

TEMP2020 - SERIES

TEMP2720



TEMP2520



COMMUNICATION MANUAL

※ This manual applies to TEMP2520 and TEMP2720.
The model stated the manual content is TEMP2520.

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1. Safety Precautions

Thank you for purchasing TEMP2520, programmable controller.
 This Communication Manual describes communication of the TEMP2520 controller.



SAFETY SYMBOL MARK

(A) Symbolizes 'Caution' and 'Warning'. The information with this symbol is especially important for preventing from user injury and protecting the product and system.



(1)Product : This symbol indicates an imminently hazardous situation which if not avoided, will result in serious injury or system damage.

(1)Communication Manual : This symbol indicates potential hazard that may cause personal injury by electrical shock.

(B) Symbolizes 'Protective Earth (PE) Terminal.'



This symbol indicates that the terminal must be connected to the Ground prior to operating.

(C) Symbolizes 'Supplementary Explanation.'



The information with this symbol describes additional explanation for features.

(D) Symbolizes 'Reference.'



This symbol indicates further information and page to refer.



Precautionary Remarks on this Communication Manual

- (A) This manual should be passed on the End- User and kept at a suitable place for easy review in time.
- (B) Read and understand this Communication Manual carefully before using the product.
- (C) This Communication Manual describes functions and features of the product in detail, and SAMWONTECH can not guarantee against over applications would suit a customer's particular purpose which is not described in this manual.
- (D) Unauthorized duplication and modification of this Communication Manual are strongly prohibited.
- (E) The contents of this manual may be modified without prior notice.
- (F) If any errors or omissions in this manual should come to the attention of the user, feel free to contact our sales representatives or our sales office.



Precautions for Safety and Unauthorized Modification

- (A) For protecting and ensuring the safety of this product and relevant system, all of the safety instructions and precautions should be well recognized and strictly observed by all users.
- (B) SAMWONTECH does not guarantee against damage resulting from unauthorized alteration, misuse, or abuse.
- (C) When using additional safety circuit or part such as Noise Filter to protect this product and relevant system, it is strongly required to install that to outside of this product. Additional installation and modification inside of this product are prohibited.
- (D) Do not try to disassemble, repair, or modify the product. It may become the cause of a trouble such as malfunction, electric shock, fire.
- (E) Contact our sales dept. for part replacement or consumables.
- (F) Keep the product away from water inflowing. This may become a critical cause of trouble.
- (G) External shock on the product may lead to damage and malfunction.



Limitation of Liability

- (A) SAMWONTECH does not guarantee or accept responsibility for this product other than the clauses stated in our warranty policy.
- (B) SAMWONTECH assumes no liability to any party for any loss or damage, direct or indirect, caused by the use or any unpredictable defect of the product.



Warranty Policy

- (A) Warranty term of this TEMP2520 is one year after delivery to the first purchaser for being free of defects in materials and faulty workmanship under the condition that the product has been applied according to this manual.
- (B) The repairing cost will be charged for defective product out of warranty period. This charge will be the actual cost estimated by SAMWONTECH.
- (C) Repairing cost may be charged even if within warranty period for following cases.
 - (1) Damage due to USER FAULT (Ex.: Product initialization by password loss).
 - (2) Damage due to natural disaster (Ex.: fire, flood).
 - (3) Damage due to additional removal and re-installation after the first one.
 - (4) Damage due to unauthorized disassembles, modification and alternation.
 - (5) Damage due to unexpected power failure caused unstable power supply.
 - (6) Others
- (D) If any A/S is required, feel free to contact our sales office or a representative.

2. Communication Specification

The TEMP2520 controller provides Half-Duplex method support on RS232C and RS485 communication interface.

- RS232C interface supports 1:1 direct communication between host computer on network system and TEMP2520.
- RS485 interface supports to connect upper level network system with up to 31 slave TEMP2520 controller.

■ Parameters for communication setting

Parameter	Range	Description
PROTOCOL	PCLINK	Default protocol
	PCLINK+SUM	Default protocol + CheckSum
	MODBUS ASC	MODBUS ASCII
	MODBUS RTU	MODBUS RTU
BAUD RATE	9600	9600 bps
	19200	19200 bps
	38400	38400 bps
	57600	57600 bps
	115200	115200 bps
PARITY	NONE	None Parity
	EVEN	Even Parity
	ODD	Odd Parity
STOP BIT	1	1 bit
	2	2 bits
DATA LENGTH	7	7 bits
	8	8 bits
ADDRESS)	1~99	Address
RESPONSE TIME	0~10	RESPONSE TIME(=PROCESS TIME+SPONSE TIME*10msec)
SYNC MASTER	UNUSE	UNUSE
	CH1	CH1 USING MASTER
	CH2	CH2 USING MASTER

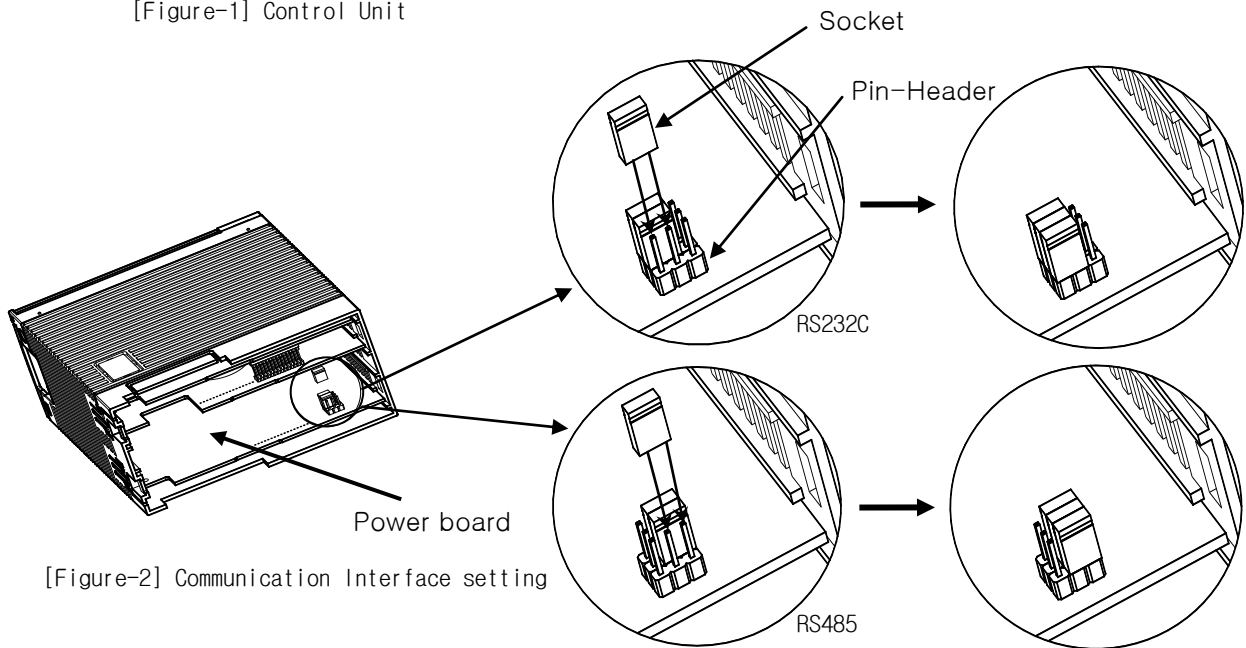
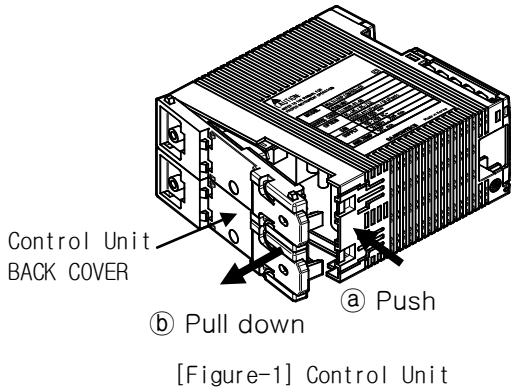
■ Factory default value

• PROTOCOL	PCLINK+SUM(PCLINK+CheckSum)
• BPS	9600 bps
• PARITY	NONE
• STOP BIT	1 (1 bit)
• DATA LENGTH	8 (8 bits)
• ADDRESS	1
• RESPONSE TIME	0 (PROCESS TIME+10msec)
• SYNC MASTER	OFF

3. Communication setting

TEMP2520 provides flexible communication interface RS232C or RS485 from Control Unit directly.

- ▶ After detaching BACK COVER from Control Unit shown as [Figure-1], communication interface between RS232C and RS485 can be selected with socket and pin-header on power board of Control Board.
- ▶ It is recommended to use tool like tweezers for setting socket to pin-header correctly.
- ☞ Make sure setup completed correctly.

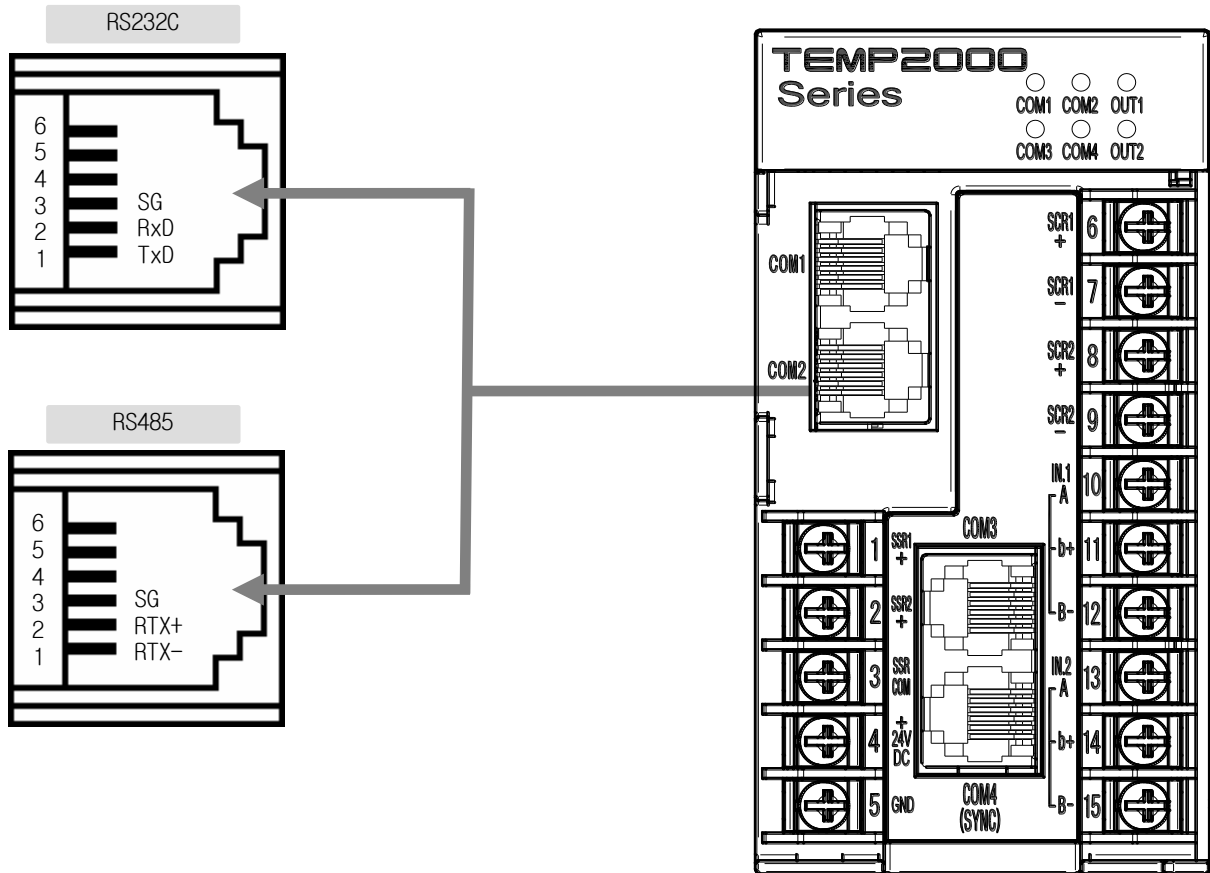


- ▶ Do not disassemble Power board from Control Unit case during setting comm. interface.
- ▶ It is recommended to use tool like tweezers for setting comm. interface.
- ▶ Make sure setup completed correctly.

4. Wiring for Communication

Connector wiring between TEMP2520 and network system depends on communication interface setting (RS232C/RS485).

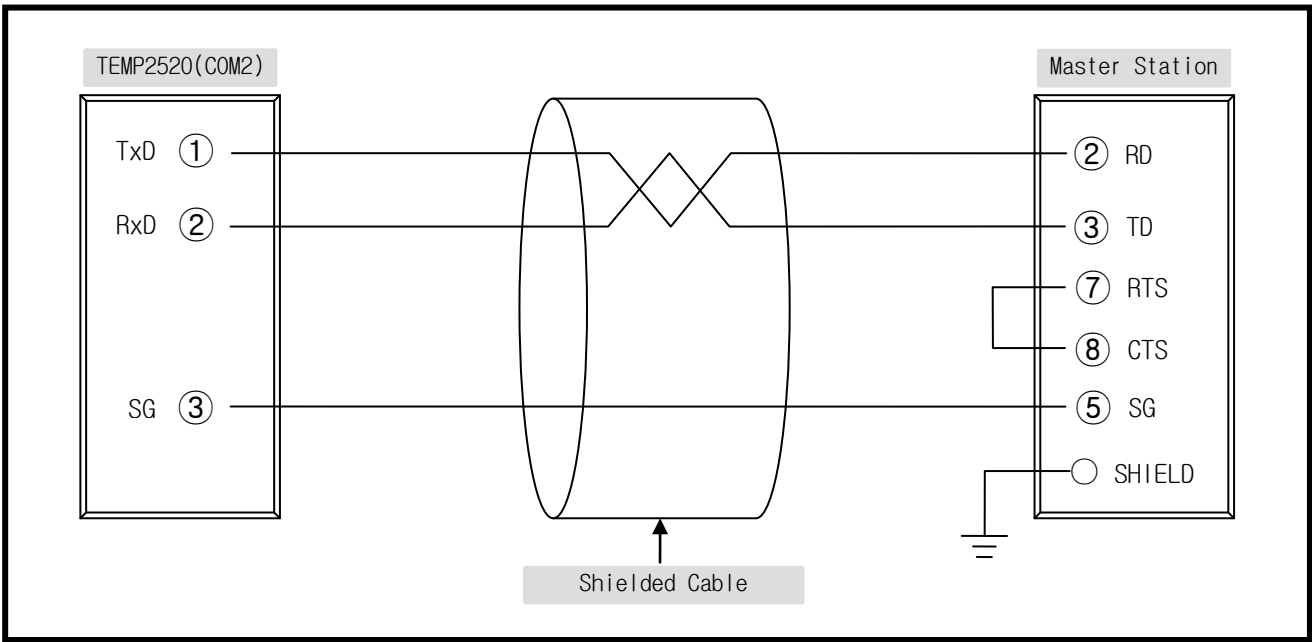
Modular Connector Pin-Mapping for COM2 port



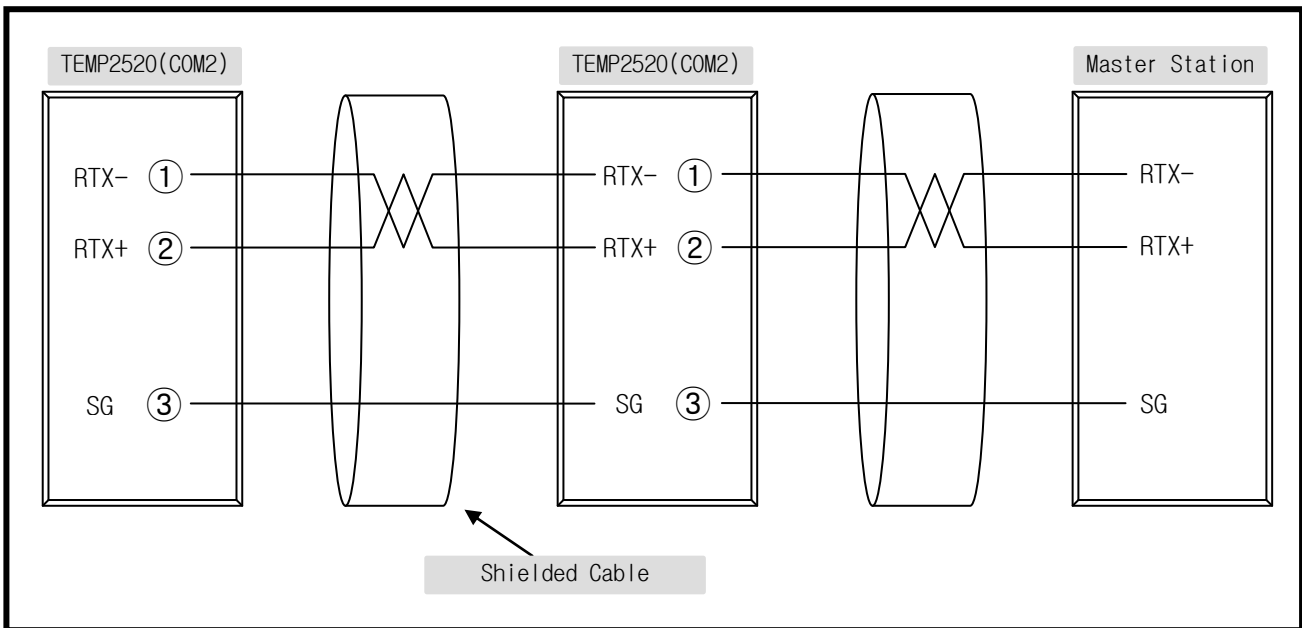
Description of Modular Connector Pin-Mapping for COM2 port

PIN no.	RS232C		RS485	
	Signal	Symbol	Signal	Symbol
1	Transmit Data	TxD	Receive/Transmit Data -	RTX-
2	Receive Data	RxD	Receive/Transmit Data +	RTX+
3	Signal Ground	SG	Signal Ground	SG
4	-	-	-	-
5	-	-	-	-
6	-	-	-	-

6 Pin connector wiring for RS232C interface



6 Pin connector wiring for RS485 interface



Up to 31 slave TEMP2520 controllers can be connected to a master device by multi-drop networking.

Make sure to install 200Ω (1/4W) resistor on Last Leg at both end of terminal Slave and Master(PC, PLC).

5. Communication Command

5.1 The Frame Structure of standard protocol

The frame structure of protocol transmitting upper-level network system to TEMP2520.

①	②	③	④	⑤	⑥	⑦	⑧
STX	Address	Command	,	Data	SUM	CR	LF

① Protocol Header

The beginning of communication command with STX (Start of Text), ASCII string with 0x02.

② Slave TEMP2520 Address

Slave unit address of TEMP2520.

③ Command

Function Command for communication. (Refer to 5.2 ~ 5.10).

④ Delimiter

Symbolize to separate Command and Data by Comma. (',').

⑤ Data

Formal text strings regulated by communication command rule.

⑥ Check Sum

- 'SUM' protocol is a more sophisticated one which includes Check Sum as an error check.
- Check Sum is calculated as following.

- 1) Add the ASCII code of characters from the character next to STX one by one up to the character prior to SUM
- 2) Represent the lowest one byte of the sum as a hexadecimal notation (2 characters).

⑦, ⑧ Protocol Tail

ASCII code to close communication command by indicating CR(0x0D) and LF(0x0A).

■ Example for SUM

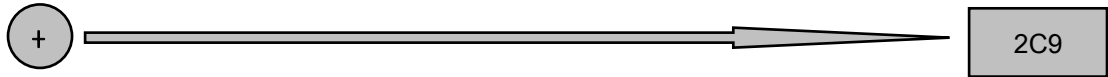
◆ Example

To read the consecutively D-Register from D0001 (CH1.NPV) to D0006 (CH2.MVOUT)

- Rrquest : [stx]01RSD,06,0001[cr][lf]
- Rrquest (with CheckSum) : [stx]01RSD,06,0001**C9**[cr][lf]

☞ As shown below, hexa decimal value adding each text at 01RSD,06,0001 by ASCII code is 2C9, and lower digit 2 characters **C9** will be used for CheckSum.

Text	0	1	R	S	D	,	0	6	,	0	0	0	1
Ascii value	30	31	52	53	44	2C	30	36	2C	30	30	30	31



■ ASCII Table

High \ Low	0	1	2	3	4	5	6	7
0	NUL	DLE	SPACE	0	@	P	`	p
1	SOH	DC1	!	1	A	Q	a	q
2	STX	DC2	"	2	B	R	b	r
3	ETX	DC3	#	3	C	S	c	s
4	EOT	DC4	\$	4	D	T	d	t
5	ENQ	NAK	%	5	E	U	e	u
6	ACK	SYN	&	6	F	V	f	v
7	BEL	ETB	'	7	G	W	g	w
8	BS	CAN	(	8	H	X	h	x
9	HT	EM	)	9	I	Y	i	y
A	LF	SUB	*	:	J	Z	j	z
B	VT	ESC	+	;	K	[	k	{
C	FF	FS	,	<	L	¥	l	|
D	CR	GS	-	=	M	]	m	}
E	SO	RS	.	>	N	^	n	~
F	SI	US	/	?	O	_	o	DEL

5.2 Type of Communication Command

Two types of commands are provided on TEMP2520. One is general READ/WRITE command to read and write information on D-Register, and the other is Reference command to read self-information of TEMP2520.

■ Reference Command

Command	Description
AMI	Displays model name and Version-Revision of TEMP2520

■ Read/Write Command

Command	Description
RSD	Read data in consecutive D-Register in sequence (Read)
RRD	Read data in arbitrary single D-Register (Read)
WSD	Write data in consecutive D-Register in sequence (Write)
WRD	Write data in arbitrary single D-Register (Write)
STD	Register arbitrary single address to monitor (D-Register Monitoring Set)
CLD	Read data in address registered by STD command (D-Register Monitoring Call)

☞ Each Command can read or write up to 64 D-Register and all of the SED/CLD data will be reset by power OFF, so the data should be registered again.

5.3 ERROR Response

When an Error occurs during communication, TEMP2520 transmits a frame as following.

bytes	1	2	2	2	2	1	1
Frame	STX	Address	NG	Error Code	SUM	CR	LF

▣ Description of Error Code

Error Code	Description	Remarks
01	Invalid Command setting	
02	Invalid D-Register setting	
04	Data Setting Error	Invalid text data input (Available 0~9, A~F : hexadecimals)
08	Invalid Format configuration	<ul style="list-style-type: none"> ▪ Different command format with designated ▪ Differnet number of setting with designated
11	Checksum Error	
12	Monitoring Command Error	No setup Monitoring Command
00	Other Errors	

5.4 RSD Command

RSD Command is used to read data in a part of D-Register by consecutive address in sequence.

Request Message Frame

bytes	1	2	3	1	2	1	4	2	1	1
Frame	STX	Address	RSD	,	Count Number	,	D-Reg.	SUM	CR	LF

Response Message Frame

bytes	1	2	3	1	2	1	4	1	...
Frame	STX	Address	RSD	,	OK	,	Data - 1	,	...

1	4	2	1	1
,	Data - n	SUM	CR	LF

- Count Number : 1 ~ 64
- Data : Hexa-decimal 16bit string 4 character with no decimal point

Example

To read the D-Register **FROM** D0001 (CH1.NPV) **TO** D0002 (CH2.NPV)

- Request : [stx]01RSD,02,0001[cr][lf]
- Request (with CheckSum) : [stx]01RSD,02,0001C5[cr][lf]
([stx] = 0x02, [cr] = 0x0d, [lf] = 0x0a)

Response data will be same as below, when 50.0 of D0001 (CH1.PV) and 30.0 of D0002 (CH2.PV)

- Response : [stx]01RSD,OK,01F4,012C[cr][lf]
- Response (with CheckSum) : [stx]01RSD,OK,01F4,012C19[cr][lf]

※ Converting procedure 4digits hexadecimal response to decimal value

- ① Radix conversion (Decimalize) : 01F4(hexadecimal) → 500(decimal)
- ② Multiply factor (decimal point) : 500 * 0.1 → 50.0

5.5 RRD Command

RRD Command is used to read data in arbitrary single D-Register.

Request Message Frame

bytes	1	2	3	1	2	1	4	1	...
Frame	STX	Address	RRD	,	Count Number	,	D-Reg.- 1	,	...

1	4	2	1	1
,	D-Reg.- n	SUM	CR	LF

Response Message Frame

bytes	1	2	3	1	2	1	4	1	...
Frame	STX	Address	RRD	,	OK	,	Data - 1	,	...

1	4	2	1	1
,	Data - n	SUM	CR	LF

- Count Number : 1 ~ 64
- Data : Hexa-decimal 16bit string 4 character with no decimal point

Example

To read the D-Register D0001 (CH1.NPV) and D0003 (CH1.NSP)

- Request : [stx]01RRD,02,0001,0003[cr][lf]
- Request (with CheckSum) : [stx]01RRD,02,0001,0003B3[cr][lf]

Response data will be same as below, when 50.0 of D0001 (CH1.PV) and 30.0 of D0003 (CH1.SP)

- Response : [stx]01RRD,OK,01F4,012C[cr][lf]
- Response (with CheckSum) : [stx]01RRD,OK,01F4,012C18[cr][lf]

5.6 WSD Command

WSD command is used to write data to a part of D-Register by consecutive address in sequence.

Request Message Frame

bytes	1	2	3	1	2	1	4	1	4
Frame	STX	Address	WSD	,	Count Number	,	D-Reg.	,	Data - 1

1	...	1	4	2	1	1
,	...	,	Data - n	SUM	CR	LF

Response Message Frame

bytes	1	2	3	1	2	2	1	1
Frame	STX	Address	WSD	,	OK	SUM	CR	LF

- Count Number : 1 ~ 64
- Data : Hexa-decimal 16bit string 4 character with no decimal point

Example

To write data to the D-Register **FROM** D0104 (CH1.TSP) **TO** D0105 (CH2.TSP) on FIX mode operation

- Setting CH1.TSP : 50.0 °C → Remove decimal point (500) → Hexadecimalize (0x01F4)
- Setting CH2.TSP : 80.0 °C → Remove decimal point (800) → Hexadecimalize (0x0320)
- Request : [stx]01WSD,02,0104,01F4,0320[cr][lf]
- Request (with CheckSum) : [stx]01WSD,02,0104,01F4,0320C6[cr][lf]

5.7 WRD Command

WRD Command is used to write data in arbitrary single D-Register.

Request Message Frame

byte 수	1	2	3	1	2	1	4	1	4
Frame	STX	Address	WRD	,	Count Number	,	D-Reg. - 1	,	Data - 1

1	...	1	4	1	4	2	1	1
,	...	,	D-Reg. - n	,	Data - n	SUM	CR	LF

Response Message Frame

bytes	1	2	3	1	2	2	1	1
Frame	STX	Address	WRD	,	OK	SUM	CR	LF

- Count Number : 1 ~ 64
- Data : Hexa-decimal 16bit string 4 character with no decimal point

Example

To write 50.0 °C into the D0104(CH1.TSP) and 0.5 °C into the D0110(CH1.SLOPE) on FIX mode operation.

- Setting CH1.TSP : 50.0 °C → Remove decimal point (500) → Hexadecimalize (0x01F4)
- Setting CH1.SLOPE : 0.5 °C → Remove decimal point (5) → Hexadecimalize (0x0005)

- Request : [stx]01WRD,02,0104,01F4,0110,0005[cr][lf]
- Request (with CheckSum) : [stx]01WRD,02,0104,01F4,0110,0005B3[cr][lf]

5.8 STD Command

STD Command is used to list the D-Registers that is necessary to monitor frequently.

Request Message Frame

bytes	1	2	3	1	2	1	4	1	4
Frame	STX	Address	STD	,	Count Number	,	D-Reg. - 1	,	D-Reg. - 2

1	...	1	4	1	4	2	1	1
,	...	,	D-Reg. - (n-1)	,	D-Reg. - n	SUM	CR	LF

Response Message Frame

bytes	1	2	3	1	2	2	1	1
Frame	STX	Address	STD	,	OK	SUM	CR	LF

- Count Number : 1 ~ 64

Example

To register D0001 (CH1.NPV), D0002 (CH2.NPV) and D0005 (CH1.MVOUT), D0006 (CH2.MVOUT)

- Request : [stx]01STD,04,0001,0002,0005,0006[cr][lf]
- Request (with CheckSum) : [stx]01STD,04,0001,0002,0005,00069A[cr][lf]

5.9 CLD Command

CLD Command is used to read data in the address which had been registered by STD command.

Request Message Frame

bytes	1	2	3	2	1	1
Frame	STX	Address	CLD	SUM	CR	LF

Response Message Frame

bytes	1	2	3	1	2	1	4	1	4
Frame	STX	Address	CLD	,	OK	,	Data - 1	,	Data - 2

1	...	1	4	1	4	2	1	1
,	...	,	Data - (n-1)	,	Data - n	SUM	CR	LF

- Count Number : 1 ~ 64

Example

- Request : [stx]01CLD[cr][lf]
- Request (with CheckSum) : [stx]01CLD34[cr][lf]

5.10 AMI Command

AMI Command is used to get the controller own-information.

Request Message Frame

bytes	1	2	3	2	1	1
Frame	STX	Address	AMI	SUM	CR	LF

Response Message Frame

bytes	1	2	3	1	2	1
Frame	STX	Address	AMI	,	OK	,

9	2	7	2	1	1
Model Name	SPACE	Version-Revision	SUM	CR	LF

Example

To confirm controller own information

- Request : [STX]01AMI[CR][LF]
- Request (with CheckSum) : [STX]01AMI38[CR][LF]
- Response : [STX]01AMI,OK,TEMP-2020[sp][sp]V00-R00[CR][LF]
- Response (with CheckSum) : [stx]01AMI,OK,TEMP-2020[sp][sp]V00-R0026[cr][lf]

6. MODBUS Protocol

6.1 The Frame Structure of MODBUS protocol

▣ Data Format

Item	ASCII	RTU
Protocol Header	:(Colon)	N/A
Protocol Tail	[CR][LF]	N/A
Data length	7-bit(Fixed)	8-bit(Fixed)
Data type	ASCII	Binary
Error detecting	LRC (Longitudinal Redundancy Check)	CRC-16 (Cyclic Redundancy Check)
Data time interval	Under 1sec.	Under 24-bit time

▣ The Frame Structure of MODBUS protocol

▶ Modbus ASCII

Protocol Header	Address	Function Code	Data	LRC Check	Protocol Tail
1 character	2 character	2 character	N character	2 character	2 character (CR+LF)

▶ Modbus RTU

Protocol Header	Address	Function Code	Data	LRC Check	Protocol Tail
N/A	8-Bit	8-Bit	N * 8-Bit	16-Bit	N/A

- N : Number of Hexadecimal data

6.2 Function Code

TEMP2520 MODBUS protocol provides two function code subsets for READ/WRITE of D-Register and Loop-Back detecting test.

Function Code	Description
03	Read data in consecutive D-Register in sequence
06	Write data to arbitrary single D-Register
08	Diagnostics(Loop-Back Test)
16	Write data to consecutive D-Register in sequence



When using MODBUS, D-Register has to be subtracted '1' from the D-Register table we offer this manual, because it starts '0' D-Register address on MODBUS protocol.

6.3 Function code – 03

Function code-03 is used to read the data of consecutive D-Register block in sequence up to 64 registers.

Request Message Frame

Factor	ASCII	RTU
Protocol Header	:(Colon)	-
Slave Address	2 characters	8-Bit
Function code-03	2 characters	8-Bit
D-Register Hi	2 characters	8-Bit
D-Register Lo	2 characters	8-Bit
Address Count Hi	2 characters	8-Bit
Address Count Lo	2 characters	8-Bit
Error detecting	2 characters	16-Bit
Protocol Tail	2 characters (CR+LF)	-

Example

Request message to read the D-Register **FROM** D0001 (CH1.NPV) **TO** D0002 (CH2.NPV) should be

- MODBUS ASCII :010300000002FA[cr][lf]
- MODBUS RTU 010300000002C40B

☞ D-Register has to be subtracted '1' from the designated address number on D-Register table in this manual.

Response Message Frame

Factor	ASCII	RTU
Protocol Header	:(Colon)	-
Slave Address	2 characters	8-Bit
Function code-03	2 characters	8-Bit
Data byte count	2 characters	8-Bit
Data - 1 Hi	2 characters	8-Bit
Data - 1 Lo	2 characters	8-Bit
...
Data - n Hi	2 characters	8-Bit
Data - n Lo	2 characters	8-Bit
Error detecting	2 characters	16-Bit
Protocol Tail	2 characters (CR+LF)	-

Example

Response data will be same as below, when 49.3 of D0001 (CH1.PV) and 10.8 of D0002 (CH2.PV)

- MODBUS ASCII :01030401ED006C9E[cr][lf]
- MODBUS RTU 01030401ED006C6BD7

6.4 Function code – 06

Function code-06 is used to write data in arbitrary single D-Register.

Request Message Frame

Factor	ASCII	RTU
Protocol Header	:(Colon)	-
Slave Address	2 characters	8-Bit
Function code-06	2 characters	8-Bit
D-Register Hi	2 characters	8-Bit
D-Register Lo	2 characters	8-Bit
Write Data Hi	2 characters	8-Bit
Write Data Lo	2 characters	8-Bit
Error detecting	2 characters	16-Bit
Protocol Tail	2 characters (CR+LF)	-

◆ Exmample

Request message to write '2' to D0100 (pattern number) should be

- MODBUS ASCII :01060063000294[cr][lf]
- MODBUS RTU 010600630002F815

☞ D-Register has to be subtracted '1' from the designated address number on D-Register table in this manual.

Response Message Frame

Factor	ASCII	RTU
Protocol Header	:(Colon)	-
Slave Address	2 characters	8-Bit
Function code-06	2 characters	8-Bit
D-Register Hi	2 characters	8-Bit
D-Register Lo	2 characters	8-Bit
Write Data Hi	2 characters	8-Bit
Write Data Lo	2 characters	8-Bit
Error detecting	2 characters	16-Bit
Protocol Tail	2 characters (CR+LF)	-

◆ Exmample

Without any trouble, response message will be.

- MODBUS ASCII :01060063000294[cr][lf]
- MODBUS RTU 010600630002F815

6.5 Function code – 08

Function code-08 is used to test loopback for self-diagnosis.

Request Message Frame

Factor	ASCII	RTU
Protocol Header	:(Colon)	-
Slave Address	2 characters	8-Bit
Function code-08	2 characters	8-Bit
Diagnosis code Hi	2 characters	8-Bit
Diagnosis code Lo	2 characters	8-Bit
Data Hi	2 characters	8-Bit
Data Lo	2 characters	8-Bit
Error detecting	2 characters	16-Bit
Protocol Tail	2 characters (CR+LF)	-

◆ Example

Request message to test loopback for self-diagnosis should be

- MODBUS ASCII :010800000002F5[cr][lf]
- MODBUS RTU 01080000000261CA

Response Message Frame

Factor	ASCII	RTU
Protocol Header	:(Colon)	-
Slave Address	2 characters	8-bit
Function code-08	2 characters	8-bit
Diagnosis code Hi	2 characters	8-bit
Diagnosis code Lo	2 characters	8-bit
Data Hi	2 characters	8-bit
Data Lo	2 characters	8-bit
Error detecting	2 characters	16-bit
Protocol Tail	2 characters (CR+LF)	-

◆ Example

Without any trouble, response message will be.

- MODBUS ASCII :010800000002F5[cr][lf]
- MODBUS RTU 01080000000261CA

6.6 Function code – 16

Function code-16 is used to write the data into consecutive D-Register block in sequence up to 64 registers.

■ Request Message Frame

Factor	ASCII	RTU
Protocol Header	:(Colon)	-
Slave address	2 characters	8-bit
Function code-16	2 characters	8-bit
D-Register Hi	2 characters	8-bit
D-Register Lo	2 characters	8-bit
Address Count Hi	2 characters	8-bit
Address Count Lo	2 characters	8-bit
Data byte Count	2 characters	8-bit
Data – 1 Hi	2 characters	8-bit
Data – 1 Lo	2 characters	8-bit
...
Data – n Hi	2 characters	8-bit
Data – n Lo	2 characters	8-bit
Error detecting	2 characters	-
Protocol Tail	2 characters (CR+LF)	16-bit

◆ Example

Request message to write ' 10.0' to the D0104(CH1.TSP) and ' 20.0' to the D0105(CH2.TSP) on FIX mode operation should be

- MODBUS ASCII :01100067000204006400C856[cr][lf]
- MODBUS RTU 01100067000204006400C8F428

■ Response Message Frame

Factor	ASCII	RTU
Protocol Header	:(Colon)	-
Slave address	2 characters	8-bit
Function code-16	2 characters	8-bit
D-Register Hi	2 characters	8-bit
D-Register Lo	2 characters	8-bit
Address Count Hi	2 characters	8-bit
Address Count Lo	2 characters	8-bit
Error detecting	2 characters	16-bit
Protocol Tail	2 characters (CR+LF)	-

◆ Example

Without any trouble, response message will be.

- MODBUS ASCII :01100067000286[cr][lf]
- MODBUS RTU 011000670002F017

7. D-REGISTER Description

D-Register is group of communication data to monitor and control all status of TEMI2520.

D-Register is grouped by consecutive 100 addresses based on its concerned function as shown below.

D-Register address	Group Name	Description	Read	Write
D0001~D0099	PROCESS	General operation process information	○	◆
D0100~D0199	FUNCTION	Operating Function setting	○	○
D0200~D0299	RESERVATION	Time & Reserve operation setting	○	△
D0300~D0399	ON/OFF SIGNAL	ON/OFF signal setting	○	○
D0400~D0499	INNER SIGNAL	INNER signal setting	○	○
D0500~D0599	ALARM SIGNAL	ALARM signal setting	○	○
D0600~D0699	SEG ALARM SIGNAL	SEGMENT ALARM signal setting	○	○
D0700~D0799	TIME SIGNAL	TIME signal setting	○	○
D0800~D0899	COMMUNICATION	Communication concerned information	○	△
D0900~D0999	PICTURE	USER SCREEN setting	○	○
D1000~D1099	PID1	P.I.D setting-1	○	○
D1100~D1199	PID2	P.I.D setting-2	○	○
D1200~D1299	INPUT	Sensor Input setting	○	○
D1300~D1399	OUTPUT	Control&retransmission Output setting	○	○
D1400~D1499	D0 CONFIG1	D0(Digital Output) Relay setting-1	○	○
D1500~D1599	D0 CONFIG2	D0(Digital Output) Relay setting-2	○	○
D1600~D1699	DI CONFIG1	DI(Digital Input) setting	○	○
D1700~D1799	DI CONFIG2	DI NAME input-1	○	○
D1800~D1899	DI CONFIG3	DI NAME input-2	○	○
D1900~D1999	INITIAL1	Initial system setting-1	○	○
D2000~D2099	INITIAL2	Initial system setting-2	○	◆
D2100~D2199	PROGRAM	Program pattern profile setting	○	○
D2200~D2299	PATTERN INFO	Pattern profile information	○	◆
D2300~D3999	FILE1 ~ FILE17	Recorded Trend file information	○	◆

☞ D-Register is composed of hexadecimal 4 digit (2-Byte).

- ○ : Available to read / write over all designated address range.
- △ : Available to read / write in part of designated address range.
- ◆ : Not available to read / write over all designated address range.

7.1 PROCESS

PROCESS group consists of fundamental parameter information concerned with operation process and status. Below table describes the detail Bit Map information of some parameter that indicates its status by Bit.

■ Bit Map information of TEMP2520-1

BIT	CH1NOW.STS	CH2NOW.STS	CH1IS.STS	CH2IS.STS	CH1TS.STS	CH2TS.STS
	(D0010)	(D0011)	(D0012)	(D0013)	(D0014)	(D0015)
0	CH1.RESET	CH2.RESET	IS1	IS9	TS1	TS1
1	CH1.FIX	CH2.FIX	IS2	IS10	TS2	TS2
2	CH1.PROG	CH2.PROG	IS3	IS11	TS3	TS3
3	CH1.HOLD	CH2.HOLD	IS4	IS12	TS4	TS4
4	CH1.WAIT	CH2.WAIT	IS5	IS13	TS5	TS5
5	CH1.AT	CH2.AT	IS6	IS14	TS6	TS6
6			IS7	IS15	TS7	TS7
7			IS8	IS16	TS8	TS8
8						
9						
10						
11						
12						
13						
14						
15						

BIT	CH1ALM.STS	CH2ALM.STS	CH1SEGALM.STS	CH2SEGALM.STS	CH1ONOFF.STS	CH2ONOFF.STS
	(D0016)	(D0017)	(D0018)	(D0019)	(D0020)	(D0021)
0	ALM1	ALM5	SEGALM1	SEGALM1	T1	T8
1	ALM2	ALM6	SEGALM2	SEGALM2	T2	T9
2	ALM3	ALM7	SEGALM3	SEGALM3	T3	T10
3	ALM4	ALM8	SEGALM4	SEGALM4	T4	T11
4					T5	T12
5					T6	T13
6					T7	T14
7						
8						
9						
10						
11						
12						
13						
14						
15						

■ Bit Map information of TEMP2520-1

BIT	CH1ADERR.STS	CH2ADERR.STS	CH1DOCTR.STS	CH2DOCTR.STS	CH1CTR.STS	CH2CTR.STS
	(D0022)	(D0023)	(D0024)	(D0025)	(D0026)	(D0027)
0	+OVER	+OVER	RUN	RUN	RUN	RUN
1	-OVER	-OVER	WAIT	WAIT	WAIT	WAIT
2	S.OPN	S.OPN	UP	UP	UP	UP
3			DOWN	DOWN	DOWN	DOWN
4			SOAK	SOAK	SOAK	SOAK
5			FEND	FEND	FEND	FEND
6			PTEND	PTEND	PTEND	PTEND
7			1REF	1REF	1REF	1REF
8			2REF	2REF	2REF	2REF
9						
10						
11						
12						
13						
14						
15						

BIT	D0.STS1	D0.STS2	D1.DATA	SYS.STS		
	(D0028)	(D0029)	(D0030)	(D0031)		
0	D01	D017	D11	DISP.COMERR		
1	D02	D018	D12	IO.COMERR		
2	D03	D019	D13	SD.INSERT		
3	D04	D020	D14			
4	D05	D021	D15			
5	D06	D022	D16			
6	D07	D023	D17			
7	D08	D024	D18			
8	D09	D025	D19			
9	D010	D026	D110			
10	D011	D027	D111			
11	D012	D028	D112			
12	D013	D029	D113			
13	D014	D030	D114			
14	D015	D031	D115			
15	D016	D032	D116			

■ Bit Map status information D-Register

D-Reg.	기 호	내 용
D0010	CH1NOW.STS	[CH1] Current operation status information.
D0011	CH2NOW.STS	[CH2] Current operation status information.
D0012	CH1IS.STS	[CH1] INNER signal generating status information.
D0013	CH2IS.STS	[CH2] INNER signal generating status information.
D0014	CH1TS.STS	[CH1] TIME signal generating status information.
D0015	CH2TS.STS	[CH2] TIME signal generating status information.
D0016	CH1ALM.STS	[CH1] ALARM signal generating status information.
D0017	CH2ALM.STS	[CH2] ALARM signal generating status information.
D0018	CH1SEGALM.STS	[CH1] SEGMENT ALARM signal generating status information.
D0019	CH2SEGALM.STS	[CH2] SEGMENT ALARM signal generating status information.
D0020	CH1ONOFF.STS	[CH1] ON/OFF signal generating status information.
D0021	CH2ONOFF.STS	[CH2] ON/OFF signal generating status information.
D0022	CH1ADERR.STS	[CH1] Error status out of control range.
D0023	CH2ADERR.STS	[CH2] Error status out of control range.
D0024	CH1DOCTR.STS	[CH1] Other D0 signal generating status information.
D0025	CH2DOCTR.STS	[CH2] Other D0 signal generating status information.
D0026	CH1CTR.STS	[CH1] Displayed D0 signal status information on 2 nd Oper screen.
D0027	CH2CTR.STS	[CH2] Displayed D0 signal status information on 2 nd Oper screen.
D0028	DO.STS1	Actual generating Do signal status through I/O board.
D0029	DO.STS2	
D0030	DI.DATA	DI Error outbreak status information.
D0031	SYS.STS	The main control and display or the main control and I / O relay board Communication error occurs and the SD card used in the information indicates.

■ Common process information D-Register for both PROG / FIX

D-Reg.	기 호	내 용
D0001	CH1.NPV	[CH1] Current PV
D0002	CH2.NPV	[CH2] Current PV
D0003	CH1.NSP	[CH1] Current SP
D0004	CH2.NSP	[CH2] Current SP
D0005	CH1.MVOUT	[CH1] Current control output
D0006	CH2.MVOUT	[CH2] Current control output
D0007	CH1.CPIDNO	[CH1] Currently running PID number
D0008	CH2.CPIDNO	[CH2] Currently running PID number
D0034	CH1RUN.TIME_H	[CH1] Process time (Hour)
D0035	CH1RUN.TIME_M	[CH1] Process time (Minute)
D0036	CH1RUN.TIME_S	[CH1] Process time (Second)
D0037	CH2RUN.TIME_H	[CH2] Process time (Hour)
D0038	CH2RUN.TIME_M	[CH2] Process time (Minute)
D0039	CH2RUN.TIME_S	[CH2] Process time (Second)
D0071	CH1.CMVOUT	[CH1] [HEAT] Current control output
D0072	CH1.CMVOUT	[CH1] [COOL] Current control output
D0073	CH2.CMVOUT	[CH2] [HEAT] Current control output
D0074	CH2.CMVOUT	[CH2] [COOL] Current control output

PROGRAM operation process information D-Register

D-Reg.	기 호	내 용
D0040	CH1RUN.PTNO	[CH1] Currently running program pattern number
D0041	CH1RUN.SEGNO	[CH1] Currently running program segment number
D0042	CH2RUN.PTNO	[CH2] Currently running program pattern number
D0043	CH2RUN.SEGNO	[CH2] Currently running program segment number
D0044	CH1NOW.PT.RPT	[CH1] Count of current Repeat operation at running pattern
D0045	CH1TOTAL.PT.RPT	[CH1] Total Programmed Count of Repeat op. at running pattern
D0046	CH2NOW.PT.RPT	[CH2] Count of current Repeat operation at running pattern
D0047	CH2TOTAL.PT.RPT	[CH2] Total Programmed Count of Repeat op. at running pattern
D0048	CH1NOW.SEG.RPT	[CH1] Count of current Repeat operation at running segment
D0049	CH1TOTAL.SEG.RPT	[CH1] Total Programmed Count of Repeat op. at running segment
D0050	CH2NOW.SEG.RPT	[CH2] Count of current Repeat operation at running segment
D0051	CH2TOTAL.SEG.RPT	[CH2] Total Programmed Count of Repeat op. at running segment
D0052	CH1NOW.SEGTM_H	[CH1] Process time(High) of currently running segment
D0053	CH1NOW.SEGTM_L	[CH1] Process time(Low) of currently running segment
D0054	CH1TOTAL.SEGTM_H	[CH1] Process time(High) of currently running segment
D0055	CH1TOTAL.SEGTM_L	[CH1] Process time(Low) of currently running segment
D0056	CH2NOW.SEGTM_H	[CH2] Programmed total time(High) of currently running segment
D0057	CH2NOW.SEGTM_L	[CH2] Programmed total time(Low) of currently running segment
D0058	CH2TOTAL.SEGTM_H	[CH2] Programmed total time(High) of currently running segment
D0059	CH2TOTAL.SEGTM_L	[CH2] Programmed total time(Low) of currently running segment
D0060	CH1PREV.TSP	[CH1] Target Set Point of the preceding segment
D0061	CH1NOW.TSP	[CH1] Target Set Point of the current segment
D0062	CH2PREV.TSP	[CH2] Target Set Point of the preceding segment
D0063	CH2NOW.TSP	[CH2] Target Set Point of the current segment
D0065	USED PATTERN	Total number of programmed pattern
D0066	USED SEGMENT	Total number of programmed segment

7.2 FUNCTION Group

FUNCTION group consists of setting parameter D-register related with operational function and process.

■ Common Operational Function setting D-Register for both PROG / FIX

D-Reg.	Symbol	Descriptions
D0112	CH1.FUZZY	[CH1] FUZZY Function (0:OFF, 1:ON)
D0113	CH2.FUZZY	[CH2] FUZZY Function (0:OFF, 1:ON)
D0121	KEYLOCK	KEYLOCK Function (0:OFF, 1:ON)
D0122	RS.SYNC	Set whether to use synchronous operation (0:SYNC, 1:ASYN)
D0126	DRAW.CYCLE	Sampling time for recording on internal memory
D0127	PV.GRP.RECORD	Activating to record on internal memory (0:OFF, 1:ON)
D0130	REC.OP	Activating to record on SD memory card (0:OFF, 1:ON)
D0131	REC.CYCLE	Sampling time for recording on SD memory card
D0132	BACK.ITEM	BACKUP ITEM setting(0:PTN, 1:PARA, 2:ALL)
D0133	BACK.DIR	BACKUP DIRECTION setting
D0136	CH1.AT	[CH1] Carrying out Auto-Tuning (0:OFF, 1:ON)
D0137	CH2.AT	[CH2] Carrying out Auto-Tuning (0:OFF, 1:ON)
D0150	PV.FONT	PV FONT select (0:HEAD, 1:NORM, 2:ART)
D0151	BUZ.ONOFF	Buzzer sound (0: UNUSE, 1: USE)
D0152	LIGHT.OFFTM	Backlight ON time
D0153	CH.ROT.TIME	Channel change time display setting
D0160	UTAG_USING	Tags enable (0:OFF, 1:ON)
D0161 ~ D0163	CH1UTAG.NAME1~ CH1UTAG.NAME3	[CH1] Tag name is set up to 6 digits.
D0164 ~ D0166	CH2UTAG.NAME1~ CH2UTAG.NAME3	[CH2] Tag name is set up to 6 digits.

■ PROGRAM Operation & Function setting D-Register

D-Reg.	Symbol	Descriptions
D0100	CH1SET.PTNO	[CH1] Pattern Number to run program operation
D0101	CH2SET.PTNO	[CH2] Pattern Number to run program operation
D0140	CH1WAIT.USE	[CH1] WAIT Function (0:UNUSE, 1:USE)
D0141	CH2WAIT.USE	[CH2] WAIT Function (0:UNUSE, 1:USE)
D0142	CH1WAIT_ZONE	[CH1] WAIT ZONE setting
D0143	CH2WAIT_ZONE	[CH2] WAIT ZONE setting
D0144	CH1WAIT_TIME	[CH1] WAIT TIME setting
D0145	CH2WAIT_TIME	[CH2] WAIT TIME setting
D0146	CH1WAIT.METHOD	[CH1] Target of WAIT function (0:ALL, 1:SEG)
D0147	CH2WAIT.METHOD	[CH2] Target of WAIT function (0:ALL, 1:SEG)

■ FIX Operation & Function setting D-Register

D-Reg.	기 호	내 용
D0104	CH1FIX.TSP	[CH1] Set Point on FIX operation
D0105	CH2FIX.TSP	[CH2] Set Point on FIX operation
D0110	CH1.SLOPE	[CH1] UP/DOWN Setting the slope
D0111	CH2.SLOPE	[CH2] UP/DOWN Setting the slope
D0114	CH1TIME.OP	[CH1] TIME OPERATION (0:UNUSE, 1:USE)
D0115	CH1TIME.OP_H	[CH1] HOUR setting for TIME OPERATION
D0116	CH1TIME.OP_M	[CH1] MINUTE & SEC setting for TIME OPERATION
D0117	CH2TIME.OP	[CH2] TIME OPERATION (0:UNUSE, 1:USE)
D0118	CH2TIME.OP_H	[CH2] HOUR setting for TIME OPERATION
D0119	CH2TIME.OP_M	[CH2] MINUTE & SEC setting for TIME OPERATION

■ OPERATION mode & performance setting D-Register

D-Reg.	Symbol	Process method	Setting	Description
D0102	CH1COM.OPMODE	RUN	1	[CH1] Start running PROG/FIX Oper
		HOLD	2	[CH1] HOLD ON/OFF
		STEP	3	[CH1] Segment STEP
		STOP	4	[CH1] Stop PROG/FIX Operation
D0103	CH2COM.OPMODE	RUN	1	[CH2] Start running PROG/FIX Oper
		HOLD	2	[CH2] HOLD ON/OFF
		STEP	3	[CH2] Segment STEP
		STOP	4	[CH2] Stop PROG/FIX Operation
D0106	CH1OP.MODE	PROG	0	[CH1] Set PROG Operation MODE
		FIX	1	[CH1] Set FIX Operation MODE
D0107	CH2OP.MODE	PROG	0	[CH2] Set PROG Operation MODE
		FIX	1	[CH2] Set FIX Operation MODE
D0108	CH1PWR.MODE	STOP	0	[CH1] Not using Power-Mode
		COLD	1	[CH1] COLD MODE
		HOT	2	[CH1] HOT MODE
D0109	CH2PWR.MODE	STOP	0	[CH2] Not using Power-Mode
		COLD	1	[CH2] COLD MODE
		HOT	2	[CH2] HOT MODE

☞ To activate PROG operation RUN or FIX operation RUN, TEMP2520 should be in individual corresponding STOP(PROG STOP/FIX STOP) state. For example, to activate PROG operation RUN from currently operating [CH1]FIX RUN state, convert the operation state to PROG STOP (D0106 = 0000, D0102 = 0004) first, then you can activate PROG operation RUN.

7.3 RESERVATION Group

RESERVATION TEMP2520 hours of group identification, and book set, PROGRAM driver's start time and end time of operation consists of related D-Register.

■ TIME setting and information D-Register

D-Reg.	Symbol	Description	Read	Write
D0202	NOW.YEAR	Current YEAR installed in TEMP2520	○	×
D0203	NOW.MONTH	Current MONTH installed in TEMP2520	○	×
D0204	NOW.DAY	Current DAY installed in TEMP2520	○	×
D0205	NOW.AMPM	Current TIME-AM/PM installed in TEMP2520	○	×
D0206	NOW.HOUR	Current HOUR installed in TEMP2520	○	×
D0207	NOW.MIN	Current MN. installed in TEMP2520	○	×
D0208	C.YEAR	Current YEAR setting in TEMP2520	×	○
D0209	C.MONTH	Current MONTH setting in TEMP2520	×	○
D0210	C.DAY	Current DAY setting in TEMP2500	×	○
D0211	C.AMPM	Current TIME-AM/PM setting in TEMP2520	×	○
D0212	C.HOUR	Current HOUR setting in TEMP2520	×	○
D0213	C.MIN	Current MN. setting in TEMP2520	×	○
D0214	CH1R.YEAR	[CH1] YEAR setting for RESERVE Operation	○	○
D0215	CH1R.MONTH	[CH1] MONTH setting for RESERVE Operation	○	○
D0216	CH1R.DAY	[CH1] DAY setting for RESERVE Operation	○	○
D0217	CH1R.AMPM	[CH1] TIME-AM/PM setting for RESERVE Operation	○	○
D0218	CH1R.HOUR	[CH1] HOUR setting for RESERVE Operation	○	○
D0219	CH1R.MIN	[CH1] MIN. setting for RESERVE Operation	○	○
D0220	CH2R.YEAR	[CH2] YEAR setting for RESERVE Operation	○	○
D0221	CH2R.MONTH	[CH2] MONTH setting for RESERVE Operation	○	○
D0222	CH2R.DAY	[CH2] DAY setting for RESERVE Operation	○	○
D0223	CH2R.AMPM	[CH2] TIME-AM/PM setting for RESERVE Operation	○	○
D0224	CH2R.HOUR	[CH2] HOUR setting for RESERVE Operation	○	○
D0225	CH2R.MIN	[CH2] MIN. setting for RESERVE Operation	○	○

■ RESERVE Operation

D-Reg.	기 호	운전내용	설정치	내 용
D0200	CH1RESERVE	OFF	0	[CH1] Release RESERVE Oper
		ON	1	[CH1] Set RESERVE Oper
D0201	CH2RESERVE	OFF	0	[CH2] Release RESERVE Oper
		ON	1	[CH2] Set RESERVE Oper

PROGRAM Start time and end time running

D-Reg.	Symbol	Description
D0260	CH1_TIME_VALID	[CH1] Show start time and end time (0: Normal, 1:---.-)
D0261	CH1_START_YEAR	[CH1] Setting start time (Year)
D0262	CH1_START_MON	[CH1] Setting start time (Month)
D0263	CH1_START_DAY	[CH1] Setting start time (Day)
D0264	CH1_START_HOUR	[CH1] Setting start time (Hour)
D0265	CH1_START_MIN	[CH1] Setting start time (Min)
D0266	CH1_END_YEAR	[CH1] Setting end time (Year)
D0267	CH1_END_MON	[CH1] Setting end time (Month)
D0268	CH1_END_DAY	[CH1] Setting end time (Day)
D0269	CH1_END_HOUR	[CH1] Setting end time (Hour)
D0270	CH1_END_MIN	[CH1] Setting end time (Min)
D0271	CH2TIME_VALID	[CH2] Show start time and end time (0: Normal, 1:---.-)
D0272	CH2_START_YEAR	[CH2] Setting start time (Year)
D0273	CH2_START_MON	[CH2] Setting start time (Month)
D0274	CH2_START_DAY	[CH2] Setting start time (Day)
D0275	CH2_START_HOUR	[CH2] Setting start time (Hour)
D0276	CH2_START_MIN	[CH2] Setting start time (Min)
D0277	CH2_END_YEAR	[CH2] Setting end time (Year)
D0278	CH2_END_MON	[CH2] Setting end time (Month)
D0279	CH2_END_DAY	[CH2] Setting end time (Day)
D0280	CH2_END_HOUR	[CH2] Setting end time (Hour)
D0281	CH2_END_MIN	[CH2] Setting end time (Min)

7.4 ON/OFF SIGNAL Group

This setting parameter D-register group is used to establish 6 ON/OFF SIGNALs for [CH1] and 6 ON/OFF SIGNALs for [CH2].

■ [CH1] ON/OFF SIGNAL setting D-Register

D-Reg.	Symbol	Description
D0301	T1.LSP	[CH1] Low SP for ON/OFF SIGNAL T1.
D0302	T1.MSP	[CH1] Middle SP for ON/OFF SIGNAL T1.
D0303	T1.HSP	[CH1] High SP for ON/OFF SIGNAL T1.
D0304	T1.HDV	[CH1] High zone Deviation for operating Point at High Zone T1.
D0305	T1.LDV	[CH1] Low zone Deviation for operating Point at Low Zone T1.
.	.	.
.	.	.
.	.	.
D0336	T6.LSP	[CH1] Low SP for ON/OFF SIGNAL T6.
D0337	T6.MSP	[CH1] Middle SP for ON/OFF SIGNAL T6.
D0338	T6.HSP	[CH1] High SP for ON/OFF SIGNAL T6.
D0339	T6.HDV	[CH1] High zone Deviation for operating Point at High Zone T6.
D0340	T6.LDV	[CH1] Low zone Deviation for operating Point at Low Zone T6.

■ [CH2] ON/OFF SIGNAL setting D-Register

D-Reg.	Symbol	Description
D0343	T8.LSP	[CH2] Low SP for ON/OFF SIGNAL T8.
D0344	T8.MSP	[CH2] Middle SP for ON/OFF SIGNAL T8.
D0345	T8.HSP	[CH2] High SP for ON/OFF SIGNAL T8.
D0346	T8.HDV	[CH2] High zone Deviation for operating Point at High Zone T8.
D0347	T8.LDV	[CH2] Low zone Deviation for operating Point at Low Zone T8.
.	.	.
.	.	.
.	.	.
D0378	T13.LSP	[CH2] Low SP for ON/OFF SIGNAL T13.
D0379	T13.MSP	[CH2] Middle SP for ON/OFF SIGNAL T13.
D0380	T13.HSP	[CH2] High SP for ON/OFF SIGNAL T13.
D0381	T13.HDV	[CH2] High zone Deviation for operating Point at High Zone T13.
D0382	T13.LDV	[CH2] Low zone Deviation for operating Point at Low Zone T13.

7.5 INNER SIGNAL Group

This setting parameter D-register group is used to establish 8 INNER SIGNALs for [CH1] and 8 INNER SIGNALs for [CH2].

■ [CH1] INNER SIGNAL setting D-Register

D-Reg.	Symbol	Descriptions
D0401	IS1.TYPE	[CH1] Object Type of Target of INNER SIGNAL1. (0:SP, 1:PV, 2:TSP)
D0402	IS1.BAND	[CH1] Direction Band of INNER SIGNAL1. (0:IN-B, 1:OUT-B)
D0403	IS1.RH	[CH1] Range High of INNER SIGNAL1.
D0404	IS1.RL	[CH1] Range Low of INNER SIGNAL1.
D0405	IS1.DYT	[CH1] DELAY TIME of INNER SIGNAL1.
.	.	.
.	.	.
.	.	.
D0443	IS8.TYPE	[CH1] Object Type of Target of INNER SIGNAL8. (0:SP, 1:PV, 2:TSP)
D0444	IS8.BAND	[CH1] Direction Band of INNER SIGNAL8. (0:IN-B, 1:OUT-B)
D0445	IS8.RH	[CH1] Range High of INNER SIGNAL8.
D0446	IS8.RL	[CH1] Range Low of INNER SIGNAL8.
D0447	IS8.DYT	[CH1] DELAY TIME of INNER SIGNAL8.

■ [CH2] INNER SIGNAL setting D-Register

D-Reg.	Symbol	Descriptions
D0449	IS9.TYPE	[CH2] Object Type of Target of INNER SIGNAL2. (0:SP, 1:PV, 2:TSP)
D0450	IS9.BAND	[CH2] Direction Band of INNER SIGNAL2. (0:IN-B, 1:OUT-B)
D0451	IS9.RH	[CH2] Range High of INNER SIGNAL2
D0452	IS9.RL	[CH2] Range Low of INNER SIGNAL2.
D0453	IS9.DYT	[CH2] DELAY TIME of INNER SIGNAL2.
.	.	.
.	.	.
.	.	.
D0491	IS16.TYPE	[CH2] Object Type of Target of INNER SIGNAL16. (0:SP, 1:PV, 2:TSP)
D0492	IS16.BAND	[CH2] Direction Band of INNER SIGNAL16. (0:IN-B, 1:OUT-B)
D0493	IS16.RH	[CH2] Range High of INNER SIGNAL16.
D0494	IS16.RL	[CH2] Range Low of INNER SIGNAL16.
D0495	IS16.DYT	[CH2] DELAY TIME of INNER SIGNAL16.

7.6 ALARM SIGNAL Group

This setting parameter D-register group is used to establish 4 ALARM SIGNALs for [CH1] and 4 ALARM SIGNALs for [CH2].

■ [CH1] ALARM signal setting D-Register

D-Reg.	Symbol	Descriptions
D0501	CH1ALM.OP	[CH1] Condition of ALARM Operation. (0:RUN, 1:ALWAYS)
D0505	ALM1.TYPE	Type of ALARM signal 1
D0506	ALM1.POINT	Target Point of ALARM signal 1
D0507	ALM1.H_POINT	Limit High point of ALARM signal 1
D0508	ALM1.L_POINT	Limit Low point of ALARM signal 1
D0509	ALM1.HYS	Hysteresis of ALARM signal 1
D0510	ALM1.DYT	DELAY TIME of ALARM signal 1
.	.	.
.	.	.
.	.	.
D0526	ALM4.TYPE	Type of ALARM signal 4
D0527	ALM4.POINT	Target Point of ALARM signal 4
D0528	ALM4.H_POINT	Limit High point of ALARM signal 4
D0529	ALM4.L_POINT	Limit Low point of ALARM signal 4
D0530	ALM4.HYS	Hysteresis of ALARM signal 4
D0531	ALM4.DYT	DELAY TIME of ALARM signal 4

■ [CH2] ALARM signal setting D-Register

D-Reg.	Symbol	Descriptions
D0502	CH2ALM.OP	[CH2] Condition of ALARM Operation. (0:RUN, 1:ALWAYS)
D0533	ALM5.TYPE	Type of ALARM signal 5
D0534	ALM5.POINT	Target Point of ALARM signal 5
D0535	ALM5.H_POINT	Limit High point of ALARM signal 5
D0536	ALM5.L_POINT	Limit Low point of ALARM signal 5
D0537	ALM5.HYS	Hysteresis of ALARM signal 5
D0538	ALM5.DYT	DELAY TIME of ALARM signal 5
.	.	.
.	.	.
.	.	.
D0554	ALM8.TYPE	Type of ALARM signal 8
D0555	ALM8.POINT	Target Point of ALARM signal 8
D0556	ALM8.H_POINT	Limit High point of ALARM signal 8
D0557	ALM8.L_POINT	Limit Low point of ALARM signal 8
D0558	ALM8.HYS	Hysteresis of ALARM signal 8
D0559	ALM8.DYT	DELAY TIME of ALARM signal 8

7.7 SEGMENT ALARM SIGNAL Group

This setting parameter D-register group is used to establish 8 SEGMENT ALARM SIGNALs for [CH1] and 8 SEGMENT ALARM SIGNALs for [CH2].

■ [CH1] SEGMENT ALARM signal setting D-Register

D-Reg.	Symbol	Descriptions
D0601	CH1SA1.TYPE	[CH1] Type of SEGMENT ALARM signal 1.
D0602	CH1SA1.POINT	[CH1] Target Point of SEGMENT ALARM signal 1.
D0603	CH1SA1.H_POINT	[CH1] Limit High point of SEGMENT ALARM signal 1.
D0604	CH1SA1.L_POINT	[CH1] Limit Low point of SEGMENT ALARM signal 1.
D0605	CH1SA1.HYS	[CH1] Hysteresis of SEGMENT ALARM signal 1.
D0606	CH1SA1.DYT	[CH1] DELAY TIME of SEGMENT ALARM signal 1.
.	.	.
.	.	.
.	.	.
D0643	CH1SA8.TYPE	[CH1] Type of SEGMENT ALARM signal 8.
D0644	CH1SA8.POINT	[CH1] Target Point of SEGMENT ALARM signal 8.
D0645	CH1SA8.H_POINT	[CH1] Limit High point of SEGMENT ALARM signal 8.
D0646	CH1SA8.L_POINT	[CH1] Limit Low point of SEGMENT ALARM signal 8.
D0647	CH1SA8.HYS	[CH1] Hysteresis of SEGMENT ALARM signal 8.
D0648	CH1SA8.DYT	[CH1] DELAY TIME of SEGMENT ALARM signal 8.

■ [CH2] SEGMENT ALARM signal setting D-Register

D-Reg.	Symbol	Descriptions
D0651	CH2SA1.TYPE	[CH2] Type of SEGMENT ALARM signal 1.
D0652	CH2SA1.POINT	[CH2] Target Point of SEGMENT ALARM signal 1.
D0653	CH2SA1.H_POINT	[CH2] Limit High point of SEGMENT ALARM signal 1.
D0654	CH2SA1.L_POINT	[CH2] Limit Low point of SEGMENT ALARM signal 1.
D0655	CH2SA1.HYS	[CH2] Hysteresis of SEGMENT ALARM signal 1.
D0656	CH2SA1.DYT	[CH2] DELAY TIME of SEGMENT ALARM signal 1.
.	.	.
.	.	.
.	.	.
D0693	CH2SA8.TYPE	[CH2] Type of SEGMENT ALARM signal 8.
D0694	CH2SA8.POINT	[CH2] Target Point of SEGMENT ALARM signal 8.
D0695	CH2SA8.H_POINT	[CH2] Limit High point of SEGMENT ALARM signal 8.
D0696	CH2SA8.L_POINT	[CH2] Limit Low point of SEGMENT ALARM signal 8.
D0697	CH2SA8.HYS	[CH2] Hysteresis of SEGMENT ALARM signal 8.
D0698	CH2SA8.DYT	[CH2] DELAY TIME of SEGMENT ALARM signal 8.

7.8 TIME SIGNAL Group

This setting parameter D-register group is used to establish 19 TIME SIGNALs.

■ TIME SIGNAL setting D-Register

D-Reg.	Symbol	Descriptions
D0701	TS2DYTM_H	DELAY TIME (HOUR) of generating TIME SIGNAL 2.
D0702	TS2DYTM_L	DELAY TIME (MIN. & SEC.) of generating TIME SIGNAL 2.
D0703	TS2KPTM_H	OPER.TIME (HOUR) to keep generating TIME SIGNAL 2.
D0704	TS2KPTM_L	OPER.TIME (MIN. & SEC.) to keep generating TIME SIGNAL 2.
.	.	.
.	.	.
.	.	.
D0773	TS20DYTM_H	DELAY TIME (HOUR) of generating TIME SIGNAL 20.
D0774	TS20DYTM_L	DELAY TIME (MIN. & SEC.) of generating TIME SIGNAL 20.
D0775	TS20KPTM_H	OPER.TIME (HOUR) to keep generating TIME SIGNAL 20.
D0776	TS20KPTM_L	OPER.TIME (MIN. & SEC.) to keep generating TIME SIGNAL 20.

7.9 COMMUNICATION Group

This group is consists of information parameter D-Register concerned communication.

■ COMMUNICATION concerned information D-Register

D-Reg.	Symbol	Descriptions
D0801	COM2.PROTOCOL	[COM2] Communication Protocol information
D0802	COM2.BPS	[COM2] Communication speed (Baud Rate) information.
D0803	COM2.PARITY	[COM2] Parity information.
D0804	COM2.STOP.BIT	[COM2] Stop Bit information.
D0805	COM2.DATA.LENGTH	[COM2] Data Length information.
D0806	COM2.ADDRESS	[COM2] Slave Address information.
D0807	COM2.RESPONSE	[COM2] Response Time information.
D0808	COM4.BPS	[COM4] Communication speed (Baud Rate) information.
D0809	SYNC.MST	SYNC Master. (0:OFF, :CH1, 2:CH2)

7.10 PICTURE Group

PICTURE group consists of setting parameter D-Register for User Screen viewer.

■ PICTURE setting D-Register

D-Reg.	Symbol	Descriptions
D0901	VIEW.ROTATE	Setting for using User Screen viewer.
D0902	R.ST_TIME	START TIME by no key input to activate User Screen Viewer
D0903	R.INT_TIME	INTERVAL TIME to display next image.

7.11 PID Group

This setting parameter D-register group is used to establish 6 PID GROUP for [CH1] and 6 PID GROUP for [CH2].

■ PID setting D-Register

D-Reg.	Symbol	Descriptions
D1001	CH1.RP1	[CH1] Reference Point 1 (T1) to define PID ZONE.
D1002	CH1.RP2	
D1003	CH1.RP3	
D1004	CH1.RP4	
D1005	CH2.RP1	[CH2] Reference Point 1 (T1) to define PID ZONE.
D1006	CH2.RP2	
D1007	CH2.RP3	
D1008	CH2.RP4	
D1009	CH1.RHYS	[CH1] Selects hysteresis when ZONE PID.
D1010	CH1.RDEV	[CH1] Sets deviation for selecting deviation PID.
D1011	CH2.RHYS	[CH2] Selects hysteresis when ZONE PID.
D1012	CH2.RDEV	[CH2] Sets deviation for selecting deviation PID.
D1013	CH1.CMOD	[CH1] Select the control method. (0:D.PV, 1:D.DV)
D1014	CH2.CMOD	[CH2] Select the control method. (0:D.PV, 1:D.DV)
D1015	CH1AT.POINT	[CH1] Auto-tuning sets the reference value.
D1016	CH2AT.POINT	[CH2] Auto-tuning sets the reference value.
D1017	CH1AT.DISPLAY	[CH1] Setting to display or hide AT KEY. (0:HIDE, 1:DISPLAY)
D1018	CH2AT.DISPLAY	[CH2] Setting to display or hide AT KEY. (0:HIDE, 1:DISPLAY)
D1019	CH1PID.OPMODE	[CH1] Select sets of PID. (0:SEG, 1:ZONE)
D1020	CH2PID.OPMODE	[CH2] Select sets of PID. (0:SEG, 1:ZONE)
D1021	CH1PID.APP	[CH1] ZONE PID sets of selection criteria. (0:PV, 1:SP)
D1022	CH2PID.APP	[CH2] ZONE PID sets of selection criteria. (0:PV, 1:SP)
D1065	1.CH1DB	[CH1] Set the DEADBAND of PID1
.	.	.
.	.	.
.	.	.
D1076	6.CH2DB	[CH2] Set the DEADBAND of PID6
D1079	CH1HCHYS	[CH1] Set the value of the internal output hysteresis.
D1080	CH2HCHYS	[CH2] Set the value of the internal output hysteresis.

■ [CH1] Heating(Normal) PID setting D-Register

D-Reg.	Symbol	Descriptions
D1101	CH1.1_P	[CH1] Proportional band of PID1
D1102	CH1.1_I	[CH1] Integral time of PID1
D1103	CH1.1_D	[CH1] Differential time of PID1
D1104	CH1.1_OH	[CH1] Control Output High limit of PID1
D1105	CH1.1_OL	[CH1] Control Output Low limit of PID1
D1106	CH1.1_MR	[CH1] Integral time of PID1 is set manually
D1107	CH1.1_HHYS	[CH1] PID1 the ON / OFF control hysteresis High limit is set at
D1108	CH1.1_LHYS	[CH1] PID1 the ON / OFF control hysteresis at the Low setting
.	.	.
.	.	.
.	.	.
D1141	CH1.6_P	[CH1] Proportional band of PID6
D1142	CH1.6_I	[CH1] Integral time of PID6
D1143	CH1.6_D	[CH1] Differential time of PID6
D1144	CH1.6_OH	[CH1] Control Output High limit of PID6
D1145	CH1.6_OL	[CH1] Control Output Low limit of PID6
D1146	CH1.6_MR	[CH1] Integral time of PID1 is set manually
D1147	CH1.6_HHYS	[CH1] PID6 the ON / OFF control hysteresis High limit is set at
D1148	CH1.6_LHYS	[CH1] PID6 the ON / OFF control hysteresis at the Low setting

■ [CH2] Heating(Normal) PID setting D-Register

D-Reg.	Symbol	Descriptions
D1151	CH2.1_P	[CH2] Proportional band of PID1
D1152	CH2.1_I	[CH2] Integral time of PID1
D1153	CH2.1_D	[CH2] Differential time of PID1
D1154	CH2.1_OH	[CH2] Control Output High limit of PID1
D1155	CH2.1_OL	[CH2] Control Output Low limit of PID1
D1156	CH2.1_MR	[CH2] Integral time of PID1 is set manually
D1157	CH2.1_HHYS	[CH2] PID1 the ON / OFF control hysteresis High limit is set at
D1158	CH2.1_LHYS	[CH2] PID1 the ON / OFF control hysteresis at the Low setting
.	.	.
.	.	.
.	.	.
D1191	CH2.6_P	[CH2] Proportional band of PID6
D1192	CH2.6_I	[CH2] Integral time of PID6
D1193	CH2.6_D	[CH2] Differential time of PID6
D1194	CH2.6_OH	[CH2] Control Output High limit of PID6
D1195	CH2.6_OL	[CH2] Control Output Low limit of PID6
D1196	CH2.6_MR	[CH2] Integral time of PID1 is set manually
D1197	CH2.6_HHYS	[CH2] PID6 the ON / OFF control hysteresis High limit is set at
D1198	CH2.6_LHYS	[CH2] PID6 the ON / OFF control hysteresis at the Low setting

■ [CH1] Cooling PID setting D-Register

D-Reg.	Symbol	Descriptions
D1101	CH1.1_CP	[CH1] Proportional band of PID1
D1102	CH1.1_CI	[CH1] Integral time of PID1
D1103	CH1.1_CD	[CH1] Differential time of PID1
.	.	.
.	.	.
.	.	.
D1141	CH1.6_CP	[CH1] Proportional band of PID6
D1142	CH1.6_CI	[CH1] Integral time of PID6
D1143	CH1.6_CD	[CH1] Differential time of PID6

■ [CH2] Cooling PID setting D-Register

D-Reg.	Symbol	Descriptions
D1151	CH2.1_CP	[CH2] Proportional band of PID1
D1152	CH2.1_CI	[CH2] Integral time of PID1
D1153	CH2.1_CD	[CH2] Differential time of PID1
.	.	.
.	.	.
.	.	.
D1191	CH2.6_CP	[CH2] Proportional band of PID6
D1192	CH2.6_CI	[CH2] Integral time of PID6
D1193	CH2.6_CD	[CH2] Differential time of PID6

7.12 INPUT Group

This INPUT group is used for setting parameter D-Register for sensor and its bias.

■ [CH1] INPUT setting D-Register

D-Reg.	Symbol	Descriptions
D1201	CH1.SENGP	[CH1] Select the sensor group. (0:T/C, 1:RTD, 2:DCV)
D1202	CH1.SENTP	[CH1] Sets the type of sensor.
D1203	CH1.UNIT	[CH1] Sets the sensor unit.
D1204	CH1.DP	[CH1] Set-point position.
D1205	CH1.TCSL	[CH1] T/C select show (0:T/C, 1:T/C+RJC, 2:RJC)
D1206	CH1.SOPN.SEL	[CH1] Sensors-open, pv select the direction. (0:UNSET, 1:UP, 2:DOWN)
D1207	CH1.INRH	[CH1] Sets the High limit range of use.
D1208	CH1.INRL	[CH1] Sets the Low limit range of use.
D1209	CH1.BIAS	[CH1] Sets the previous range revision value.
D1210	CH1.INFL	[CH1] Removes noise when measuring input includes noise of high frequency.
D1212	CH1.INSH	[CH1] Scale sets the High limit.
D1213	CH1.INSL	[CH1] Scale sets the Low limit.
D1231~D1238	CH1.BP1.DDV ~ CH1.BP8.DDV	[CH1] Sets revision temperature at each standard temperature.
D1239~D1246	CH1.BP1.DPV ~ CH1.BP8.DPV	[CH1] Sets each standard temperature.
D1270,D2071	UNITNAME1, UNITNAME2	[CH1] Setting the unit name for DCV sensor.

■ [CH2] INPUT setting D-Register

D-Reg.	Symbol	Descriptions
D1216	CH2.SENGP	[CH2] Select the sensor group. (0:T/C, 1:RTD, 2:DCV)
D1217	CH2.SENTP	[CH2] Sets the type of sensor.
D1218	CH2.UNIT	[CH2] Sets the sensor unit.
D1219	CH2.DP	[CH2] Set-point position.
D1220	CH2.TCSL	[CH2] T/C select show (0:T/C, 1:T/C+RJC, 2:RJC)
D1221	CH2.SOPN.SEL	[CH2] Sensors-open, pv select the direction. (0:UNSET, 1:UP, 2:DOWN)
D1222	CH2.INRH	[CH2] Sets the High limit range of use.
D1223	CH2.INRL	[CH2] Sets the Low limit range of use.
D1224	CH2.BIAS	[CH2] Sets the previous range revision value.
D1225	CH2.INFL	[CH2] Removes noise when measuring input includes noise of high frequency.
D1227	CH2.INSH	[CH2] Scale sets the High limit.
D1228	CH2.INSL	[CH2] Scale sets the Low limit.
D1249~D1256	CH2.BP1.DDV ~ CH2.BP8.DDV	[CH2] Sets revision temperature at each standard temperature.
D1257~D1264	CH2.BP1.DPV ~ CH2.BP8.DPV	[CH2] Sets each standard temperature.
D1272,D2073	UNITNAME1, UNITNAME2	[CH2] Setting the unit name for DCV sensor.

7.13 OUTPUT Group

This INPUT group is used for setting parameter D-Register for control output and retransmission.

■ [Common] Control output and retransmission setting D-Register

D-Reg.	Symbol	Descriptions
D1301~ D1304	OUT1.TYPE~ OUT4.TYPE	Setting the output terminal of OUT1~OUT4
D1341~D1344	OUT1.MODE~OUT4.MODE	Setting the output type of OUT1~OUT4(0:SSR, 1:SCR)

■ [1CH] Control output and retransmission setting D-Register

D-Reg.	Symbol	Descriptions
D1309	CH1.DIR	[CH1] Select the direction of behavior.(0:REV, 1:FWD)
D1311	CH1.ARW	[CH1] ARW(Anti Reset Wind-up) sets the value of prevention
D1313	CH1.UPOPR	[CH1] Change the setting up of the control output.
D1314	CH1.DNOPR	[CH1] Change the setting of control output is falling.
D1317	CH1.HCT	[CH1] [HEAT] Sets the output cycle.
D1319	CH1.HPO	[CH1] [HEAT] Output is in an emergency setting.
D1321	CH1.HATG	[CH1] [HEAT] Auto-Tuning GAIN value for Manual PID.
D1325	CH1.RETT	[CH1] Target object of transmission. (0:PV, 1:SP, 2:MV)
D1327	CH1.RETH	[CH1] Range High of transmission.
D1328	CH1.RETL	[CH1] Range Low of transmission.
D1334	CH1.CCT	[CH1] [COOL] Sets the output cycle.
D1336	CH1.CPO	[CH1] [COOL] Output is in an emergency setting.
D1338	CH1.CAGT	[CH1] [COOL] Auto-Tuning GAIN value for Manual PID.

■ [2CH] Control output and retransmission setting D-Register

D-Reg.	Symbol	Descriptions
D1310	CH2.DIR	[CH2] Select the direction of behavior.(0:REV, 1:FWD)
D1312	CH2.ARW	[CH2] ARW(Anti Reset Wind-up) sets the value of prevention
D1315	CH2.UPOPR	[CH2] Change the setting up of the control output.
D1316	CH2.DNOPR	[CH2] Change the setting of control output is falling.
D1318	CH2.CT	[CH2] [HEAT] Sets the output cycle.
D1320	CH2.PO	[CH2] [HEAT] Output is in an emergency setting.
D1322	CH2.ATG	[CH2] [HEAT] Auto-Tuning GAIN value for Manual PID.
D1326	CH2.RETT	[CH2] Target object of transmission. (0:PV, 1:SP, 2:MV)
D1329	CH2.RETH	[CH2] Range High of transmission.
D1330	CH2.RETL	[CH2] Range Low of transmission.
D1335	CH2.CCT	[CH2] [COOL] Sets the output cycle.
D1337	CH2.CPO	[CH2] [COOL] Output is in an emergency setting.
D1339	CH2.CAGT	[CH2] [COOL] Auto-Tuning GAIN value for Manual PID.

7.14 DO CONFIG Group

DO CONFIG group consists of setting and information parameter D-Register related to establish RELAY number on I/O board to generate signal and its sub setting for auxiliary Digital Output.

■ [CH1] DO CONFIG setting and information D-Register

D-Reg.	Symbol	Descriptions
D1401~D1408	CH1IS1.RLY~CH1IS8.RLY	[CH1] RELAY No.on I/O for INNER SIGNAL.
D1417~D1424	CH1TS1.RLY~CH1TS8.RLY	[CH1] RELAY No.on I/O for TIME SIGNAL.
D1433~D1436	CH1ALM1.RLY~CH1ALM4.RLY	[CH1] RELAY No.on I/O ALARM SIGNAL.
D1441~D1444	CH1SA1.RLY~CH1SA4.RLY	[CH1] RELAY No.on I/O SEGMENT ALARM SIGNAL.
D1449~D1462	CH1T1.RLY~CH1T7.DYT	[CH1] RELAY No.on I/O and DELAY TIME for ON/OFF SIGNAL.
D1501,D1502	CH1RUN.RLY,CH1RUN.DYT	[CH1] RELAY No.on I/O and DELAY TIME for RUN SIGNAL.
D1505,D1506	CH1SOPN.RLY,CH1SOPN.KPT	[CH1] RLY No.on I/O and KEEP TIME for SENSOR-OPEN SIGNAL.
D1509,D1510	CH1WAIT.RLY,CH1WAIT.KPT	[CH1] REALY No.on I/O and KEEP TIME for WAIT SIGNAL.
D1513,D1514	CH1UP.RLY,CH1UP.DEV	[CH1] RELAY No.on I/O and DEVIATION for UP SIGNAL.
D1517,D1518	CH1SOAK.RLY,CH1SOAK.KPT	[CH1] REALY No.on I/O and KEEP TIME for SOAK SIGNAL.
D1521,D1522	CH1DOWN.RLY,CH1DOWN.DEV	[CH1] RELAY No.on I/O and DEVIATION for DOWN SIGNAL.
D1525,D1526	CH1FEND.RLY,CH1FEND.KPT	[CH1] RLY No.on I/O and KEEP TIME for FIX-END SIGNAL.
D1529,D1530	CH1PTEND.RLY,CH1PTEND.KPT	[CH1] RLY No.on I/O and KEEP TIME for PROGRAM PTN-END SIGNAL.
D1533,D1534	CH1.1REF.RLY,CH1.1REF.DYT	[CH1] RELAY No.on I/O and DELAY TIME for 1 st Refrigerator oper.
D1535,D1536	CH1.2REF.RLY,CH1.2REF.DYT	[CH1] RELAY No.on I/O and DELAY TIME for 2 nd Refrigerator oper.
D1541,D1542	ERROR.RLY,ERROR.KPT	REALY No.on I/O and KEEP TIME for ERROR SIGNAL.
D1581,D1582	CH1FIXTIMER.RLY CH1FIXTIMER.DEV	RELAY No.on I/O and DEVIATION for FIXTIMER SIGNAL
D1583,D1584	CH1FIXTIMER.DLY CH1FIXTIMER.OPT	DELAY TIME and OPERATION TIME for FIXTIMER SIGNAL
D1591,D1592	UP.DEVSEL DN.DEVSEL	Set operation condition for UP/DOWN SIGNAL (Operating conditions 0:[TSP-NSP] ,1:[TSP-NPV])

■ [CH2] D0 CONFIG setting and information D-Register

D-Reg.	Symbol	Descriptions
D1409~D1416	CH2IS9.RLY~CH2IS16.RLY	[CH2] RELAY No.on I/O for INNER SIGNAL.
D1425~D1432	CH2TS1.RLY~CH2TS8.RLY	[CH2] RELAY No.on I/O for TIME SIGNAL.
D1437~D1440	CH2ALM5.RLY~CH2ALM8.RLY	[CH2] RELAY No.on I/O ALARM SIGNAL.
D1445~D1448	CH2SA1.RLY~CH2SA4.RLY	[CH2] RELAY No.on I/O SEGMENT ALARM SIGNAL.
D1463~D1476	CH2T8.RLY~CH2T14.DYT	[CH2] RELAY No.on I/O and DELAY TIME for ON/OFF SIGNAL.
D1503,D1504	CH2RUN.RLY,CH2RUN.DYT	[CH2] RELAY No.on I/O and DELAY TIME for RUN SIGNAL.
D1507,D1508	CH2SOPN.RLY,CH2SOPN.KPT	[CH2] RLY No.on I/O and KEEP TIME for SENSOR-OPEN SIGNAL.
D1511,D1512	CH2WAIT.RLY,CH2WAIT.KPT	[CH2] REALY No.on I/O and KEEP TIME for WAIT SIGNAL.
D1515,D1516	CH2UP.RLY,CH2UP.DEV	[CH2] RELAY No.on I/O and DEVIATION for UP SIGNAL.
D1519,D1520	CH2SOAK.RLY,CH2SOAK.KPT	[CH2] REALY No.on I/O and KEEP TIME for SOAK SIGNAL.
D1523,D1524	CH2DOWN.RLY,CH2DOWN.DEV	[CH2] RELAY No.on I/O and DEVIATION for DOWN SIGNAL.
D1527,D1528	CH2FEND.RLY,CH2FEND.KPT	[CH2] RLY No.on I/O and KEEP TIME for FIX-END SIGNAL.
D1531,D1532	CH2PTEND.RLY,CH2PTEND.KPT	[CH2] RLY No.on I/O and KEEP TIME for PROGRAM PTN-END SIGNAL.
D1537,D1538	CH2.1REF.RLY,CH2.1REF.DYT	[CH2] RELAY No.on I/O and DELAY TIME for 1 st Refrigerator oper.
D1539,D1540	CH2.2REF.RLY,CH2.2REF.DYT	[CH2] RELAY No.on I/O and DELAY TIME for 2 nd Refrigerator oper.
D1585,D1586	CH1FIXTIMER.RLY CH1FIXTIMER.DEV	RELAY No.on I/O and DEVIATION for FIXTIMER SIGNAL
D1587,D1588	CH1FIXTIMER.DLY CH1FIXTIMER.OPT	DELAY TIME and OPERATION TIME for FIXTIMER SIGNAL
D1593,D1594	UP.DEVSEL DN.DEVSEL	Set operation condition for UP/DOWN SIGNAL (Operating conditions 0:[TSP-NSP] ,1:[TSP-NPV])

■ D0 릴레이 설정 관련 공통 D-Register

D-Reg.	Symbol	Descriptions
D1545	UKEY.RLY	RELAY No.on I/O for USER KEY SIGNAL.
D1546~D1561	D11.RLY~D116RLY	RELAY No.on I/O for DI SIGNAL.
D1562~D1573	USER.RLY1~USER.RLY12	RELAY No.on I/O for MANUAL SIGNAL.
D1573	USER.RLY_ON/OFF	Switch "ON" the relay for the corresponding number manually.
D1670	LOG.OUTRLY1	RELAY No.on I/O for LOGICAL SIGNAL1.
D1671	LOG.SRCLRYa1	Set RELAY-a for LOGICAL SIGNAL1.
D1672	LOG.SRCLRYb1	Set RELAY-b for LOGICAL SIGNAL1.
D1673	LOG.OPERAND1	Set operand for LOGICAL SIGNAL1.
.	.	.
.	.	.
.	.	.
D1678	LOG.OUTRLY3	RELAY No.on I/O for LOGICAL SIGNAL3.
D1679	LOG.SRCLRYa3	Set RELAY-a for LOGICAL SIGNAL3.
D1680	LOG.SRCLRYb3	Set RELAY-b for LOGICAL SIGNAL3.
D1681	LOG.OPERAND3	Set operand for LOGICAL SIGNAL3.

7.15 DI CONFIG Group

DI CONFIG group consists of setting parameter D-Register for DI ERROR and its name.

■ DI CONFIG setting D-Register

D-Reg.	Symbol	Descriptions
D1601	DISP.METHOD	DISPLAY METHOD for DI ERROR. (0:TEXT, 1:PICTURE)
D1602	BUZ.TIME	Sets time for DI Error buzzer.
D1603	DIDEC.TIME	DETECT TIME to recognize DI ERROR from actual occurrence
D1606	DI1.OP_MODE	[CH1] OPERATION MODE when DI 1 ON. (0:ERROR, 1:RUN/STOP)
D1607	DI2.OP_MODE	[CH1] OPERATION MODE when DI 2 ON. (0:ERROR, 1:HOLD)
D1608	DI3.OP_MODE	[CH1] OPERATION MODE when DI 3 ON. (0:ERROR, 1:STEP)
D1609	DI4.OP_MODE	[CH1] OPERATION MODE when DI 4 ~ 16 ON (0:ERROR, 1:PATTERN SELECTION)
D1612	DI9.OP_MODE	[CH2] OPERATION MODE when DI 9 ON. (0:ERROR, 1:RUN/STOP)
D1613	DI10.OP_MODE	[CH2] OPERATION MODE when DI 10 ON. (0:ERROR, 1:HOLD)
D1614	DI11.OP_MODE	[CH2] OPERATION MODE when DI 11 ON. (0:ERROR, 1:STEP)
D1615	DI12.OP_MODE	[CH2] OPERATION MODE when DI 4 ~ 16 ON (0:ERROR, 1:PATTERN SELECTION)
D1618,D1619	DI1.OP,DI1.DYT	DI 1 OPERATION after detecting and DELAY TIME
.	.	.
.	.	.
.	.	.
D1648,D1649	DI16.OP,DI16.DYT	DI 16 OPERATION after detecting and DELAY TIME
D1652	DI1.DETECT	Setting the DI1 sensing method (0:A-TYPE, 1:B-TYPE)
.	.	.
.	.	.
.	.	.
D1667	DI16.DETECT	Setting the DI1 sensing method (0:A-TYPE, 1:B-TYPE)
D1701~D1712	DI1.NAME1~DI1.NAME12	DI 1 ERROR NAME.
.	.	.
.	.	.
.	.	.
D1785~D1796	DI16.NAME1~DI16.NAME12	DI 16 ERROR NAME

7.16 INITIAL Group

INITIAL group consists of setting parameter D-Register for system initial configuration.

■ INITIAL setting D-Register

D-Reg.	Symbol	Descriptions
D1901	LANGUAGE	Language for using TEMP2500. (0:ENG, 1:KOR, 2:CHN)
D1902	DISP.MODE	DISPLAY MODE for 'Initial Logo screen' when PWR ON. (0:TEXT, 1:PICTURE)
D1903	UKEY.USE	Setting for using USER KEY. (0:UNUSE, 1:USE)
D1906~D1918	INFORM1.NAME1 ~INFORM1.NAME13	Name of INIT INFORMATION 1 when setting 'TEXT' on DISPLAY MODE
.	.	.
D1932~D1944	INFORM3.NAME1 ~INFORM3.NAME13	Name of INIT INFORMATION 3 when setting 'TEXT' on DISPLAY MODE
D2001~D2043	CH1LAMP_IS1 ~CH1LAMP_DI8	[CH1] STATUS DISPLAY LAM
D2044~D2086	CH2LAMP_IS9 ~CH2LAMP_DI16	[CH2] STATUS DISPLAY LAM

7.17 PROGRAM PATTERN Group and Setting

7.17.1 PROGRAM

PROGRAM group consists of parameter D-Register to arrange program PATTERN organized by each segment profile. Each segment should be established step by step.

■ Program PATTERN setting D-Register

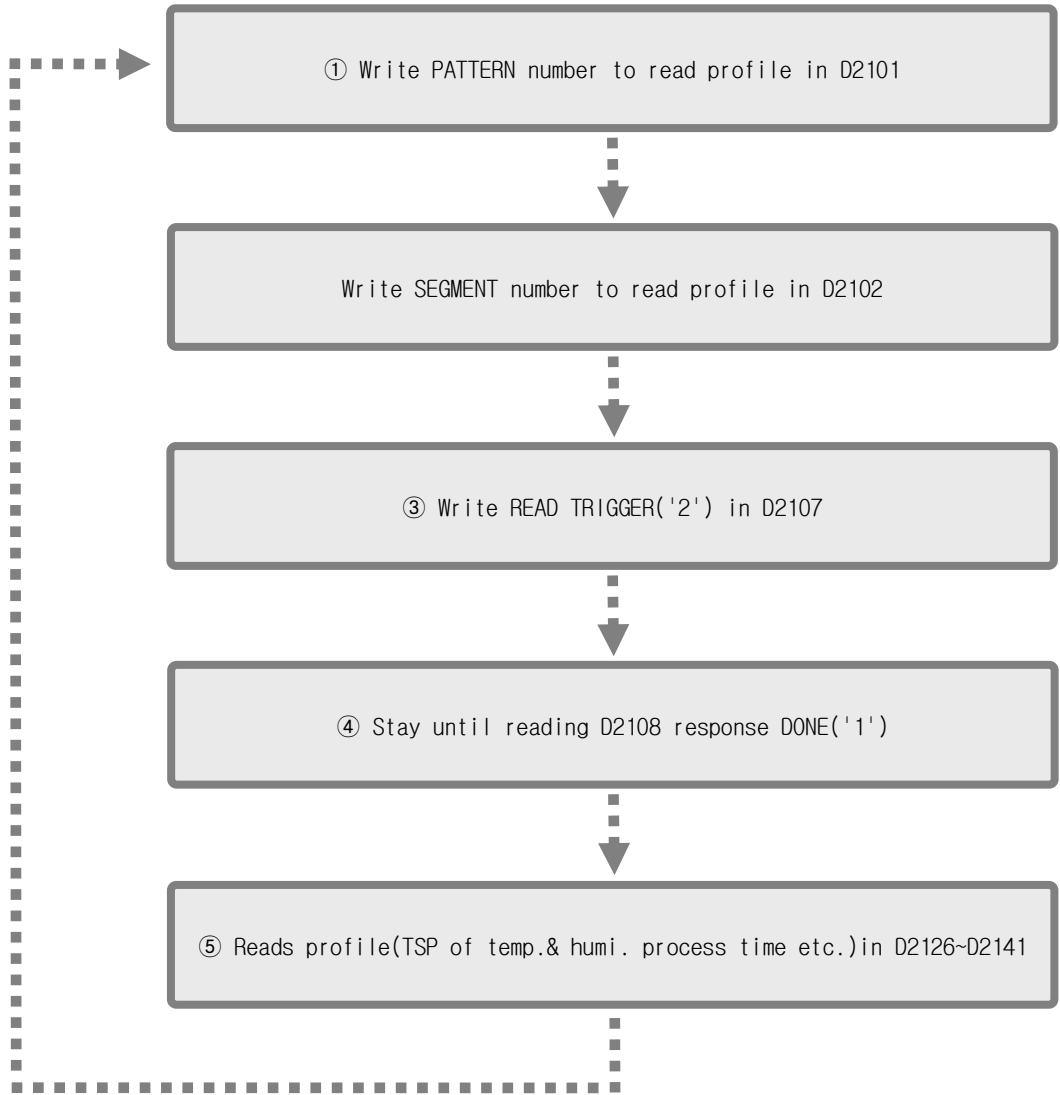
D-Reg.	Symbol	Range	Description
D2101	COM_PTNO	1~80	Program PATTERN number to Read or Write
D2102	COM_SEGNO	0	To Read or Write in D2145~D2167
		1~99	Segment number to Read or Write
D2103	PTCOPY_START	-	First target (START) pattern number to paste
D2104	PTCOPY_END	-	Last target (END) pattern number to paste
D2105	PTDEL_START	-	First target (START) pattern number to delete
D2106	PTDEL_END	-	Last target (END) pattern number to delete
D2107	TRIGGER	1	INIT : Initialize D2101~D2108 to '0'
		2	READ : Read profiles in D2101 and D2102
		3	WRITE : Write profiles in D2101 and D2102
		4	PT COPY : Copy PTN in D2101 to PTN designated in D2103~2104
		5	PT DEL : Delete PTN designated in D2105~D2106
		6	PT NAME READ : Read PTN NAME in D2101
		7	PT NAME WRITE : Write PTN NAME in D2101
		8	ALL PT : Write pattern profile at D2101 into D2300
D2108	ANSWER	0	FULL : Excessive number of pattern or segment setting
		1	DONE : Normally accessed of D2107(TRIGGER) command
		2	PT EMPTY : No profile in designated pattern
		3	SEG EMPTY : No profile in designated segment
		4	PT RUN : Program RUN state of designated PTN
		5	PARA ERROR : Program setting Error of D2101~D2107
D2111~D2122	PATTERN_NAME1~12	-	Pattern NAME to Read or Write
D2126	TSP	-	Target Set Point(TSP) to Read or Write
D2127	SEG.TIME_H	-	Target Process time (HOUR) of segment to Read or Write
D2128	SEG.TIME_L	-	Target Process time (MIN & SEC) of segment to Read or Write
D2129	TS1	-	TS1 to Read or Write
D2130	TS2	-	TS2 to Read or Write
D2131	TS3	-	TS3 to Read or Write
D2132	TS4	-	TS4 to Read or Write
D2133	TS5	-	TS5 to Read or Write
D2134	TS6	-	TS6 to Read or Write
D2135	TS7	-	TS7 to Read or Write
D2136	TS8	-	TS8 to Read or Write
D2137	SEGAL1	-	SEGMENT ALARM1 to Read or Write
D2138	SEGAL2	-	SEGMENT ALARM2 to Read or Write
D2139	SEGAL3	-	SEGMENT ALARM3 to Read or Write
D2140	SEGAL4	-	SEGMENT ALARM4 to Read or Write
D2141	SEG_PID	-	SEGMENT PID to Read or Write

■ PROGRAM and its REPEAT operation setting D-Register

D-Reg.	Symbol	Descriptions
D2145	START.CODE	START CODE for operation (0:TPV, 1:SPV, 2:SSP)
D2146	CH1START.SP	[CH1] START SSP
D2147	CH2START.SP	[CH2] START SSP
D2150	PT.RPT	Count number for PATTERN REPEAT (0:Infinitely, 1 ~ 999)
D2151	PT.EMOD	PATTERN END MODE (0:RESET, 1:SEG HOLD, 2:LINK RUN)
D2152	CH1LINK.PT	[CH1] LINK PATTERN (1 ~ 40)
D2153	CH2LINK.PT	[CH2] LINK PATTERN (1 ~ 40)
D2156	SEG_RPT.S1	SEGMENT REPEAT START-1
D2157	SEG_RPT.E1	SEGMENT REPEAT END-1
D2158	SEG_RPT.C1	SEGMENT REPEAT COUNT-1
D2159	SEG_RPT.S2	SEGMENT REPEAT START-2
D2160	SEG_RPT.E2	SEGMENT REPEAT END-2
D2161	SEG_RPT.C2	SEGMENT REPEAT COUNT-2
D2162	SEG_RPT.S3	SEGMENT REPEAT START-3
D2163	SEG_RPT.E3	SEGMENT REPEAT END-3
D2164	SEG_RPT.C3	SEGMENT REPEAT COUNT-3
D2165	SEG_RPT.S4	SEGMENT REPEAT START-4
D2166	SEG_RPT.E4	SEGMENT REPEAT END-4
D2167	SEG_RPT.C4	SEGMENT REPEAT COUNT-4

7.17.2 How to READ program PATTERN

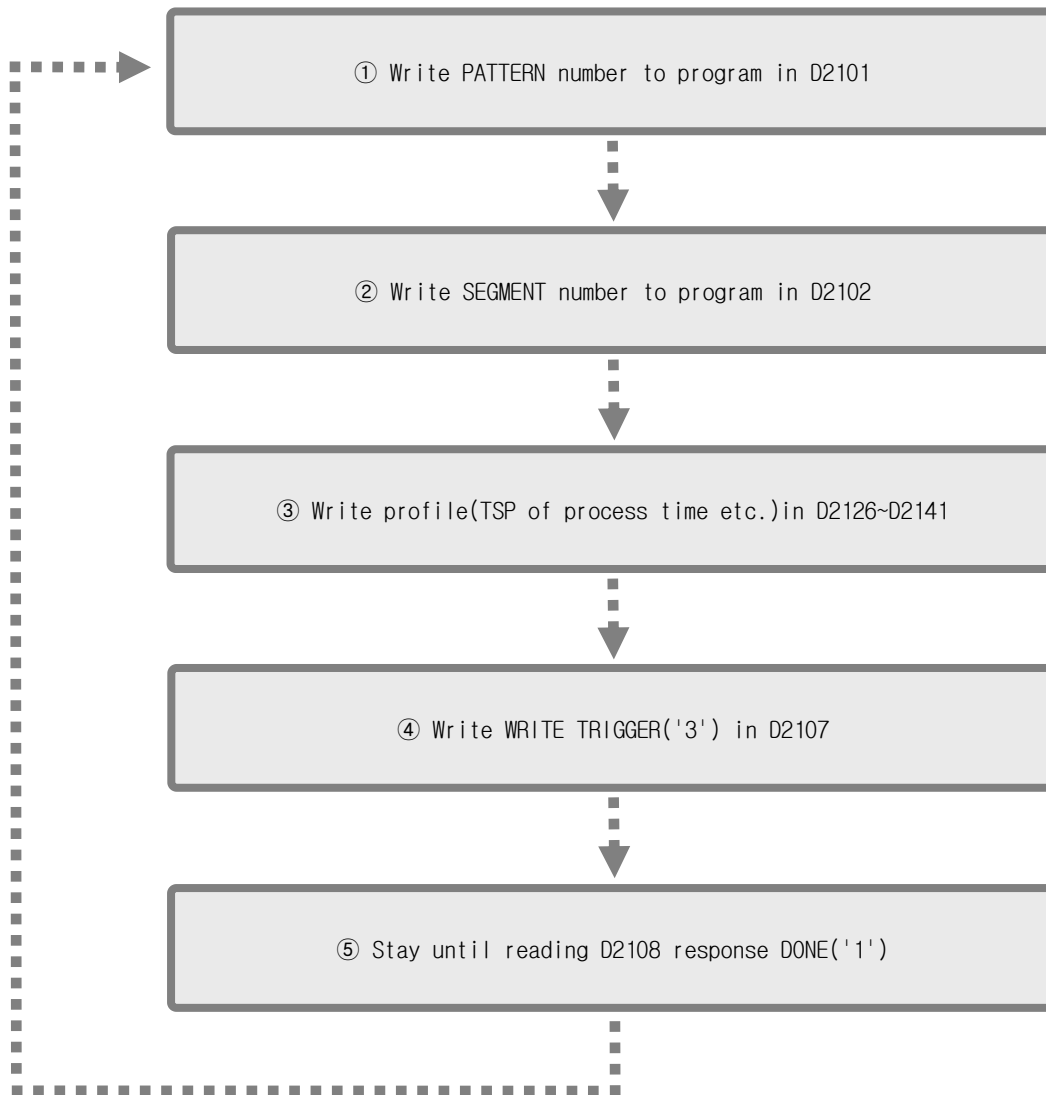
▶ Below describes process step to read programmed PATTERN profile in TEMP2520.



Above process step ① ~ ⑤ is used to read 'ONE SEGMENT' profile among all in programmed pattern. To read many segments, reiterate ① ~ ⑤ process step by changing segment number. Setting '0' in D2102 at process step ② will read profile in D2145~D2167.

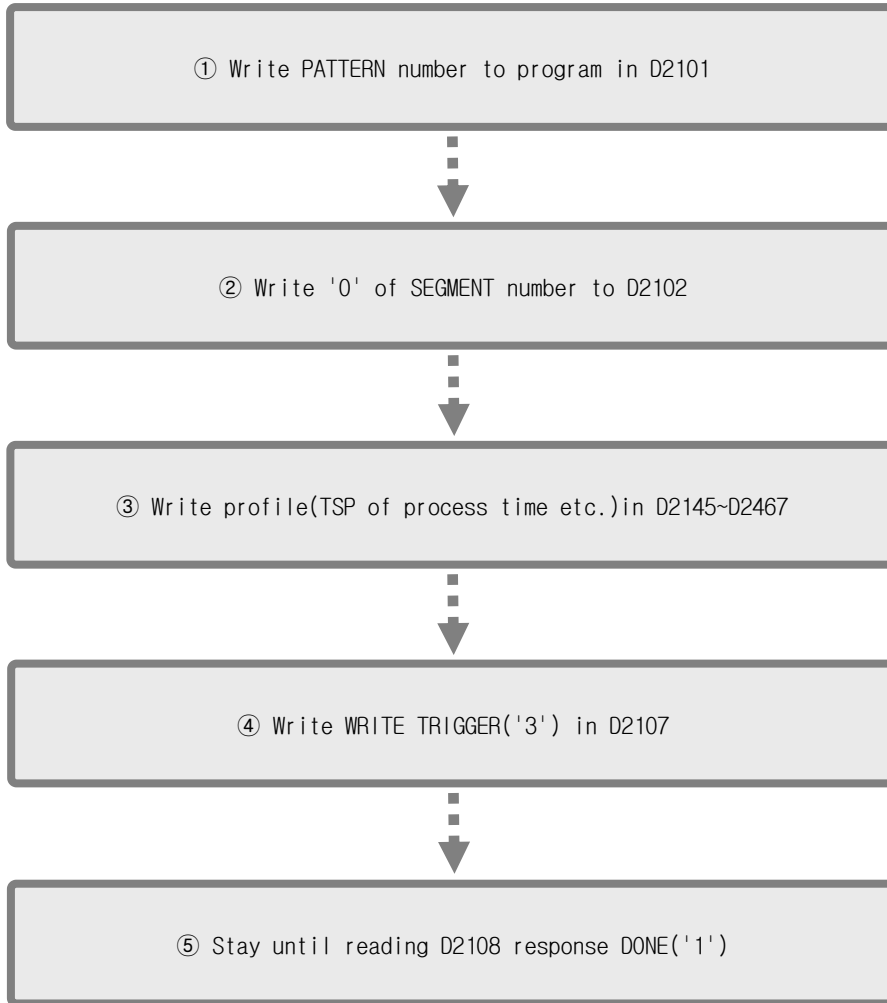
7.17.3 How to WRITE program PATTERN

▶ Below describes process step to write programming PATTERN profile in TEMP2520.



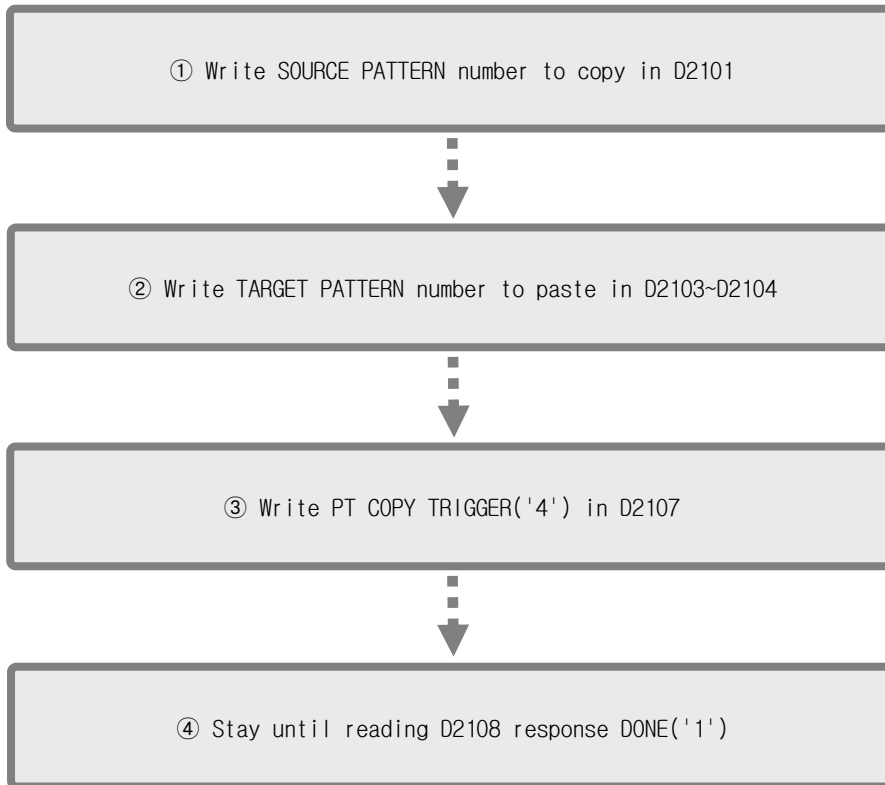
Above process step ① ~ ⑤ is used to write 'ONE SEGMENT' profile among all in programmed pattern. Reiterate ① ~ ⑤ process step by changing segment number to write many segments.

► Below describes process step to write program in D2145~D2167.

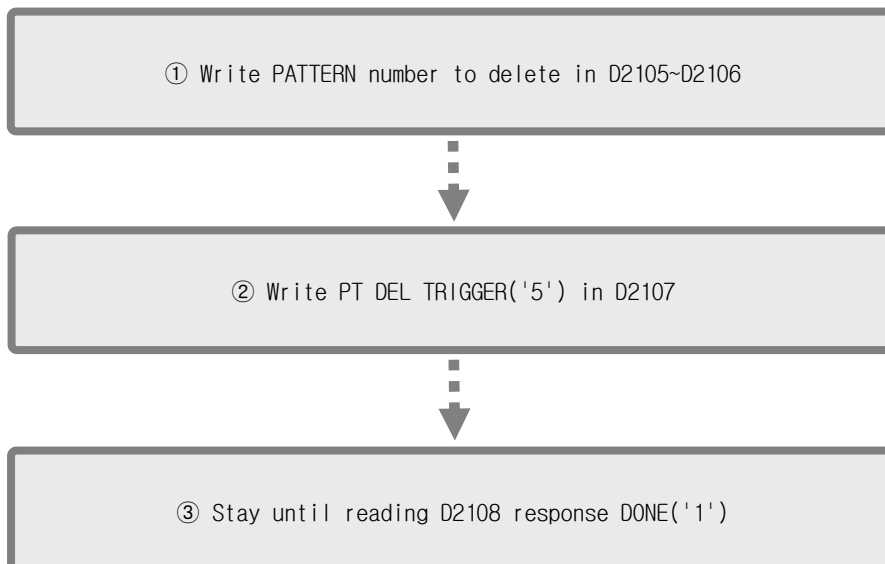


7.17.4 FILE EDIT (PATTERN COPY / DELETE)

▶ Below describes step to copy pattern.



▶ Below describes step to delete pattern.



7.18 PATTERN INFO

PATTERN INFO group consists of programmed pattern and segment information parameter D-Register.

■ Programmed pattern and segment information D-Register

D-Reg.	Symbol	Descriptions
D2201	NPT1	The number of programmed SEGMENT in PATTERN no.1
.	.	.
.	.	.
D2280	NPT80	The number of programmed SEGMENT in PATTERN no.80

7.19 FILE

FILE group consists of profile information of programmed pattern parameter D-Register.

■ FILE information D-Register

D-Reg.	Symbol	Descriptions
D2301~D2399	C.TSP1~C.TSP99	SP in reading pattern.
D2501~D2599	C.SRTIME_H1~C.SRTIME_H99	Total operation time (Hour) in reading pattern.
D2601~D2699	C.SRTIME_L1~C.SRTIME_L99	Total operation time (Minute&Second) in reading pattern.
D2701~D2799	C.TS1_1~C.TS1_99	TS1 in reading pattern.
D2801~D2899	C.TS2_1~C.TS2_99	TS2 in reading pattern.
D2901~D2999	C.TS3_1~C.TS3_99	TS3 in reading pattern.
D3001~D3099	C.TS4_1~C.TS4_99	TS4 in reading pattern.
D3101~D3199	C.TS5_1~C.TS5_99	TS5 in reading pattern.
D3201~D3299	C.TS6_1~C.TS6_99	TS6 in reading pattern.
D3301~D3399	C.TS7_1~C.TS7_99	TS7 in reading pattern.
D3401~D3499	C.TS8_1~C.TS8_99	TS8 in reading pattern.
D3501~D3599	C.SEGAL1_1~C.SEGAL1_99	SEGMENT ALARM1 in reading pattern.
D3601~D3699	C.SEGAL2_1~C.SEGAL2_99	SEGMENT ALARM2 in reading pattern.
D3701~D3799	C.SEGAL3_1~C.SEGAL3_99	SEGMENT ALARM3 in reading pattern.
D3801~D3899	C.SEGAL4_1~C.SEGAL4_99	SEGMENT ALARM4 in reading pattern.
D3901~D3999	C.SEGPID_1~C.SEGPID_99	SEGMENT PID in reading patten.

D-Register 0000 ~ 0599

: Read Only

D-Reg.	PROCESS	FUNCTION	RESERVATION	ON/OFF SIGNAL	INNER SIGNAL	ALARM SIGNAL
	0	100	200	300	400	500
0		CH1SET.PTNO	CH1RESERVE			
1	CH1.NPV	CH2SET.PTNO	CH2RESERVE	T1.LSP	IS1.TYPE	CH1ALM.OP
2	CH2.NPV	CH1COM.OPMODE	NOW.YEAR	T1.MSP	IS1.BAND	CH2ALM.OP
3	CH1.NSP	CH2COM.OPMODE	NOW.MONTH	T1.HSP	IS1.RH	
4	CH2.NSP	CH1FIX.TSP	NOW.DAY	T1.HDV	IS1.RL	
5	CH1.MVOUT	CH2FIX.TSP	NOW.AMPM	T1.LDV	IS1.DYT	ALM1.TYPE
6	CH2.MVOUT	CH1OP.MODE	NOW.HOUR			ALM1.POINT
7	CH1.CPIDNO	CH2OP.MODE	NOW.MIN		IS2.TYPE	ALM1.H.POINT
8	CH2.CPIDNO	CH1PWR.MODE	C.YEAR	T2.LSP	IS2.BAND	ALM1.L.POINT
9		CH2PWR.MODE	C.MONTH	T2.MSP	IS2.RH	ALM1.HYS
10	CH1NOW.STS	CH1.SLOPE	C.DAY	T2.HSP	IS2.RL	ALM1.DYT
11	CH2NOW.STS	CH2.SLOPE	C.AMPM	T2.HDV	IS2.DYT	
12	CH1IS.STS	CH1.FUZZY	C.HOUR	T2.LDV		ALM2.TYPE
13	CH2IS.STS	CH2.FUZZY	C.MIN		IS3.TYPE	ALM2.POINT
14	CH1TS.STS	CH1TIME.OP	CH1R.YEAR		IS3.BAND	ALM2.H.POINT
15	CH2TS.STS	CH1TIME.OP_H	CH1R.MONTH	T3.LSP	IS3.RH	ALM2.L.POINT
16	CH1ALM.STS	CH1TIME.OP_M	CH1R.DAY	T3.MSP	IS3.RL	ALM2.HYS
17	CH2ALM.STS	CH2TIME.OP	CH1R.AMPM	T3.HSP	IS3.DYT	ALM2.DYT
18	CH1SEGALM.STS	CH2TIME.OP_H	CH1R.HOUR	T3.HDV		
19	CH2SEGALM.STS	CH2TIME.OP_M	CH1R.MIN	T3.LDV	IS4.TYPE	ALM3.TYPE
20	CH1ONOFF.STS		CH2R.YEAR		IS4.BAND	ALM3.POINT
21	CH2ONOFF.STS	KEYLOCK	CH2R.MONTH		IS4.RH	ALM3.H.POINT
22	CH1ADERR.STS	RS.SYNC	CH2R.DAY	T4.LSP	IS4.RL	ALM3.L.POINT
23	CH2ADERR.STS		CH2R.AMPM	T4.MSP	IS4.DYT	ALM3.HYS
24	CH1DOCTR.STS		CH2R.HOUR	T4.HSP		ALM3.DYT
25	CH2DOCTR.STS		CH2R.MIN	T4.HDV	IS5.TYPE	
26	CH1CTR.STS	DRAW.CYCLE		T4.LDV	IS5.BAND	ALM4.TYPE
27	CH2CTR.STS	PV.GRP.RECORD			IS5.RH	ALM4.POINT
28	D0.STS1				IS5.RL	ALM4.H.POINT
29	D0.STS2			T5.LSP	IS5.DYT	ALM4.L.POINT
30	D1.DATA	REC.OP		T5.MSP		ALM4.HYS
31	SYS.STS	REC.CYCLE		T5.HSP	IS6.TYPE	ALM4.DYT
32		BACK.ITEM		T5.HDV	IS6.BAND	
33		BACK.DIR		T5.LDV	IS6.RH	ALM5.TYPE
34	CH1RUN.TIME_H				IS6.RL	ALM5.POINT
35	CH1RUN.TIME_M				IS6.DYT	ALM5.H.POINT
36	CH1RUN.TIME_S	CH1.AT		T6.LSP		ALM5.L.POINT
37	CH2RUN.TIME_H	CH2.AT		T6.MSP	IS7.TYPE	ALM5.HYS
38	CH2RUN.TIME_M			T6.HSP	IS7.BAND	ALM5.DYT
39	CH2RUN.TIME_S			T6.HDV	IS7.RH	
40	CH1RUN.PTNO	CH1WAIT.USE		T6.LDV	IS7.RL	ALM6.TYPE
41	CH1RUN.SEGNO	CH2WAIT.USE			IS7.DYT	ALM6.POINT
42	CH2RUN.PTNO	CH1WAIT_ZONE				ALM6.H.POINT
43	CH2RUN.SEGNO	CH2WAIT_ZONE		T8.LSP	IS8.TYPE	ALM6.L.POINT
44	CH1NOW.PT.RPT	CH1WAIT_TIME		T8.MSP	IS8.BAND	ALM6.HYS
45	CH1TOTAL.PT.RPT	CH2WAIT_TIME		T8.HSP	IS8.RH	ALM6.DYT
46	CH2NOW.PT.RPT	CH1WAIT.METHOD		T8.HDV	IS8.RL	
47	CH2TOTAL.PT.RPT	CH2WAIT.METHOD		T8.LDV	IS8.DYT	ALM7.TYPE
48	CH1NOW.SEG.RPT					ALM7.POINT
49	CH1TOTAL.SEG.RPT				IS9.TYPE	ALM7.H.POINT

D-Reg.	PROCESS	FUNCTION	RESERVATION	ON/OFF SIGNAL	INNER SIGNAL	ALARM SIGNAL
	0	100	200	300	400	500
50	CH2NOW.SEG.RPT	PV.FONT		T9.LSP	IS9.BAND	ALM7.L_POINT
51	CH2TOTAL.SEG.RPT	BUZ.ONOFF		T9.MSP	IS9.RH	ALM7.HYS
52	CH1NOW.SEGTM_H	LIGHT.OFFTM		T9.HSP	IS9.RL	ALM7.DYT
53	CH1NOW.SEGTM_L	CH.ROT.TIME		T9.HDV	IS9.DYT	
54	CH1TOTAL.SEGTM_H			T9.LDV		ALM8.TYPE
55	CH1TOTAL.SEGTM_L				IS10.TYPE	ALM8.POINT
56	CH2NOW.SEGTM_H				IS10.BAND	ALM8.H_POINT
57	CH2NOW.SEGTM_L			T10.LSP	IS10.RH	ALM8.L_POINT
58	CH2TOTAL.SEGTM_H			T10.MSP	IS10.RL	ALM8.HYS
59	CH2TOTAL.SEGTM_L			T10.HSP	IS10.DYT	ALM8.DYT
60	CH1PREV.TSP	UTAG_USING	CH_TIME_VALID	T10.HDV		
61	CH1NOW.TSP	CH1UTAG.NAME1	CH1_START_YEAR	T10.LDV	IS11.TYPE	
62	CH2PREV.TSP	CH1UTAG.NAME2	CH1_START_MON		IS11.BAND	
63	CH2NOW.TSP	CH1UTAG.NAME3	CH1_START_DAY		IS11.RH	
64		CH2UTAG.NAME1	CH1_START_HOUR	T11.LSP	IS11.RL	
65	USED PATTERN	CH2UTAG.NAME2	CH1_START_MIN	T11.MSP	IS11.DYT	
66	USED SEGMENT	CH2UTAG.NAME3	CH1_END_YEAR	T11.HSP		
67			CH1_END_MON	T11.HDV	IS12.TYPE	
68			CH1_END_DAY	T11.LDV	IS12.BAND	
69			CH1_END_HOUR		IS12.RH	
70			CH1_END_MIN		IS12.RL	
71	CH1.HMVOUT		CH2TIME_VALID	T12.LSP	IS12.DYT	
72	CH1.CMVOUT		CH2_START_YEAR	T12.MSP		
73	CH2.HMVOUT		CH2_START_MON	T12.HSP	IS13.TYPE	
74	CH2.CMVOUT		CH2_START_DAY	T12.HDV	IS13.BAND	
75			CH2_START_HOUR	T12.LDV	IS13.RH	
76			CH2_START_MIN		IS13.RL	
77			CH2_END_YEAR		IS13.DYT	
78			CH2_END_MON	T13.LSP		
79			CH2_END_DAY	T13.MSP	IS14.TYPE	
80			CH2_END_HOUR	T13.HSP	IS14.BAND	
81			CH2_END_MIN	T13.HDV	IS14.RH	
82				T13.LDV	IS14.RL	
83					IS14.DYT	
84						
85					IS15.TYPE	
86					IS15.BAND	
87					IS15.RH	
88					IS15.RL	
89					IS15.DYT	
90						
91					IS16.TYPE	
92					IS16.BAND	
93					IS16.RH	
94					IS16.RL	
95					IS16.DYT	
96						
97						
98						
99						

D-Register 0600 ~ 1199

D-Reg.	SEG ALARM SIGNAL	TIME SIGNAL	COMMUNICATION	PICTURE	PID1	PID2
	600	700	800	900	1000	1100
0						
1	CH1SA1.TYPE	TS2DYTM_H	COM2.PROTOCOL	VIEW.ROTATE	CH1.RP1	CH1.1_HP
2	CH1SA1.POINT	TS2DYTM_L	COM2.BPS	R.ST_TIME	CH1.RP2	CH1.1_HI
3	CH1SA1.H_POINT	TS2KPTM_H	COM2.PARITY	R.INT_TIME	CH1.RP3	CH1.1_HD
4	CH1SA1.L_POINT	TS2KPTM_L	COM2.STOP.BIT		CH1.RP4	CH1.1_HOH
5	CH1SA1.HYS	TS3DYTM_H	COM2.DATA.LENGTH		CH2.RP1	CH1.1_OL
6	CH1SA1.DYT	TS3DYTM_L	COM2.ADDRESS		CH2.RP2	CH1.1_MR
7	CH1SA2.TYPE	TS3KPTM_H	COM2.RESPONSE		CH2.RP3	CH1.1_HHYS
8	CH1SA2.POINT	TS3KPTM_L	COM4.BPS		CH2.RP4	CH1.1_LHYS
9	CH1SA2.H_POINT	TS4DYTM_H	SYNC.MST		CH1.RHYS	CH1.2_HP
10	CH1SA2.L_POINT	TS4DYTM_L			CH1.RDEV	CH1.2_HI
11	CH1SA2.HYS	TS4KPTM_H			CH2.RHYS	CH1.2_HD
12	CH1SA2.DYT	TS4KPTM_L			CH2.RDEV	CH1.2_HOH
13	CH1SA3.TYPE	TS5DYTM_H			CH1.CMOD	CH1.2_OL
14	CH1SA3.POINT	TS5DYTM_L			CH2.CMOD	CH1.2_MR
15	CH1SA3.H_POINT	TS5KPTM_H			CH1AT.POINT	CH1.2_HHYS
16	CH1SA3.L_POINT	TS5KPTM_L			CH2AT.POINT	CH1.2_LHYS
17	CH1SA3.HYS	TS6DYTM_H			CH1AT.DISPLAY	CH1.3_HP
18	CH1SA3.DYT	TS6DYTM_L			CH2AT.DISPLAY	CH1.3_HI
19	CH1SA4.TYPE	TS6KPTM_H			CH1PID.OPMODE	CH1.3_HD
20	CH1SA4.POINT	TS6KPTM_L			CH2PID.OPMODE	CH1.3_HOH
21	CH1SA4.H_POINT	TS7DYTM_H			CH1PID.APP	CH1.3_OL
22	CH1SA4.L_POINT	TS7DYTM_L			CH2PID.APP	CH1.3_MR
23	CH1SA4.HYS	TS7KPTM_H				CH1.3_HHYS
24	CH1SA4.DYT	TS7KPTM_L				CH1.3_LHYS
25	CH1SA5.TYPE	TS8DYTM_H			1.CH1_CP	CH1.4_HP
26	CH1SA5.POINT	TS8DYTM_L			1.CH1_C1	CH1.4_HI
27	CH1SA5.H_POINT	TS8KPTM_H			1.CH1_CD	CH1.4_HD
28	CH1SA5.L_POINT	TS8KPTM_L			2.CH1_CP	CH1.4_HOH
29	CH1SA5.HYS	TS9DYTM_H			2.CH1_C1	CH1.4_OL
30	CH1SA5.DYT	TS9DYTM_L			2.CH1_CD	CH1.4_MR
31	CH1SA6.TYPE	TS9KPTM_H			3.CH1_CP	CH1.4_HHYS
32	CH1SA6.POINT	TS9KPTM_L			3.CH1_C1	CH1.4_LHYS
33	CH1SA6.H_POINT	TS10DYTM_H			3.CH1_CD	CH1.5_HP
34	CH1SA6.L_POINT	TS10DYTM_L			4.CH1_CP	CH1.5_HI
35	CH1SA6.HYS	TS10KPTM_H			4.CH1_C1	CH1.5_HD
36	CH1SA6.DYT	TS10KPTM_L			4.CH1_CD	CH1.5_HOH
37	CH1SA7.TYPE	TS11DYTM_H			5.CH1_CP	CH1.5_OL
38	CH1SA7.POINT	TS11DYTM_L			5.CH1_C1	CH1.5_MR
39	CH1SA7.H_POINT	TS11KPTM_H			5.CH1_CD	CH1.5_HHYS
40	CH1SA7.L_POINT	TS11KPTM_L			6.CH1_CP	CH1.5_LHYS
41	CH1SA7.HYS	TS12DYTM_H			6.CH1_C1	CH1.6_HP
42	CH1SA7.DYT	TS12DYTM_L			6.CH1_CD	CH1.6_HI
43	CH1SA8.TYPE	TS12KPTM_H				CH1.6_HD
44	CH1SA8.POINT	TS12KPTM_L				CH1.6_HOH
45	CH1SA8.H_POINT	TS13DYTM_H			1.CH2_CP	CH1.6_OL
46	CH1SA8.L_POINT	TS13DYTM_L			1.CH2_C1	CH1.6_MR
47	CH1SA8.HYS	TS13KPTM_H			1.CH2_CD	CH1.6_HHYS
48	CH1SA8.DYT	TS13KPTM_L			2.CH2_CP	CH1.6_LHYS
49		TS14DYTM_H			2.CH2_C1	

D-Reg.	SEG ALARM SIGNAL	TIME SIGNAL	COMMUNICATION	PICTURE	PID1	PID2
	600	700	800	900	1000	1100
50		TS14DYTM_L			2.CH2_CD	
51	CH2SA1.TYPE	TS14KPTM_H			3.CH2_CP	CH2.1_HP
52	CH2SA1.P01NT	TS14KPTM_L			3.CH2_C1	CH2.1_H1
53	CH2SA1.H_P01NT	TS15DYTM_H			3.CH2_CD	CH2.1_HD
54	CH2SA1.L_P01NT	TS15DYTM_L			4.CH2_CP	CH2.1_HOH
55	CH2SA1.HYS	TS15KPTM_H			4.CH2_C1	CH2.1_OL
56	CH2SA1.DYT	TS15KPTM_L			4.CH2_CD	CH2.1_MR
57	CH2SA2.TYPE	TS16DYTM_H			5.CH2_CP	CH2.1_HHYS
58	CH2SA2.P01NT	TS16DYTM_L			5.CH2_C1	CH2.1_LHYS
59	CH2SA2.H_P01NT	TS16KPTM_H			5.CH2_CD	CH2.2_HP
60	CH2SA2.L_P01NT	TS16KPTM_L			6.CH2_CP	CH2.2_H1
61	CH2SA2.HYS	TS17DYTM_H			6.CH2_C1	CH2.2_HD
62	CH2SA2.DYT	TS17DYTM_L			6.CH2_CD	CH2.2_HOH
63	CH2SA3.TYPE	TS17KPTM_H				CH2.2_OL
64	CH2SA3.P01NT	TS17KPTM_L				CH2.2_MR
65	CH2SA3.H_P01NT	TS18DYTM_H			1.CH1DB	CH2.2_HHYS
66	CH2SA3.L_P01NT	TS18DYTM_L			2.CH1DB	CH2.2_LHYS
67	CH2SA3.HYS	TS18KPTM_H			3.CH1DB	CH2.3_HP
68	CH2SA3.DYT	TS18KPTM_L			4.CH1DB	CH2.3_H1
69	CH2SA4.TYPE	TS19DYTM_H			5.CH1DB	CH2.3_HD
70	CH2SA4.P01NT	TS19DYTM_L			6.CH1DB	CH2.3_HOH
71	CH2SA4.H_P01NT	TS19KPTM_H			1.CH2DB	CH2.3_OL
72	CH2SA4.L_P01NT	TS19KPTM_L			2.CH2DB	CH2.3_MR
73	CH2SA4.HYS	TS20DYTM_H			3.CH2DB	CH2.3_HHYS
74	CH2SA4.DYT	TS20DYTM_L			4.CH2DB	CH2.3_LHYS
75	CH2SA5.TYPE	TS20KPTM_H			5.CH2DB	CH2.4_HP
76	CH2SA5.P01NT	TS20KPTM_L			6.CH2DB	CH2.4_H1
77	CH2SA5.H_P01NT					CH2.4_HD
78	CH2SA5.L_P01NT					CH2.4_HOH
79	CH2SA5.HYS				CH1HCHYS	CH2.4_OL
80	CH2SA5.DYT				CH2HCHYS	CH2.4_MR
81	CH2SA6.TYPE					CH2.4_HHYS
82	CH2SA6.P01NT				1.CH1_C0H	CH2.4_LHYS
83	CH2SA6.H_P01NT				2.CH1_C0H	CH2.5_HP
84	CH2SA6.L_P01NT				3.CH1_C0H	CH2.5_H1
85	CH2SA6.HYS				4.CH1_C0H	CH2.5_HD
86	CH2SA6.DYT				5.CH1_C0H	CH2.5_HOH
87	CH2SA7.TYPE				6.CH1_C0H	CH2.5_OL
88	CH2SA7.P01NT				1.CH2_C0H	CH2.5_MR
89	CH2SA7.H_P01NT				2.CH2_C0H	CH2.5_HHYS
90	CH2SA7.L_P01NT				3.CH2_C0H	CH2.5_LHYS
91	CH2SA7.HYS				4.CH2_C0H	CH2.6_HP
92	CH2SA7.DYT				5.CH2_C0H	CH2.6_H1
93	CH2SA8.TYPE				6.CH2_C0H	CH2.6_HD
94	CH2SA8.P01NT					CH2.6_HOH
95	CH2SA8.H_P01NT					CH2.6_OL
96	CH2SA8.L_P01NT					CH2.6_MR
97	CH2SA8.HYS					CH2.6_HHYS
98	CH2SA8.DYT					CH2.6_LHYS
99						

D-Register 1200 ~ 1799

D-Reg.	INPUT	OUTPUT	DO CONFIG1	DO CONFIG2	DI CONFIG1	DI CONFIG2
	1200	1300	1400	1500	1600	1700
0						
1	CH1.SENGP	SSR1.OUT	CH1IS1.RLY	CH1RUN.RLY	DISP.METHOD	D11.NAME1
2	CH1.SENTP	SSR2.OUT	CH1IS2.RLY	CH1RUN.DYT	BUZ.TIME	D11.NAME2
3	CH1.UNIT	SCR1.OUT	CH1IS3.RLY	CH2RUN.RLY	DIDET.TIME	D11.NAME3
4	CH1.DP	SCR2.OUT	CH1IS4.RLY	CH2RUN.DYT		D11.NAME4
5	CH1.TCSL		CH1IS5.RLY	CH1SOPN.RLY		D11.NAME5
6	CH1.SOPN.SEL		CH1IS6.RLY	CH1SOPN.KPT	D11.OP_MODE	D11.NAME6
7	CH1.INRH		CH1IS7.RLY	CH2SOPN.RLY	D12.OP_MODE	D11.NAME7
8	CH1.INRL		CH1IS8.RLY	CH2SOPN.KPT	D13.OP_MODE	D11.NAME8
9	CH1.BIAS	CH1.DIR	CH2IS9.RLY	CH1WAIT.RLY	D14.OP_MODE	D11.NAME9
10	CH1.INFL	CH2.DIR	CH2IS10.RLY	CH1WAIT.KPT		D11.NAME10
11		CH1.ARW	CH2IS11.RLY	CH2WAIT.RLY		D11.NAME11
12	CH1.INSH	CH2.ARW	CH2IS12.RLY	CH2WAIT.KPT	D19.OP_MODE	D11.NAME12
13	CH1.INSL	CH1.UOPR	CH2IS13.RLY	CH1UP.RLY	D110.OP_MODE	D12.NAME1
14		CH1.DNOPR	CH2IS14.RLY	CH1UP.DEV	D111.OP_MODE	D12.NAME2
15		CH2.UOPR	CH2IS15.RLY	CH2UP.RLY	D112.OP_MODE	D12.NAME3
16	CH2.SENGP	CH2.DNOPR	CH2IS16.RLY	CH2UP.DEV		D12.NAME4
17	CH2.SENTP	CH1.HCT	CH1TS1.RLY	CH1SOAK.RLY		D12.NAME5
18	CH2.UNIT	CH2.HCT	CH1TS2.RLY	CH1SOAK.KPT	D11.OP	D12.NAME6
19	CH2.DP	CH1.HPO	CH1TS3.RLY	CH2SOAK.RLY	D11.DVT	D12.NAME7
20	CH2.TCSL	CH2.HPO	CH1TS4.RLY	CH2SOAK.KPT	D12.OP	D12.NAME8
21	CH2.SOPN.SEL	CH1.HATG	CH1TS5.RLY	CH1DOWN.RLY	D12.DVT	D12.NAME9
22	CH2.INRH	CH2.HATG	CH1TS6.RLY	CH1DOWN.DEV	D13.OP	D12.NAME10
23	CH2.INRL		CH1TS7.RLY	CH2DOWN.RLY	D13.DVT	D12.NAME11
24	CH2.BIAS		CH1TS8.RLY	CH2DOWN.DEV	D14.OP	D12.NAME12
25	CH2.INFL	CH1.RETT	CH2TS1.RLY	CH1FEND.RLY	D14.DVT	D13.NAME1
26		CH2.RETT	CH2TS2.RLY	CH1FEND.KPT	D15.OP	D13.NAME2
27	CH2.INSH	CH1.RETH	CH2TS3.RLY	CH2FEND.RLY	D15.DVT	D13.NAME3
28	CH2.INSL	CH1.RETL	CH2TS4.RLY	CH2FEND.KPT	D16.OP	D13.NAME4
29		CH2.RETH	CH2TS5.RLY	CH1PTEND.RLY	D16.DVT	D13.NAME5
30		CH2.RETL	CH2TS6.RLY	CH1PTEND.KPT	D17.OP	D13.NAME6
31	CH1.BP1.DDV		CH2TS7.RLY	CH2PTEND.RLY	D17.DVT	D13.NAME7
32	CH1.BP2.DDV		CH2TS8.RLY	CH2PTEND.KPT	D18.OP	D13.NAME8
33	CH1.BP3.DDV		CH1ALM1.RLY	CH1.1REF.RLY	D18.DVT	D13.NAME9
34	CH1.BP4.DDV	CH1.CCT	CH1ALM2.RLY	CH1.1REF.DYT	D19.OP	D13.NAME10
35	CH1.BP5.DDV	CH2.CCT	CH1ALM3.RLY	CH1.2REF.RLY	D19.DVT	D13.NAME11
36	CH1.BP6.DDV	CH1.CPO	CH1ALM4.RLY	CH1.2REF.DYT	D110.OP	D13.NAME12
37	CH1.BP7.DDV	CH2.CPO	CH2ALM5.RLY	CH2.1REF.RLY	D110.DVT	D14.NAME1
38	CH1.BP8.DDV	CH1.CATG	CH2ALM6.RLY	CH2.1REF.DYT	D111.OP	D14.NAME2
39	CH1.BP1.DPV	CH2.CATG	CH2ALM7.RLY	CH2.2REF.RLY	D111.DVT	D14.NAME3
40	CH1.BP2.DPV		CH2ALM8.RLY	CH2.2REF.DYT	D112.OP	D14.NAME4
41	CH1.BP3.DPV	OUT1.MODE	CH1SA1.RLY	CH1.ERROR.RLY	D112.DVT	D14.NAME5
42	CH1.BP4.DPV	OUT2.MODE	CH1SA2.RLY	CH1.ERROR.KPT	D113.OP	D14.NAME6
43	CH1.BP5.DPV	OUT3.MODE	CH1SA3.RLY	CH2.ERROR.RLY	D113.DVT	D14.NAME7
44	CH1.BP6.DPV	OUT4.MODE	CH1SA4.RLY	CH2.ERROR.KPT	D114.OP	D14.NAME8
45	CH1.BP7.DPV		CH2SA1.RLY	UKEY.RLY	D114.DVT	D14.NAME9
46	CH1.BP8.DPV		CH2SA2.RLY	D11.RLY	D115.OP	D14.NAME10
47			CH2SA3.RLY	D12.RLY	D115.DVT	D14.NAME11
48			CH2SA4.RLY	D13.RLY	D116.OP	D14.NAME12
49	CH2.BP1.DDV		CH1T1.RLY	D14.RLY	D116.DVT	D15.NAME1

D-Reg.	INPUT	OUTPUT	DO CONFIG1	DO CONFIG2	DI CONFIG1	DI CONFIG2
	1200	1300	1400	1500	1600	1700
50	CH2.BP2.DDV		CH1T1.DYT	D15.RLY		D15.NAME2
51	CH2.BP3.DDV		CH1T2.RLY	D16.RLY		D15.NAME3
52	CH2.BP4.DDV		CH1T2.DYT	D17.RLY	D11.DETECT	D15.NAME4
53	CH2.BP5.DDV		CH1T3.RLY	D18.RLY	D12.DETECT	D15.NAME5
54	CH2.BP6.DDV		CH1T3.DYT	D19.RLY	D13.DETECT	D15.NAME6
55	CH2.BP7.DDV		CH1T4.RLY	D110.RLY	D14.DETECT	D15.NAME7
56	CH2.BP8.DDV		CH1T4.DYT	D111.RLY	D15.DETECT	D15.NAME8
57	CH2.BP1.DPV		CH1T5.RLY	D112.RLY	D16.DETECT	D15.NAME9
58	CH2.BP2.DPV		CH1T5.DYT	D113.RLY	D17.DETECT	D15.NAME10
59	CH2.BP3.DPV		CH1T6.RLY	D114.RLY	D18.DETECT	D15.NAME11
60	CH2.BP4.DPV		CH1T6.DYT	D115.RLY	D19.DETECT	D15.NAME12
61	CH2.BP5.DPV		CH1T7.RLY	D116.RLY	D110.DETECT	D16.NAME1
62	CH2.BP6.DPV		CH1T7.DYT	USER.RLY1	D111.DETECT	D16.NAME2
63	CH2.BP7.DPV		CH2T8.RLY	USER.RLY2	D112.DETECT	D16.NAME3
64	CH2.BP8.DPV		CH2T8.DYT	USER.RLY3	D113.DETECT	D16.NAME4
65			CH2T9.RLY	USER.RLY4	D114.DETECT	D16.NAME5
66			CH2T9.DYT	USER.RLY5	D115.DETECT	D16.NAME6
67			CH2T10.RLY	USER.RLY6	D116.DETECT	D16.NAME7
68			CH2T10.DYT	USER.RLY7		D16.NAME8
69			CH2T11.RLY	USER.RLY8		D16.NAME9
70	CH1UNITNAME1		CH2T11.DYT	USER.RLY9	LOG.OUTPUT1	D16.NAME10
71	CH1UNITNAME2		CH2T12.RLY	USER.RLY10	LOG.SRCRLYa1	D16.NAME11
72	CH2UNITNAME1		CH2T12.DYT	USER.RLY11	LOG.SRCRLYb1	D16.NAME12
73	CH2UNITNAME2		CH2T13.RLY	USER.RLY12	LOG.OPERAND1	D17.NAME1
74			CH2T13.DYT	USER.RLY_ON/OFF	LOG.OUTPUT2	D17.NAME2
75			CH2T14.RLY	CH1FEND.DLY	LOG.SRCRLYa2	D17.NAME3
76			CH2T14.DYT	CH1PEND.DLY	LOG.SRCRLYb2	D17.NAME4
77				CH2FEND.DLY	LOG.OPERAND2	D17.NAME5
78				CH2PEND.DLY	LOG.OUTPUT3	D17.NAME6
79					LOG.SRCRLYa3	D17.NAME7
80					LOG.SRCRLYb3	D17.NAME8
81				CH1FXTIMER.RLY	LOG.OPERAND3	D17.NAME9
82				CH1FXTIMER.DEV		D17.NAME10
83				CH1FXTIMER.DLY		D17.NAME11
84				CH1FXTIMER.OPT		D17.NAME12
85				CH2FXTIMER.RLY		D18.NAME1
86				CH2FXTIMER.DEV		D18.NAME2
87				CH2FXTIMER.DLY		D18.NAME3
88				CH2FXTIMER.OPT		D18.NAME4
89						D18.NAME5
90						D18.NAME6
91				CH1UP.DEVSEL		D18.NAME7
92				CH1DN.DEVSEL		D18.NAME8
93				CH2UP.DEVSEL		D18.NAME9
94				CH2DN.DEVSEL		D18.NAME10
95						D18.NAME11
96						D18.NAME12
97						
98						
99						

D-Register 1800 ~ 2399

D-Reg.	DI CONFIG3	INITIAL1	INITIAL2	PROGRAM	PATTERN INFO	FILE1
	1800	1900	2000	2100	2200	2300
0						
1	D19.NAME1	LANGUAGE	CH1LAMP_IS1	COM_PTNO	NPT1	C.TSP1
2	D19.NAME2	DISP.MODE	CH1LAMP_IS2	COM_SEGNO	NPT2	C.TSP2
3	D19.NAME3	UKEY.USE	CH1LAMP_IS3	PTCOPY_START	NPT3	C.TSP3
4	D19.NAME4		CH1LAMP_IS4	PTCOPY_END	NPT4	C.TSP4
5	D19.NAME5		CH1LAMP_IS5	PTDEL_START	NPT5	C.TSP5
6	D19.NAME6	INFORM1.NAME1	CH1LAMP_IS6	PTDEL_END	NPT6	C.TSP6
7	D19.NAME7	INFORM1.NAME2	CH1LAMP_IS7	TRIGGER	NPT7	C.TSP7
8	D19.NAME8	INFORM1.NAME3	CH1LAMP_IS8	ANSWER	NPT8	C.TSP8
9	D19.NAME9	INFORM1.NAME4	CH1LAMP_TS1		NPT9	C.TSP9
10	D19.NAME10	INFORM1.NAME5	CH1LAMP_TS2		NPT10	C.TSP10
11	D19.NAME11	INFORM1.NAME6	CH1LAMP_TS3	PATTERN_NAME1	NPT11	C.TSP11
12	D19.NAME12	INFORM1.NAME7	CH1LAMP_TS4	PATTERN_NAME2	NPT12	C.TSP12
13	D110.NAME1	INFORM1.NAME8	CH1LAMP_TS5	PATTERN_NAME3	NPT13	C.TSP13
14	D110.NAME2	INFORM1.NAME9	CH1LAMP_TS6	PATTERN_NAME4	NPT14	C.TSP14
15	D110.NAME3	INFORM1.NAME10	CH1LAMP_TS7	PATTERN_NAME5	NPT15	C.TSP15
16	D110.NAME4	INFORM1.NAME11	CH1LAMP_TS8	PATTERN_NAME6	NPT16	C.TSP16
17	D110.NAME5	INFORM1.NAME12	CH1LAMP_AL1	PATTERN_NAME7	NPT17	C.TSP17
18	D110.NAME6	INFORM1.NAME13	CH1LAMP_AL2	PATTERN_NAME8	NPT18	C.TSP18
19	D110.NAME7	INFORM2.NAME1	CH1LAMP_AL3	PATTERN_NAME9	NPT19	C.TSP19
20	D110.NAME8	INFORM2.NAME2	CH1LAMP_AL4	PATTERN_NAME10	NPT20	C.TSP20
21	D110.NAME9	INFORM2.NAME3	CH1LAMP_SAL1	PATTERN_NAME11	NPT21	C.TSP21
22	D110.NAME10	INFORM2.NAME4	CH1LAMP_SAL2	PATTERN_NAME12	NPT22	C.TSP22
23	D110.NAME11	INFORM2.NAME5	CH1LAMP_SAL3		NPT23	C.TSP23
24	D110.NAME12	INFORM2.NAME6	CH1LAMP_SAL4		NPT24	C.TSP24
25	D111.NAME1	INFORM2.NAME7	CH1LAMP_T1		NPT25	C.TSP25
26	D111.NAME2	INFORM2.NAME8	CH1LAMP_T2	TSP	NPT26	C.TSP26
27	D111.NAME3	INFORM2.NAME9	CH1LAMP_T3	SEG.TIME_H	NPT27	C.TSP27
28	D111.NAME4	INFORM2.NAME10	CH1LAMP_T4	SEG.TIME_L	NPT28	C.TSP28
29	D111.NAME5	INFORM2.NAME11	CH1LAMP_T5	TS1	NPT29	C.TSP29
30	D111.NAME6	INFORM2.NAME12	CH1LAMP_T6	TS2	NPT30	C.TSP30
31	D111.NAME7	INFORM2.NAME13	CH1LAMP_T7	TS3	NPT31	C.TSP31
32	D111.NAME8	INFORM3.NAME1	CH1LAMP_RUN	TS4	NPT32	C.TSP32
33	D111.NAME9	INFORM3.NAME2	CH1LAMP_1REF	TS5	NPT33	C.TSP33
34	D111.NAME10	INFORM3.NAME3	CH1LAMP_2REF	TS6	NPT34	C.TSP34
35	D111.NAME11	INFORM3.NAME4	CH1LAMP_SD	TS7	NPT35	C.TSP35
36	D111.NAME12	INFORM3.NAME5	CH1LAMP_D11	TS8	NPT36	C.TSP36
37	D112.NAME1	INFORM3.NAME6	CH1LAMP_D12	SEGAL1	NPT37	C.TSP37
38	D112.NAME2	INFORM3.NAME7	CH1LAMP_D13	SEGAL2	NPT38	C.TSP38
39	D112.NAME3	INFORM3.NAME8	CH1LAMP_D14	SEGAL3	NPT39	C.TSP39
40	D112.NAME4	INFORM3.NAME9	CH1LAMP_D15	SEGAL4	NPT40	C.TSP40
41	D112.NAME5	INFORM3.NAME10	CH1LAMP_D16	SEG_PID	NPT41	C.TSP41
42	D112.NAME6	INFORM3.NAME11	CH1LAMP_D17		NPT42	C.TSP42
43	D112.NAME7	INFORM3.NAME12	CH1LAMP_D18		NPT43	C.TSP43
44	D112.NAME8	INFORM3.NAME13	CH2LAMP_IS9		NPT44	C.TSP44
45	D112.NAME9		CH2LAMP_IS10	START.CODE	NPT45	C.TSP45
46	D112.NAME10		CH2LAMP_IS11	CH1START.SP	NPT46	C.TSP46
47	D112.NAME11		CH2LAMP_IS12	CH2START.SP	NPT47	C.TSP47
48	D112.NAME12		CH2LAMP_IS13		NPT48	C.TSP48
49	D113.NAME1		CH2LAMP_IS14		NPT49	C.TSP49

D-Reg.	DI CONFIG3	INITIAL1	INITIAL2	PROGRAM	PATTERN INFO	FILE1
	1800	1900	2000	2100	2200	2300
50	DI13.NAME2		CH2LAMP_IS15	PT.RPT	NPT50	C.TSP50
51	DI13.NAME3		CH2LAMP_IS16	PT.EMOD	NPT51	C.TSP51
52	DI13.NAME4		CH2LAMP_TS1	CH1LINK.PT	NPT52	C.TSP52
53	DI13.NAME5		CH2LAMP_TS2	CH2LINK.PT	NPT53	C.TSP53
54	DI13.NAME6		CH2LAMP_TS3		NPT54	C.TSP54
55	DI13.NAME7		CH2LAMP_TS4		NPT55	C.TSP55
56	DI13.NAME8		CH2LAMP_TS5	SEG_RPT.S1	NPT56	C.TSP56
57	DI13.NAME9		CH2LAMP_TS6	SEG_RPT.E1	NPT57	C.TSP57
58	DI13.NAME10		CH2LAMP_TS7	SEG_RPT.C1	NPT58	C.TSP58
59	DI13.NAME11		CH2LAMP_TS8	SEG_RPT.S2	NPT59	C.TSP59
60	DI13.NAME12		CH2LAMP_AL5	SEG_RPT.E2	NPT60	C.TSP60
61	DI14.NAME1		CH2LAMP_AL6	SEG_RPT.C2	NPT61	C.TSP61
62	DI14.NAME2		CH2LAMP_AL7	SEG_RPT.S3	NPT62	C.TSP62
63	DI14.NAME3		CH2LAMP_AL8	SEG_RPT.E3	NPT63	C.TSP63
64	DI14.NAME4		CH2LAMP_SAL1	SEG_RPT.C3	NPT64	C.TSP64
65	DI14.NAME5		CH2LAMP_SAL2	SEG_RPT.S4	NPT65	C.TSP65
66	DI14.NAME6		CH2LAMP_SAL3	SEG_RPT.E4	NPT66	C.TSP66
67	DI14.NAME7		CH2LAMP_SAL4	SEG_RPT.C4	NPT67	C.TSP67
68	DI14.NAME8		CH2LAMP_T8		NPT68	C.TSP68
69	DI14.NAME9		CH2LAMP_T9		NPT69	C.TSP69
70	DI14.NAME10		CH2LAMP_T10		NPT70	C.TSP70
71	DI14.NAME11		CH2LAMP_T11		NPT71	C.TSP71
72	DI14.NAME12		CH2LAMP_T12		NPT72	C.TSP72
73	DI15.NAME1		CH2LAMP_T13		NPT73	C.TSP73
74	DI15.NAME2		CH2LAMP_T14		NPT74	C.TSP74
75	DI15.NAME3		CH2LAMP_RUN		NPT75	C.TSP75
76	DI15.NAME4		CH2LAMP_1REF		NPT76	C.TSP76
77	DI15.NAME5		CH2LAMP_2REF		NPT77	C.TSP77
78	DI15.NAME6		CH2LAMP_SD		NPT78	C.TSP78
79	DI15.NAME7		CH2LAMP_DI9		NPT79	C.TSP79
80	DI15.NAME8		CH2LAMP_DI10		NPT80	C.TSP80
81	DI15.NAME9		CH2LAMP_DI11			C.TSP81
82	DI15.NAME10		CH2LAMP_DI12			C.TSP82
83	DI15.NAME11		CH2LAMP_DI13			C.TSP83
84	DI15.NAME12		CH2LAMP_DI14			C.TSP84
85	DI16.NAME1		CH2LAMP_DI15			C.TSP85
86	DI16.NAME2		CH2LAMP_DI16			C.TSP86
87	DI16.NAME3					C.TSP87
88	DI16.NAME4					C.TSP88
89	DI16.NAME5					C.TSP89
90	DI16.NAME6					C.TSP90
91	DI16.NAME7					C.TSP91
92	DI16.NAME8					C.TSP92
93	DI16.NAME9					C.TSP93
94	DI16.NAME10					C.TSP94
95	DI16.NAME11					C.TSP95
96	DI16.NAME12					C.TSP96
97						C.TSP97
98						C.TSP98
99						C.TSP99

D-Register 2400 ~ 2999

D-Reg.	FILE2	FILE3	FILE4	FILE5	FILE6	FILE7
	2400	2500	2600	2700	2800	2900
0						
1		C.SRTIME_H1	C.SRTIME_L1	C.TS1_1	C.TS2_1	C.TS3_1
2		C.SRTIME_H2	C.SRTIME_L2	C.TS1_2	C.TS2_2	C.TS3_2
3		C.SRTIME_H3	C.SRTIME_L3	C.TS1_3	C.TS2_3	C.TS3_3
4		C.SRTIME_H4	C.SRTIME_L4	C.TS1_4	C.TS2_4	C.TS3_4
5		C.SRTIME_H5	C.SRTIME_L5	C.TS1_5	C.TS2_5	C.TS3_5
6		C.SRTIME_H6	C.SRTIME_L6	C.TS1_6	C.TS2_6	C.TS3_6
7		C.SRTIME_H7	C.SRTIME_L7	C.TS1_7	C.TS2_7	C.TS3_7
8		C.SRTIME_H8	C.SRTIME_L8	C.TS1_8	C.TS2_8	C.TS3_8
9		C.SRTIME_H9	C.SRTIME_L9	C.TS1_9	C.TS2_9	C.TS3_9
10		C.SRTIME_H10	C.SRTIME_L10	C.TS1_10	C.TS2_10	C.TS3_10
11		C.SRTIME_H11	C.SRTIME_L11	C.TS1_11	C.TS2_11	C.TS3_11
12		C.SRTIME_H12	C.SRTIME_L12	C.TS1_12	C.TS2_12	C.TS3_12
13		C.SRTIME_H13	C.SRTIME_L13	C.TS1_13	C.TS2_13	C.TS3_13
14		C.SRTIME_H14	C.SRTIME_L14	C.TS1_14	C.TS2_14	C.TS3_14
15		C.SRTIME_H15	C.SRTIME_L15	C.TS1_15	C.TS2_15	C.TS3_15
16		C.SRTIME_H16	C.SRTIME_L16	C.TS1_16	C.TS2_16	C.TS3_16
17		C.SRTIME_H17	C.SRTIME_L17	C.TS1_17	C.TS2_17	C.TS3_17
18		C.SRTIME_H18	C.SRTIME_L18	C.TS1_18	C.TS2_18	C.TS3_18
19		C.SRTIME_H19	C.SRTIME_L19	C.TS1_19	C.TS2_19	C.TS3_19
20		C.SRTIME_H20	C.SRTIME_L20	C.TS1_20	C.TS2_20	C.TS3_20
21		C.SRTIME_H21	C.SRTIME_L21	C.TS1_21	C.TS2_21	C.TS3_21
22		C.SRTIME_H22	C.SRTIME_L22	C.TS1_22	C.TS2_22	C.TS3_22
23		C.SRTIME_H23	C.SRTIME_L23	C.TS1_23	C.TS2_23	C.TS3_23
24		C.SRTIME_H24	C.SRTIME_L24	C.TS1_24	C.TS2_24	C.TS3_24
25		C.SRTIME_H25	C.SRTIME_L25	C.TS1_25	C.TS2_25	C.TS3_25
26		C.SRTIME_H26	C.SRTIME_L26	C.TS1_26	C.TS2_26	C.TS3_26
27		C.SRTIME_H27	C.SRTIME_L27	C.TS1_27	C.TS2_27	C.TS3_27
28		C.SRTIME_H28	C.SRTIME_L28	C.TS1_28	C.TS2_28	C.TS3_28
29		C.SRTIME_H29	C.SRTIME_L29	C.TS1_29	C.TS2_29	C.TS3_29
30		C.SRTIME_H30	C.SRTIME_L30	C.TS1_30	C.TS2_30	C.TS3_30
31		C.SRTIME_H31	C.SRTIME_L31	C.TS1_31	C.TS2_31	C.TS3_31
32		C.SRTIME_H32	C.SRTIME_L32	C.TS1_32	C.TS2_32	C.TS3_32
33		C.SRTIME_H33	C.SRTIME_L33	C.TS1_33	C.TS2_33	C.TS3_33
34		C.SRTIME_H34	C.SRTIME_L34	C.TS1_34	C.TS2_34	C.TS3_34
35		C.SRTIME_H35	C.SRTIME_L35	C.TS1_35	C.TS2_35	C.TS3_35
36		C.SRTIME_H36	C.SRTIME_L36	C.TS1_36	C.TS2_36	C.TS3_36
37		C.SRTIME_H37	C.SRTIME_L37	C.TS1_37	C.TS2_37	C.TS3_37
38		C.SRTIME_H38	C.SRTIME_L38	C.TS1_38	C.TS2_38	C.TS3_38
39		C.SRTIME_H39	C.SRTIME_L39	C.TS1_39	C.TS2_39	C.TS3_39
40		C.SRTIME_H40	C.SRTIME_L40	C.TS1_40	C.TS2_40	C.TS3_40
41		C.SRTIME_H41	C.SRTIME_L41	C.TS1_41	C.TS2_41	C.TS3_41
42		C.SRTIME_H42	C.SRTIME_L42	C.TS1_42	C.TS2_42	C.TS3_42
43		C.SRTIME_H43	C.SRTIME_L43	C.TS1_43	C.TS2_43	C.TS3_43
44		C.SRTIME_H44	C.SRTIME_L44	C.TS1_44	C.TS2_44	C.TS3_44
45		C.SRTIME_H45	C.SRTIME_L45	C.TS1_45	C.TS2_45	C.TS3_45
46		C.SRTIME_H46	C.SRTIME_L46	C.TS1_46	C.TS2_46	C.TS3_46
47		C.SRTIME_H47	C.SRTIME_L47	C.TS1_47	C.TS2_47	C.TS3_47
48		C.SRTIME_H48	C.SRTIME_L48	C.TS1_48	C.TS2_48	C.TS3_48
49		C.SRTIME_H49	C.SRTIME_L49	C.TS1_49	C.TS2_49	C.TS3_49

D-Reg.	FILE2	FILE3	FILE4	FILE5	FILE6	FILE7
	2400	2500	2600	2700	2800	2900
50		C.SRTIME_H50	C.SRTIME_L50	C.TS1_50	C.TS2_50	C.TS3_50
51		C.SRTIME_H51	C.SRTIME_L51	C.TS1_51	C.TS2_51	C.TS3_51
52		C.SRTIME_H52	C.SRTIME_L52	C.TS1_52	C.TS2_52	C.TS3_52
53		C.SRTIME_H53	C.SRTIME_L53	C.TS1_53	C.TS2_53	C.TS3_53
54		C.SRTIME_H54	C.SRTIME_L54	C.TS1_54	C.TS2_54	C.TS3_54
55		C.SRTIME_H55	C.SRTIME_L55	C.TS1_55	C.TS2_55	C.TS3_55
56		C.SRTIME_H56	C.SRTIME_L56	C.TS1_56	C.TS2_56	C.TS3_56
57		C.SRTIME_H57	C.SRTIME_L57	C.TS1_57	C.TS2_57	C.TS3_57
58		C.SRTIME_H58	C.SRTIME_L58	C.TS1_58	C.TS2_58	C.TS3_58
59		C.SRTIME_H59	C.SRTIME_L59	C.TS1_59	C.TS2_59	C.TS3_59
60		C.SRTIME_H60	C.SRTIME_L60	C.TS1_60	C.TS2_60	C.TS3_60
61		C.SRTIME_H61	C.SRTIME_L61	C.TS1_61	C.TS2_61	C.TS3_61
62		C.SRTIME_H62	C.SRTIME_L62	C.TS1_62	C.TS2_62	C.TS3_62
63		C.SRTIME_H63	C.SRTIME_L63	C.TS1_63	C.TS2_63	C.TS3_63
64		C.SRTIME_H64	C.SRTIME_L64	C.TS1_64	C.TS2_64	C.TS3_64
65		C.SRTIME_H65	C.SRTIME_L65	C.TS1_65	C.TS2_65	C.TS3_65
66		C.SRTIME_H66	C.SRTIME_L66	C.TS1_66	C.TS2_66	C.TS3_66
67		C.SRTIME_H67	C.SRTIME_L67	C.TS1_67	C.TS2_67	C.TS3_67
68		C.SRTIME_H68	C.SRTIME_L68	C.TS1_68	C.TS2_68	C.TS3_68
69		C.SRTIME_H69	C.SRTIME_L69	C.TS1_69	C.TS2_69	C.TS3_69
70		C.SRTIME_H70	C.SRTIME_L70	C.TS1_70	C.TS2_70	C.TS3_70
71		C.SRTIME_H71	C.SRTIME_L71	C.TS1_71	C.TS2_71	C.TS3_71
72		C.SRTIME_H72	C.SRTIME_L72	C.TS1_72	C.TS2_72	C.TS3_72
73		C.SRTIME_H73	C.SRTIME_L73	C.TS1_73	C.TS2_73	C.TS3_73
74		C.SRTIME_H74	C.SRTIME_L74	C.TS1_74	C.TS2_74	C.TS3_74
75		C.SRTIME_H75	C.SRTIME_L75	C.TS1_75	C.TS2_75	C.TS3_75
76		C.SRTIME_H76	C.SRTIME_L76	C.TS1_76	C.TS2_76	C.TS3_76
77		C.SRTIME_H77	C.SRTIME_L77	C.TS1_77	C.TS2_77	C.TS3_77
78		C.SRTIME_H78	C.SRTIME_L78	C.TS1_78	C.TS2_78	C.TS3_78
79		C.SRTIME_H79	C.SRTIME_L79	C.TS1_79	C.TS2_79	C.TS3_79
80		C.SRTIME_H80	C.SRTIME_L80	C.TS1_80	C.TS2_80	C.TS3_80
81		C.SRTIME_H81	C.SRTIME_L81	C.TS1_81	C.TS2_81	C.TS3_81
82		C.SRTIME_H82	C.SRTIME_L82	C.TS1_82	C.TS2_82	C.TS3_82
83		C.SRTIME_H83	C.SRTIME_L83	C.TS1_83	C.TS2_83	C.TS3_83
84		C.SRTIME_H84	C.SRTIME_L84	C.TS1_84	C.TS2_84	C.TS3_84
85		C.SRTIME_H85	C.SRTIME_L85	C.TS1_85	C.TS2_85	C.TS3_85
86		C.SRTIME_H86	C.SRTIME_L86	C.TS1_86	C.TS2_86	C.TS3_86
87		C.SRTIME_H87	C.SRTIME_L87	C.TS1_87	C.TS2_87	C.TS3_87
88		C.SRTIME_H88	C.SRTIME_L88	C.TS1_88	C.TS2_88	C.TS3_88
89		C.SRTIME_H89	C.SRTIME_L89	C.TS1_89	C.TS2_89	C.TS3_89
90		C.SRTIME_H90	C.SRTIME_L90	C.TS1_90	C.TS2_90	C.TS3_90
91		C.SRTIME_H91	C.SRTIME_L91	C.TS1_91	C.TS2_91	C.TS3_91
92		C.SRTIME_H92	C.SRTIME_L92	C.TS1_92	C.TS2_92	C.TS3_92
93		C.SRTIME_H93	C.SRTIME_L93	C.TS1_93	C.TS2_93	C.TS3_93
94		C.SRTIME_H94	C.SRTIME_L94	C.TS1_94	C.TS2_94	C.TS3_94
95		C.SRTIME_H95	C.SRTIME_L95	C.TS1_95	C.TS2_95	C.TS3_95
96		C.SRTIME_H96	C.SRTIME_L96	C.TS1_96	C.TS2_96	C.TS3_96
97		C.SRTIME_H97	C.SRTIME_L97	C.TS1_97	C.TS2_97	C.TS3_97
98		C.SRTIME_H98	C.SRTIME_L98	C.TS1_98	C.TS2_98	C.TS3_98
99		C.SRTIME_H99	C.SRTIME_L99	C.TS1_99	C.TS2_99	C.TS3_99

D-Register 3000 ~ 3599

D-Reg.	FILE8	FILE9	FILE10	FILE11	FILE12	FILE13
	3000	3100	3200	3300	3400	3500
0						
1	C.TS4_1	C.TS5_1	C.TS6_1	C.TS7_1	C.TS8_1	C.SEGAL1_1
2	C.TS4_2	C.TS5_2	C.TS6_2	C.TS7_2	C.TS8_2	C.SEGAL1_2
3	C.TS4_3	C.TS5_3	C.TS6_3	C.TS7_3	C.TS8_3	C.SEGAL1_3
4	C.TS4_4	C.TS5_4	C.TS6_4	C.TS7_4	C.TS8_4	C.SEGAL1_4
5	C.TS4_5	C.TS5_5	C.TS6_5	C.TS7_5	C.TS8_5	C.SEGAL1_5
6	C.TS4_6	C.TS5_6	C.TS6_6	C.TS7_6	C.TS8_6	C.SEGAL1_6
7	C.TS4_7	C.TS5_7	C.TS6_7	C.TS7_7	C.TS8_7	C.SEGAL1_7
8	C.TS4_8	C.TS5_8	C.TS6_8	C.TS7_8	C.TS8_8	C.SEGAL1_8
9	C.TS4_9	C.TS5_9	C.TS6_9	C.TS7_9	C.TS8_9	C.SEGAL1_9
10	C.TS4_10	C.TS5_10	C.TS6_10	C.TS7_10	C.TS8_10	C.SEGAL1_10
11	C.TS4_11	C.TS5_11	C.TS6_11	C.TS7_11	C.TS8_11	C.SEGAL1_11
12	C.TS4_12	C.TS5_12	C.TS6_12	C.TS7_12	C.TS8_12	C.SEGAL1_12
13	C.TS4_13	C.TS5_13	C.TS6_13	C.TS7_13	C.TS8_13	C.SEGAL1_13
14	C.TS4_14	C.TS5_14	C.TS6_14	C.TS7_14	C.TS8_14	C.SEGAL1_14
15	C.TS4_15	C.TS5_15	C.TS6_15	C.TS7_15	C.TS8_15	C.SEGAL1_15
16	C.TS4_16	C.TS5_16	C.TS6_16	C.TS7_16	C.TS8_16	C.SEGAL1_16
17	C.TS4_17	C.TS5_17	C.TS6_17	C.TS7_17	C.TS8_17	C.SEGAL1_17
18	C.TS4_18	C.TS5_18	C.TS6_18	C.TS7_18	C.TS8_18	C.SEGAL1_18
19	C.TS4_19	C.TS5_19	C.TS6_19	C.TS7_19	C.TS8_19	C.SEGAL1_19
20	C.TS4_20	C.TS5_20	C.TS6_20	C.TS7_20	C.TS8_20	C.SEGAL1_20
21	C.TS4_21	C.TS5_21	C.TS6_21	C.TS7_21	C.TS8_21	C.SEGAL1_21
22	C.TS4_22	C.TS5_22	C.TS6_22	C.TS7_22	C.TS8_22	C.SEGAL1_22
23	C.TS4_23	C.TS5_23	C.TS6_23	C.TS7_23	C.TS8_23	C.SEGAL1_23
24	C.TS4_24	C.TS5_24	C.TS6_24	C.TS7_24	C.TS8_24	C.SEGAL1_24
25	C.TS4_25	C.TS5_25	C.TS6_25	C.TS7_25	C.TS8_25	C.SEGAL1_25
26	C.TS4_26	C.TS5_26	C.TS6_26	C.TS7_26	C.TS8_26	C.SEGAL1_26
27	C.TS4_27	C.TS5_27	C.TS6_27	C.TS7_27	C.TS8_27	C.SEGAL1_27
28	C.TS4_28	C.TS5_28	C.TS6_28	C.TS7_28	C.TS8_28	C.SEGAL1_28
29	C.TS4_29	C.TS5_29	C.TS6_29	C.TS7_29	C.TS8_29	C.SEGAL1_29
30	C.TS4_30	C.TS5_30	C.TS6_30	C.TS7_30	C.TS8_30	C.SEGAL1_30
31	C.TS4_31	C.TS5_31	C.TS6_31	C.TS7_31	C.TS8_31	C.SEGAL1_31
32	C.TS4_32	C.TS5_32	C.TS6_32	C.TS7_32	C.TS8_32	C.SEGAL1_32
33	C.TS4_33	C.TS5_33	C.TS6_33	C.TS7_33	C.TS8_33	C.SEGAL1_33
34	C.TS4_34	C.TS5_34	C.TS6_34	C.TS7_34	C.TS8_34	C.SEGAL1_34
35	C.TS4_35	C.TS5_35	C.TS6_35	C.TS7_35	C.TS8_35	C.SEGAL1_35
36	C.TS4_36	C.TS5_36	C.TS6_36	C.TS7_36	C.TS8_36	C.SEGAL1_36
37	C.TS4_37	C.TS5_37	C.TS6_37	C.TS7_37	C.TS8_37	C.SEGAL1_37
38	C.TS4_38	C.TS5_38	C.TS6_38	C.TS7_38	C.TS8_38	C.SEGAL1_38
39	C.TS4_39	C.TS5_39	C.TS6_39	C.TS7_39	C.TS8_39	C.SEGAL1_39
40	C.TS4_40	C.TS5_40	C.TS6_40	C.TS7_40	C.TS8_40	C.SEGAL1_40
41	C.TS4_41	C.TS5_41	C.TS6_41	C.TS7_41	C.TS8_41	C.SEGAL1_41
42	C.TS4_42	C.TS5_42	C.TS6_42	C.TS7_42	C.TS8_42	C.SEGAL1_42
43	C.TS4_43	C.TS5_43	C.TS6_43	C.TS7_43	C.TS8_43	C.SEGAL1_43
44	C.TS4_44	C.TS5_44	C.TS6_44	C.TS7_44	C.TS8_44	C.SEGAL1_44
45	C.TS4_45	C.TS5_45	C.TS6_45	C.TS7_45	C.TS8_45	C.SEGAL1_45
46	C.TS4_46	C.TS5_46	C.TS6_46	C.TS7_46	C.TS8_46	C.SEGAL1_46
47	C.TS4_47	C.TS5_47	C.TS6_47	C.TS7_47	C.TS8_47	C.SEGAL1_47
48	C.TS4_48	C.TS5_48	C.TS6_48	C.TS7_48	C.TS8_48	C.SEGAL1_48
49	C.TS4_49	C.TS5_49	C.TS6_49	C.TS7_49	C.TS8_49	C.SEGAL1_49

D-Reg.	FILE8	FILE9	FILE10	FILE11	FILE12	FILE13
	3000	3100	3200	3300	3400	3500
50	C.TS4_50	C.TS5_50	C.TS6_50	C.TS7_50	C.TS8_50	C.SEGAL_1_50
51	C.TS4_51	C.TS5_51	C.TS6_51	C.TS7_51	C.TS8_51	C.SEGAL_1_51
52	C.TS4_52	C.TS5_52	C.TS6_52	C.TS7_52	C.TS8_52	C.SEGAL_1_52
53	C.TS4_53	C.TS5_53	C.TS6_53	C.TS7_53	C.TS8_53	C.SEGAL_1_53
54	C.TS4_54	C.TS5_54	C.TS6_54	C.TS7_54	C.TS8_54	C.SEGAL_1_54
55	C.TS4_55	C.TS5_55	C.TS6_55	C.TS7_55	C.TS8_55	C.SEGAL_1_55
56	C.TS4_56	C.TS5_56	C.TS6_56	C.TS7_56	C.TS8_56	C.SEGAL_1_56
57	C.TS4_57	C.TS5_57	C.TS6_57	C.TS7_57	C.TS8_57	C.SEGAL_1_57
58	C.TS4_58	C.TS5_58	C.TS6_58	C.TS7_58	C.TS8_58	C.SEGAL_1_58
59	C.TS4_59	C.TS5_59	C.TS6_59	C.TS7_59	C.TS8_59	C.SEGAL_1_59
60	C.TS4_60	C.TS5_60	C.TS6_60	C.TS7_60	C.TS8_60	C.SEGAL_1_60
61	C.TS4_61	C.TS5_61	C.TS6_61	C.TS7_61	C.TS8_61	C.SEGAL_1_61
62	C.TS4_62	C.TS5_62	C.TS6_62	C.TS7_62	C.TS8_62	C.SEGAL_1_62
63	C.TS4_63	C.TS5_63	C.TS6_63	C.TS7_63	C.TS8_63	C.SEGAL_1_63
64	C.TS4_64	C.TS5_64	C.TS6_64	C.TS7_64	C.TS8_64	C.SEGAL_1_64
65	C.TS4_65	C.TS5_65	C.TS6_65	C.TS7_65	C.TS8_65	C.SEGAL_1_65
66	C.TS4_66	C.TS5_66	C.TS6_66	C.TS7_66	C.TS8_66	C.SEGAL_1_66
67	C.TS4_67	C.TS5_67	C.TS6_67	C.TS7_67	C.TS8_67	C.SEGAL_1_67
68	C.TS4_68	C.TS5_68	C.TS6_68	C.TS7_68	C.TS8_68	C.SEGAL_1_68
69	C.TS4_69	C.TS5_69	C.TS6_69	C.TS7_69	C.TS8_69	C.SEGAL_1_69
70	C.TS4_70	C.TS5_70	C.TS6_70	C.TS7_70	C.TS8_70	C.SEGAL_1_70
71	C.TS4_71	C.TS5_71	C.TS6_71	C.TS7_71	C.TS8_71	C.SEGAL_1_71
72	C.TS4_72	C.TS5_72	C.TS6_72	C.TS7_72	C.TS8_72	C.SEGAL_1_72
73	C.TS4_73	C.TS5_73	C.TS6_73	C.TS7_73	C.TS8_73	C.SEGAL_1_73
74	C.TS4_74	C.TS5_74	C.TS6_74	C.TS7_74	C.TS8_74	C.SEGAL_1_74
75	C.TS4_75	C.TS5_75	C.TS6_75	C.TS7_75	C.TS8_75	C.SEGAL_1_75
76	C.TS4_76	C.TS5_76	C.TS6_76	C.TS7_76	C.TS8_76	C.SEGAL_1_76
77	C.TS4_77	C.TS5_77	C.TS6_77	C.TS7_77	C.TS8_77	C.SEGAL_1_77
78	C.TS4_78	C.TS5_78	C.TS6_78	C.TS7_78	C.TS8_78	C.SEGAL_1_78
79	C.TS4_79	C.TS5_79	C.TS6_79	C.TS7_79	C.TS8_79	C.SEGAL_1_79
80	C.TS4_80	C.TS5_80	C.TS6_80	C.TS7_80	C.TS8_80	C.SEGAL_1_80
81	C.TS4_81	C.TS5_81	C.TS6_81	C.TS7_81	C.TS8_81	C.SEGAL_1_81
82	C.TS4_82	C.TS5_82	C.TS6_82	C.TS7_82	C.TS8_82	C.SEGAL_1_82
83	C.TS4_83	C.TS5_83	C.TS6_83	C.TS7_83	C.TS8_83	C.SEGAL_1_83
84	C.TS4_84	C.TS5_84	C.TS6_84	C.TS7_84	C.TS8_84	C.SEGAL_1_84
85	C.TS4_85	C.TS5_85	C.TS6_85	C.TS7_85	C.TS8_85	C.SEGAL_1_85
86	C.TS4_86	C.TS5_86	C.TS6_86	C.TS7_86	C.TS8_86	C.SEGAL_1_86
87	C.TS4_87	C.TS5_87	C.TS6_87	C.TS7_87	C.TS8_87	C.SEGAL_1_87
88	C.TS4_88	C.TS5_88	C.TS6_88	C.TS7_88	C.TS8_88	C.SEGAL_1_88
89	C.TS4_89	C.TS5_89	C.TS6_89	C.TS7_89	C.TS8_89	C.SEGAL_1_89
90	C.TS4_90	C.TS5_90	C.TS6_90	C.TS7_90	C.TS8_90	C.SEGAL_1_90
91	C.TS4_91	C.TS5_91	C.TS6_91	C.TS7_91	C.TS8_91	C.SEGAL_1_91
92	C.TS4_92	C.TS5_92	C.TS6_92	C.TS7_92	C.TS8_92	C.SEGAL_1_92
93	C.TS4_93	C.TS5_93	C.TS6_93	C.TS7_93	C.TS8_93	C.SEGAL_1_93
94	C.TS4_94	C.TS5_94	C.TS6_94	C.TS7_94	C.TS8_94	C.SEGAL_1_94
95	C.TS4_95	C.TS5_95	C.TS6_95	C.TS7_95	C.TS8_95	C.SEGAL_1_95
96	C.TS4_96	C.TS5_96	C.TS6_96	C.TS7_96	C.TS8_96	C.SEGAL_1_96
97	C.TS4_97	C.TS5_97	C.TS6_97	C.TS7_97	C.TS8_97	C.SEGAL_1_97
98	C.TS4_98	C.TS5_98	C.TS6_98	C.TS7_98	C.TS8_98	C.SEGAL_1_98
99	C.TS4_99	C.TS5_99	C.TS6_99	C.TS7_99	C.TS8_99	C.SEGAL_1_99

D-Register 3600 ~ 4199

D-Reg.	FILE14	FILE15	FILE16	FILE17	RESERVED	RESERVED
	3600	3700	3800	3900	4000	4100
0						
1	C.SEGAL2_1	C.SEGAL3_1	C.SEGAL4_1	C.SEGPID_1		
2	C.SEGAL2_2	C.SEGAL3_2	C.SEGAL4_2	C.SEGPID_2		
3	C.SEGAL2_3	C.SEGAL3_3	C.SEGAL4_3	C.SEGPID_3		
4	C.SEGAL2_4	C.SEGAL3_4	C.SEGAL4_4	C.SEGPID_4		
5	C.SEGAL2_5	C.SEGAL3_5	C.SEGAL4_5	C.SEGPID_5		
6	C.SEGAL2_6	C.SEGAL3_6	C.SEGAL4_6	C.SEGPID_6		
7	C.SEGAL2_7	C.SEGAL3_7	C.SEGAL4_7	C.SEGPID_7		
8	C.SEGAL2_8	C.SEGAL3_8	C.SEGAL4_8	C.SEGPID_8		
9	C.SEGAL2_9	C.SEGAL3_9	C.SEGAL4_9	C.SEGPID_9		
10	C.SEGAL2_10	C.SEGAL3_10	C.SEGAL4_10	C.SEGPID_10		
11	C.SEGAL2_11	C.SEGAL3_11	C.SEGAL4_11	C.SEGPID_11		
12	C.SEGAL2_12	C.SEGAL3_12	C.SEGAL4_12	C.SEGPID_12		
13	C.SEGAL2_13	C.SEGAL3_13	C.SEGAL4_13	C.SEGPID_13		
14	C.SEGAL2_14	C.SEGAL3_14	C.SEGAL4_14	C.SEGPID_14		
15	C.SEGAL2_15	C.SEGAL3_15	C.SEGAL4_15	C.SEGPID_15		
16	C.SEGAL2_16	C.SEGAL3_16	C.SEGAL4_16	C.SEGPID_16		
17	C.SEGAL2_17	C.SEGAL3_17	C.SEGAL4_17	C.SEGPID_17		
18	C.SEGAL2_18	C.SEGAL3_18	C.SEGAL4_18	C.SEGPID_18		
19	C.SEGAL2_19	C.SEGAL3_19	C.SEGAL4_19	C.SEGPID_19		
20	C.SEGAL2_20	C.SEGAL3_20	C.SEGAL4_20	C.SEGPID_20		
21	C.SEGAL2_21	C.SEGAL3_21	C.SEGAL4_21	C.SEGPID_21		
22	C.SEGAL2_22	C.SEGAL3_22	C.SEGAL4_22	C.SEGPID_22		
23	C.SEGAL2_23	C.SEGAL3_23	C.SEGAL4_23	C.SEGPID_23		
24	C.SEGAL2_24	C.SEGAL3_24	C.SEGAL4_24	C.SEGPID_24		
25	C.SEGAL2_25	C.SEGAL3_25	C.SEGAL4_25	C.SEGPID_25		
26	C.SEGAL2_26	C.SEGAL3_26	C.SEGAL4_26	C.SEGPID_26		
27	C.SEGAL2_27	C.SEGAL3_27	C.SEGAL4_27	C.SEGPID_27		
28	C.SEGAL2_28	C.SEGAL3_28	C.SEGAL4_28	C.SEGPID_28		
29	C.SEGAL2_29	C.SEGAL3_29	C.SEGAL4_29	C.SEGPID_29		
30	C.SEGAL2_30	C.SEGAL3_30	C.SEGAL4_30	C.SEGPID_30		
31	C.SEGAL2_31	C.SEGAL3_31	C.SEGAL4_31	C.SEGPID_31		
32	C.SEGAL2_32	C.SEGAL3_32	C.SEGAL4_32	C.SEGPID_32		
33	C.SEGAL2_33	C.SEGAL3_33	C.SEGAL4_33	C.SEGPID_33		
34	C.SEGAL2_34	C.SEGAL3_34	C.SEGAL4_34	C.SEGPID_34		
35	C.SEGAL2_35	C.SEGAL3_35	C.SEGAL4_35	C.SEGPID_35		
36	C.SEGAL2_36	C.SEGAL3_36	C.SEGAL4_36	C.SEGPID_36		
37	C.SEGAL2_37	C.SEGAL3_37	C.SEGAL4_37	C.SEGPID_37		
38	C.SEGAL2_38	C.SEGAL3_38	C.SEGAL4_38	C.SEGPID_38		
39	C.SEGAL2_39	C.SEGAL3_39	C.SEGAL4_39	C.SEGPID_39		
40	C.SEGAL2_40	C.SEGAL3_40	C.SEGAL4_40	C.SEGPID_40		
41	C.SEGAL2_41	C.SEGAL3_41	C.SEGAL4_41	C.SEGPID_41		
42	C.SEGAL2_42	C.SEGAL3_42	C.SEGAL4_42	C.SEGPID_42		
43	C.SEGAL2_43	C.SEGAL3_43	C.SEGAL4_43	C.SEGPID_43		
44	C.SEGAL2_44	C.SEGAL3_44	C.SEGAL4_44	C.SEGPID_44		
45	C.SEGAL2_45	C.SEGAL3_45	C.SEGAL4_45	C.SEGPID_45		
46	C.SEGAL2_46	C.SEGAL3_46	C.SEGAL4_46	C.SEGPID_46		
47	C.SEGAL2_47	C.SEGAL3_47	C.SEGAL4_47	C.SEGPID_47		
48	C.SEGAL2_48	C.SEGAL3_48	C.SEGAL4_48	C.SEGPID_48		
49	C.SEGAL2_49	C.SEGAL3_49	C.SEGAL4_49	C.SEGPID_49		

D-Reg.	FILE14	FILE15	FILE16	FILE17	RESERVED	RESERVED
	3600	3700	3800	3900	4000	4100
50	C.SEGAL2_50	C.SEGAL3_50	C.SEGAL4_50	C.SEGPID_50		
51	C.SEGAL2_51	C.SEGAL3_51	C.SEGAL4_51	C.SEGPID_51		
52	C.SEGAL2_52	C.SEGAL3_52	C.SEGAL4_52	C.SEGPID_52		
53	C.SEGAL2_53	C.SEGAL3_53	C.SEGAL4_53	C.SEGPID_53		
54	C.SEGAL2_54	C.SEGAL3_54	C.SEGAL4_54	C.SEGPID_54		
55	C.SEGAL2_55	C.SEGAL3_55	C.SEGAL4_55	C.SEGPID_55		
56	C.SEGAL2_56	C.SEGAL3_56	C.SEGAL4_56	C.SEGPID_56		
57	C.SEGAL2_57	C.SEGAL3_57	C.SEGAL4_57	C.SEGPID_57		
58	C.SEGAL2_58	C.SEGAL3_58	C.SEGAL4_58	C.SEGPID_58		
59	C.SEGAL2_59	C.SEGAL3_59	C.SEGAL4_59	C.SEGPID_59		
60	C.SEGAL2_60	C.SEGAL3_60	C.SEGAL4_60	C.SEGPID_60		
61	C.SEGAL2_61	C.SEGAL3_61	C.SEGAL4_61	C.SEGPID_61		
62	C.SEGAL2_62	C.SEGAL3_62	C.SEGAL4_62	C.SEGPID_62		
63	C.SEGAL2_63	C.SEGAL3_63	C.SEGAL4_63	C.SEGPID_63		
64	C.SEGAL2_64	C.SEGAL3_64	C.SEGAL4_64	C.SEGPID_64		
65	C.SEGAL2_65	C.SEGAL3_65	C.SEGAL4_65	C.SEGPID_65		
66	C.SEGAL2_66	C.SEGAL3_66	C.SEGAL4_66	C.SEGPID_66		
67	C.SEGAL2_67	C.SEGAL3_67	C.SEGAL4_67	C.SEGPID_67		
68	C.SEGAL2_68	C.SEGAL3_68	C.SEGAL4_68	C.SEGPID_68		
69	C.SEGAL2_69	C.SEGAL3_69	C.SEGAL4_69	C.SEGPID_69		
70	C.SEGAL2_70	C.SEGAL3_70	C.SEGAL4_70	C.SEGPID_70		
71	C.SEGAL2_71	C.SEGAL3_71	C.SEGAL4_71	C.SEGPID_71		
72	C.SEGAL2_72	C.SEGAL3_72	C.SEGAL4_72	C.SEGPID_72		
73	C.SEGAL2_73	C.SEGAL3_73	C.SEGAL4_73	C.SEGPID_73		
74	C.SEGAL2_74	C.SEGAL3_74	C.SEGAL4_74	C.SEGPID_74		
75	C.SEGAL2_75	C.SEGAL3_75	C.SEGAL4_75	C.SEGPID_75		
76	C.SEGAL2_76	C.SEGAL3_76	C.SEGAL4_76	C.SEGPID_76		
77	C.SEGAL2_77	C.SEGAL3_77	C.SEGAL4_77	C.SEGPID_77		
78	C.SEGAL2_78	C.SEGAL3_78	C.SEGAL4_78	C.SEGPID_78		
79	C.SEGAL2_79	C.SEGAL3_79	C.SEGAL4_79	C.SEGPID_79		
80	C.SEGAL2_80	C.SEGAL3_80	C.SEGAL4_80	C.SEGPID_80		
81	C.SEGAL2_81	C.SEGAL3_81	C.SEGAL4_81	C.SEGPID_81		
82	C.SEGAL2_82	C.SEGAL3_82	C.SEGAL4_82	C.SEGPID_82		
83	C.SEGAL2_83	C.SEGAL3_83	C.SEGAL4_83	C.SEGPID_83		
84	C.SEGAL2_84	C.SEGAL3_84	C.SEGAL4_84	C.SEGPID_84		
85	C.SEGAL2_85	C.SEGAL3_85	C.SEGAL4_85	C.SEGPID_85		
86	C.SEGAL2_86	C.SEGAL3_86	C.SEGAL4_86	C.SEGPID_86		
87	C.SEGAL2_87	C.SEGAL3_87	C.SEGAL4_87	C.SEGPID_87		
88	C.SEGAL2_88	C.SEGAL3_88	C.SEGAL4_88	C.SEGPID_88		
89	C.SEGAL2_89	C.SEGAL3_89	C.SEGAL4_89	C.SEGPID_89		
90	C.SEGAL2_90	C.SEGAL3_90	C.SEGAL4_90	C.SEGPID_90		
91	C.SEGAL2_91	C.SEGAL3_91	C.SEGAL4_91	C.SEGPID_91		
92	C.SEGAL2_92	C.SEGAL3_92	C.SEGAL4_92	C.SEGPID_92		
93	C.SEGAL2_93	C.SEGAL3_93	C.SEGAL4_93	C.SEGPID_93		
94	C.SEGAL2_94	C.SEGAL3_94	C.SEGAL4_94	C.SEGPID_94		
95	C.SEGAL2_95	C.SEGAL3_95	C.SEGAL4_95	C.SEGPID_95		
96	C.SEGAL2_96	C.SEGAL3_96	C.SEGAL4_96	C.SEGPID_96		
97	C.SEGAL2_97	C.SEGAL3_97	C.SEGAL4_97	C.SEGPID_97		
98	C.SEGAL2_98	C.SEGAL3_98	C.SEGAL4_98	C.SEGPID_98		
99	C.SEGAL2_99	C.SEGAL3_99	C.SEGAL4_99	C.SEGPID_99		



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