering unit +150.00 -020.00 43 0 to 200 °C % of FSR +100.00 +000.00 2'S comp HEX 7FFF D556 44 0 to 200 °C % of FSR					
39 0 to 600 °C % of FSR +100.00 +000.00 2's comp HEX 7FFF 0000 40 -80 to 100 °C % of FSR +100.00 -080.00 40 -80 to 100 °C % of FSR +100.00 -080.00 41 0 to 100 °C % of FSR +100.00 +000.00 41 0 to 100 °C % of FSR +100.00 +000.00 42 -200 to 600 °C % of FSR +100.00 -000.00 42 -200 to 600 °C % of FSR +100.00 -000.00 43 -20 to 150 °C % of FSR +100.00 -003.33 2's comp HEX 7FFF D556 Engineering unit +150.00 -020.00 43 -20 to 150 °C % of FSR +100.00 +000.00 2's comp HEX 7FFF DEFF 44 0 to 200 °C % of FSR +100.00 +000.00 2's comp HEX 7FFF D000 45 -20 to 200 °C % of FSR +100.00 -013.33 2's comp HEX	39	0 to 600 °C	Engineering unit	+600.00	+000.00
Image: second			% of FSR	+100.00	+000.00
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			2's comp HEX	7FFF	0000
40 -80 to 100 °C % of FSR +100.00 -080.00 2's comp HEX 7FFF 999A 41 0 to 100 °C % of FSR +100.00 +000.00 41 0 to 100 °C % of FSR +100.00 +000.00 42 -200 to 600 °C 2's comp HEX 7FFF 0000 42 -200 to 600 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 43 -20 to 150 °C % of FSR +100.00 -013.33 2's comp HEX 7FFF D556 Engineering unit +150.00 -020.00 44 0 to 200 °C % of FSR +100.00 +000.00 % of FSR +100.00 +000.00 44 0 to 200 °C 2's comp HEX 7FFF 0000 Engineering unit +150.00 -020.00 45 -20 to 150 °C 2's comp HEX 7FFF 0000 2's comp HEX 7FFF 8000 46 -200 to 200 °C % of FSR +100.00 -100.00	40		Engineering unit	+100.00	-080.00
Image: state		-80 to 100 °C	% of FSR	+100.00	-080.00
41 0 to 100 °C Engineering unit +100.00 +000.00 41 0 to 100 °C % of FSR +100.00 +000.00 42 -200 to 600 °C Engineering unit +600.00 -200.00 42 -200 to 600 °C % of FSR +100.00 -200.00 43 -200 to 500 °C % of FSR +100.00 -013.33 2's comp HEX 7FFF D556 43 -20 to 150 °C % of FSR +100.00 -013.33 44 0 to 200 °C % of FSR +100.00 -013.33 45 -20 to 150 °C % of FSR +100.00 +000.00 45 -20 to 150 °C % of FSR +100.00 -013.33 45 -20 to 150 °C % of FSR +100.00 -013.33 46 -20 to 150 °C % of FSR +100.00 -013.33 47 -200 to 200 °C % of FSR +100.00 -020.00 46 -200 to 200 °C % of FSR +100.00 -200.00 47 <			2's comp HEX	7FFF	999A
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		0 to 100 °C	Engineering unit	+100.00	+000.00
1 2's comp HEX 7FFF 0000 42 -200 to 600 °C Engineering unit +600.00 -200.00 42 -200 to 600 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 43 -20 to 150 °C Engineering unit +150.00 -020.00 43 -20 to 150 °C % of FSR +100.00 -013.33 2's comp HEX 7FFF EEEF 44 0 to 200 °C % of FSR +100.00 +000.00 44 0 to 200 °C % of FSR +100.00 +000.00 45 -20 to 150 °C % of FSR +100.00 +000.00 45 -20 to 150 °C % of FSR +100.00 -013.33 2's comp HEX 7FFF 0000 2's comp HEX 7FFF 45 -20 to 150 °C % of FSR +100.00 -013.33 2's comp HEX 7FFF EEEF Engineering unit +200.00 -200.00 46 -200 to 200 °C % of FSR <	41		% of FSR	+100.00	+000.00
42 -200 to 600 °C Engineering unit +600.00 -200.00 43 -20 to 150 °C Engineering unit +100.00 -033.33 43 -20 to 150 °C Engineering unit +150.00 -020.00 43 -20 to 150 °C % of FSR +100.00 -013.33 43 -20 to 150 °C % of FSR +100.00 -013.33 2's comp HEX 7FFF EEEF 44 0 to 200 °C % of FSR +100.00 +000.00 44 0 to 200 °C % of FSR +100.00 +000.00 44 0 to 200 °C % of FSR +100.00 +000.00 45 -200 to 150 °C % of FSR +100.00 -020.00 45 -200 to 200 °C % of FSR +100.00 -020.00 46 -200 to 200 °C % of FSR +100.00 -200.00 47 -200 to 200 °C % of FSR +100.00 -200.00 47 -200 to 600 °C % of FSR +100.00 -200.00 12's com			2's comp HEX	7FFF	0000
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		-200 to 600 °C	Engineering unit	+600.00	-200.00
1 2's comp HEX 7FFF D556 43 -20 to 150 °C Engineering unit +150.00 -020.00 43 -20 to 150 °C % of FSR +100.00 -013.33 2's comp HEX 7FFF EEEF 44 0 to 200 °C % of FSR +100.00 +000.00 44 0 to 200 °C % of FSR +100.00 +000.00 44 0 to 200 °C % of FSR +100.00 +000.00 44 0 to 200 °C % of FSR +100.00 -020.00 45 -20 to 150 °C % of FSR +100.00 -013.33 2's comp HEX 7FFF EEEF Engineering unit +200.00 -200.00 46 -200 to 200 °C % of FSR +100.00 -200.00 2's comp HEX 7FFF 8000 47 -200 to 200 °C % of FSR +100.00 -200.00 2's comp HEX 7FFF 8000 47 -200 to 600 °C % of FSR +100.00 -200.00 % of FSR +100.00 <t< td=""><td>42</td><td>% of FSR</td><td>+100.00</td><td>-033.33</td></t<>	42		% of FSR	+100.00	-033.33
43 -20 to 150 °C Engineering unit +150.00 -020.00 43 -20 to 150 °C % of FSR +100.00 -013.33 2's comp HEX 7FFF EEEF 44 0 to 200 °C % of FSR +100.00 +000.00 44 0 to 200 °C % of FSR +100.00 +000.00 44 0 to 200 °C % of FSR +100.00 +000.00 45 -20 to 150 °C % of FSR +100.00 -020.00 45 -20 to 150 °C % of FSR +100.00 -013.33 2's comp HEX 7FFF EEEF EEF 46 -200 to 200 °C % of FSR +100.00 -200.00 46 -200 to 200 °C % of FSR +100.00 -200.00 47 -200 to 200 °C % of FSR +100.00 -200.00 47 -200 to 600 °C % of FSR +100.00 -200.00 128 -200 to 600 °C % of FSR +100.00 -200.00 129 -200 to 600 °C % o			2's comp HEX	7FFF	D556
43 -20 to 150 °C % of FSR +100.00 -013.33 2's comp HEX 7FFF EEEF 44 0 to 200 °C % of FSR +100.00 +000.00 44 0 to 200 °C % of FSR +100.00 +000.00 44 0 to 200 °C % of FSR +100.00 +000.00 45 -20 to 150 °C % of FSR +100.00 -020.00 45 -20 to 150 °C % of FSR +100.00 -013.33 2's comp HEX 7FFF EEEF Engineering unit +200.00 -020.00 46 -200 to 200 °C % of FSR +100.00 -100.00 -200.00 47 -200 to 200 °C % of FSR +100.00 -200.00 -200.00 47 -200 to 200 °C % of FSR +100.00 -200.00 -200.00 128 -200 to 600 °C % of FSR +100.00 -200.00 -200.00 129 -200 to 600 °C % of FSR +100.00 -200.00 -200.00 -200.00 -200.00			Engineering unit	+150.00	-020.00
Image: second	43	-20 to 150 °C	% of FSR	+100.00	-013.33
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			2's comp HEX	7FFF	EEEF
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			Engineering unit	+200.00	+000.00
Image: second HEX 7FFF 0000 45 -20 to 150 °C Engineering unit +150.00 -020.00 45 -20 to 150 °C % of FSR +100.00 -013.33 2's comp HEX 7FFF EEEF 46 -200 to 200 °C % of FSR +100.00 -200.00 46 -200 to 200 °C % of FSR +100.00 -200.00 47 -200 to 200 °C % of FSR +100.00 -200.00 47 -200 to 200 °C % of FSR +100.00 -200.00 47 -200 to 200 °C % of FSR +100.00 -200.00 47 -200 to 600 °C % of FSR +100.00 -200.00 128 -200 to 600 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 129 -200 to 600 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 130 -50 to 150 °C % of FSR +100.00 -033.33 2's	44	0 to 200 °C	% of FSR	+100.00	+000.00
45 -20 to 150 °C Engineering unit % of FSR +100.00 -020.00 45 -20 to 150 °C % of FSR +100.00 -013.33 2's comp HEX 7FFF EEEF 46 -200 to 200 °C % of FSR +100.00 -200.00 46 -200 to 200 °C % of FSR +100.00 -100.00 47 -200 to 200 °C % of FSR +100.00 -200.00 47 -200 to 200 °C % of FSR +100.00 -200.00 47 -200 to 200 °C % of FSR +100.00 -100.00 47 -200 to 200 °C % of FSR +100.00 -200.00 128 -200 to 600 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 129 -200 to 600 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 556 130 -50 to 150 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 556 </td <td></td> <td>2's comp HEX</td> <td>7FFF</td> <td>0000</td>			2's comp HEX	7FFF	0000
45 -20 to 150 °C % of FSR +100.00 -013.33 2's comp HEX 7FFF EEEF 46 -200 to 200 °C % of FSR +100.00 -200.00 46 -200 to 200 °C % of FSR +100.00 -200.00 46 -200 to 200 °C % of FSR +100.00 -100.00 2's comp HEX 7FFF 8000 -200.00 47 -200 to 200 °C % of FSR +100.00 -200.00 47 -200 to 200 °C % of FSR +100.00 -200.00 47 -200 to 200 °C % of FSR +100.00 -200.00 128 -200 to 600 °C % of FSR +100.00 -200.00 128 -200 to 600 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 129 -200 to 600 °C % of FSR +100.00 -033.33 129 -200 to 600 °C % of FSR +100.00 -033.33 130 -50 to 150 °C % of FSR +100.00		-20 to 150 °C	Engineering unit	+150.00	-020.00
Image: series of the	45		% of FSR	+100.00	-013.33
46 -200 to 200 °C Engineering unit +200.00 -200.00 46 -200 to 200 °C % of FSR +100.00 -100.00 2's comp HEX 7FFF 8000 47 -200 to 200 °C % of FSR +100.00 -200.00 47 -200 to 200 °C % of FSR +100.00 -200.00 47 -200 to 200 °C % of FSR +100.00 -200.00 47 -200 to 200 °C % of FSR +100.00 -200.00 128 -200 to 600 °C % of FSR +100.00 -200.00 128 -200 to 600 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 129 -200 to 600 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 130 -50 to 150 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 131 -60 to 180 °C Engineering unit +180.00 -060.00			2's comp HEX	7FFF	EEEF
46 -200 to 200 °C % of FSR +100.00 -100.00 2's comp HEX 7FFF 8000 47 -200 to 200 °C Engineering unit +200.00 -200.00 47 -200 to 200 °C % of FSR +100.00 -200.00 47 -200 to 200 °C % of FSR +100.00 -200.00 128 -200 to 600 °C % of FSR +100.00 -200.00 128 -200 to 600 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 129 -200 to 600 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 -000 129 -200 to 600 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 -000 130 -50 to 150 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 -000 131 -60 to 180 °C % of FSR +100.00 -033.33 2's comp H		-200 to 200 °C	Engineering unit	+200.00	-200.00
Image: style	46		% of FSR	+100.00	-100.00
47 Engineering unit +200.00 -200.00 47 -200 to 200 °C % of FSR +100.00 -100.00 2's comp HEX 7FFF 8000 -200.00 128 -200 to 600 °C Engineering unit +600.00 -200.00 128 -200 to 600 °C % of FSR +100.00 -200.00 128 -200 to 600 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 129 -200 to 600 °C % of FSR +100.00 -200.00 129 -200 to 600 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 130 -50 to 150 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556			2's comp HEX	7FFF	8000
47 -200 to 200 °C % of FSR +100.00 -100.00 2's comp HEX 7FFF 8000 128 -200 to 600 °C % of FSR +600.00 -200.00 128 -200 to 600 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 129 -200 to 600 °C % of FSR +100.00 -200.00 129 -200 to 600 °C % of FSR +100.00 -200.00 129 -200 to 600 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 130 -50 to 150 °C % of FSR +100.00 -033.33 130 -50 to 150 °C % of FSR +100.00 -033.33 131 -60 to 180 °C Engineering unit +150.00 -033.33 131 -60 to 180 °C Engineering unit +180.00 -060.00		-200 to 200 °C	Engineering unit	+200.00	-200.00
2's comp HEX 7FFF 8000 128 -200 to 600 °C Engineering unit +600.00 -200.00 128 -200 to 600 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 129 -200 to 600 °C Engineering unit +600.00 -200.00 129 -200 to 600 °C % of FSR +100.00 -200.00 129 -200 to 600 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 130 -50 to 150 °C % of FSR +100.00 -050.00 130 -50 to 150 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 131 -60 to 180 °C Engineering unit +180.00 -060.00 % of FSR +100.00 -033.33 2's comp HEX 7FFF D556	47		% of FSR	+100.00	-100.00
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			2's comp HEX	7FFF	8000
128 -200 to 600 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 129 -200 to 600 °C Engineering unit +600.00 -200.00 129 -200 to 600 °C % of FSR +100.00 -200.00 129 -200 to 600 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 130 -50 to 150 °C % of FSR +100.00 -050.00 130 -50 to 150 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 131 -60 to 180 °C Engineering unit +180.00 -060.00 131 -60 to 180 °C Engineering unit +180.00 -060.00	_	-200 to 600 °C	Engineering unit	+600.00	-200.00
2's comp HEX 7FFF D556 129 -200 to 600 °C Engineering unit +600.00 -200.00 129 -200 to 600 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 130 -50 to 150 °C Engineering unit +150.00 -050.00 130 -50 to 150 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 130 -50 to 150 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 56 131 -60 to 180 °C Engineering unit +180.00 -060.00 % of FSR +100.00 -033.33 -060.00 -033.33	128		% of FSR	+100.00	-033.33
129 -200 to 600 °C Engineering unit +600.00 -200.00 129 -200 to 600 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 130 -50 to 150 °C Engineering unit +150.00 -050.00 130 -50 to 150 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 131 -60 to 180 °C Engineering unit +180.00 -060.00 % of FSR +100.00 -033.33 -060.00 -033.33			2's comp HEX	7FFF	D556
129 -200 to 600 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 130 -50 to 150 °C Engineering unit +150.00 -050.00 130 -50 to 150 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 131 -60 to 180 °C Engineering unit +180.00 -060.00 % of FSR +100.00 -033.33 -060.00 -063.33	129	-200 to 600 °C	Engineering unit	+600.00	-200.00
2's comp HEX 7FFF D556 2's comp HEX 7FFF D556 130 -50 to 150 °C Engineering unit +150.00 -050.00 130 -50 to 150 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 131 -60 to 180 °C Engineering unit +180.00 -060.00 % of FSR +100.00 -033.33 -060.00 -033.33			% of FSR	+100.00	-033.33
130 -50 to 150 °C Engineering unit +150.00 -050.00 131 -60 to 180 °C % of FSR +100.00 -033.33 131 -60 to 180 °C Engineering unit +180.00 -060.00 % of FSR +100.00 -060.00 -060.00			2's comp HEX	7FFF	D556
130 -50 to 150 °C % of FSR +100.00 -033.33 2's comp HEX 7FFF D556 131 -60 to 180 °C Engineering unit +180.00 -060.00 % of FSR +100.00 -033.33 -060.00 -060.00		-50 to 150 °C	Engineerina unit	+150.00	-050.00
2's comp HEX 7FFF D556 131 -60 to 180 °C Engineering unit +180.00 -060.00 % of FSR +100.00 -033.33	130		% of FSR	+100.00	-033.33
131 -60 to 180 °C Engineering unit +180.00 -060.00 % of FSR +100.00 -033.33			2's comp HEX	7FFF	D556
% of FSR +100.00 -033.33	131	-60 to 180 °C	Engineering unit	+180.00	-060.00
			% of FSR	+100.00	-033.33

		2's comp HEX	7FFF	D556
254 (Counter)	0 to 4294967295	Counter Value	Counter Value	Counter Value
255 (Customer)	0 to 0	Customer define	Customer define	Customer define

AOType code

AO Type Code	Input Type	Data Format +F.S		-F.S.
00	0 to 20 mA	Engineering unit	+20.000	00.000
		% of FSR	+100.00	+000.00
		2's comp HEX	FFF	0000
	4 to 20 mA	Engineering unit	+20.000	04.000
01		% of FSR	+100.00	+000.00
		2's comp HEX	FFF	0000
	0 to 10 V	Engineering unit	+10.000	00.000
02		% of FSR	+100.00	+000.00
		2's comp HEX	FFF	0000
	0 to 20 mA	Engineering unit	+20.000	00.000
48		% of FSR	+100.00	+000.00
		2's comp HEX	FFF	0000
	4 to 20 mA	Engineering unit	+20.000	04.000
49		% of FSR	+100.00	+000.00
		2's comp HEX	FFF	0000
	0 to 10 V	Engineering unit	+10.000	00.000
50		% of FSR	+100.00	+000.00
		2's comp HEX	FFF	0000
	-10 to +10 V	Engineering unit	+10.000	-10.000
51		% of FSR	+100.00	+000.00
		2's comp HEX	FFF	0000
	0 to +5V	Engineering unit	+05.000	-05.000
52		% of FSR	+100.00	+000.00
		2's comp HEX	FFF	0000
53	-5 to +5V	Engineering unit	+05.000	-05.000
		% of FSR	+100.00	+000.00
		2's comp HEX	FFF	0000
255 (Customer)	0 to 0	Customer define	Customer define	Customer define

History of version

Revision

Version	Ву	Date	Description
1.00	Yide	2010/03/05	
1.01	Yide	2010/03/28	