

# HSC\_CMP

G3F-HSCA Module comparison value setting

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

Function block	Description																																													
	<p><b>Input</b></p> <p>REQ : Function block execution request at rising edge                  BASE : G3F-HSCA module installation base location number                  SLOT : Slot location number of G3F-HSCA module installation base                  CH : Assign the channel number to be operated(0~1)                  CMPD : Comparison value assignment(0~16,777,15)                  CMP1 : Large/Small comparison value 1 assignment(0~7)                  CMP2 : Large/Small comparison value 2 assignment(0~7)                  &lt;Large/Small comparison assignment&gt;                  Assign the large/small comparison value of OUT1 and OUT2</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Symbol</th> <th>Content</th> <th>OUT1 LED</th> <th>OUT2 LED</th> </tr> </thead> <tbody> <tr> <td>0</td> <td></td> <td>No comparison</td> <td>Off</td> <td>Off</td> </tr> <tr> <td>1</td> <td>&lt;</td> <td>Current counter value(CNT) &lt; Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>2</td> <td>=</td> <td>Current counter value(CNT) = Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>3</td> <td>≤</td> <td>Current counter value(CNT) ≤ Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>4</td> <td>&gt;</td> <td>Current counter value(CNT) &gt; Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>5</td> <td>≠</td> <td>Current counter value(CNT) ≠ Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>6</td> <td>≥</td> <td>Current counter value(CNT) ≥ Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>7</td> <td>-</td> <td>Current counter value(CNT) - Comparison value(CMPD)</td> <td>Always On</td> <td>Always On</td> </tr> </tbody> </table> <p><b>Output</b></p> <p>DONE : On if the function block is executed without error and holds on till next function block execution is requested. However, Off if the error occurs during executing the function block.                  STAT : Error status during the function block execution.</p>	No.	Symbol	Content	OUT1 LED	OUT2 LED	0		No comparison	Off	Off	1	<	Current counter value(CNT) < Comparison value(CMPD)	On	On	2	=	Current counter value(CNT) = Comparison value(CMPD)	On	On	3	≤	Current counter value(CNT) ≤ Comparison value(CMPD)	On	On	4	>	Current counter value(CNT) > Comparison value(CMPD)	On	On	5	≠	Current counter value(CNT) ≠ Comparison value(CMPD)	On	On	6	≥	Current counter value(CNT) ≥ Comparison value(CMPD)	On	On	7	-	Current counter value(CNT) - Comparison value(CMPD)	Always On	Always On
No.	Symbol	Content	OUT1 LED	OUT2 LED																																										
0		No comparison	Off	Off																																										
1	<	Current counter value(CNT) < Comparison value(CMPD)	On	On																																										
2	=	Current counter value(CNT) = Comparison value(CMPD)	On	On																																										
3	≤	Current counter value(CNT) ≤ Comparison value(CMPD)	On	On																																										
4	>	Current counter value(CNT) > Comparison value(CMPD)	On	On																																										
5	≠	Current counter value(CNT) ≠ Comparison value(CMPD)	On	On																																										
6	≥	Current counter value(CNT) ≥ Comparison value(CMPD)	On	On																																										
7	-	Current counter value(CNT) - Comparison value(CMPD)	Always On	Always On																																										

■ **Function**

Set the counter comparison value and large/small comparison value for respective module of G3F-HSCA module.

■ **Program example**

LD	IL
	<pre> CAL   HSC_CMP   HSCCMP       REQ :=    %I0.0.0       BASE :=   BASE       SLOT :=   SLOT       CH :=     CH       CMPD :=   CMPD       CMP1 :=   CMP1       CMP2 :=   CMP2  LD    HSCCMP.DONE ST    %Q0.1.0  LD    HSCCMP.STAT ST    STAT                     </pre>

# HSC\_CMP

G4F-HSCA Module comparison value setting

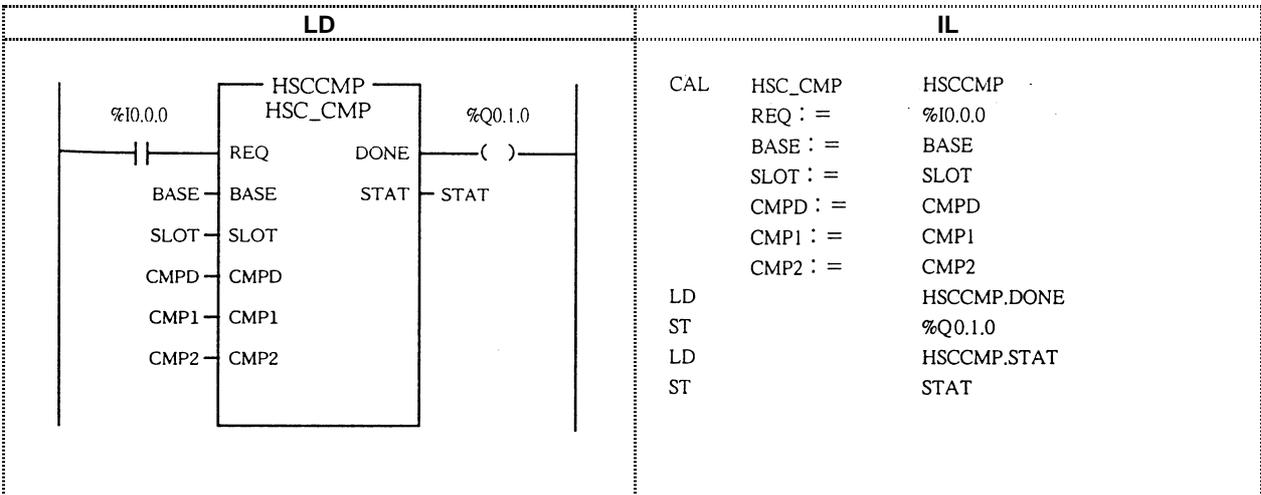
Product	GM1	GM2	GM3	GM4	GM5
Applicable				●	

Function block	Description																																													
	<p><b>Input</b></p> <p>REQ : Function block execution request at rising edge</p> <p>BASE : G4F-HSCA module installation base location number</p> <p>SLOT : Slot location number of G4F-HSCA module installation base</p> <p>CMPD : Comparison value assignment(0~16,777,215)</p> <p>CMP1 : Large/Small comparison value 1 assignment(0~7)</p> <p>CMP2 : Large/Small comparison value 2 assignment(0~7)</p> <p>&lt;Large/Small comparison assignment&gt;</p> <p>Assign the large/small comparison value of OUT1 and OUT2</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Symbol</th> <th>Content</th> <th>OUT1 LED</th> <th>OUT2 LED</th> </tr> </thead> <tbody> <tr> <td>0</td> <td></td> <td>No comparison</td> <td>Off</td> <td>Off</td> </tr> <tr> <td>1</td> <td>&lt;</td> <td>Current counter value(CNT) &lt; Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>2</td> <td>=</td> <td>Current counter value(CNT) = Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>3</td> <td>≤</td> <td>Current counter value(CNT) ≤ Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>4</td> <td>&gt;</td> <td>Current counter value(CNT) &gt; Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>5</td> <td>≠</td> <td>Current counter value(CNT) ≠ Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>6</td> <td>≥</td> <td>Current counter value(CNT) ≥ Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>7</td> <td>-</td> <td>Current counter value(CNT) - Comparison value(CMPD)</td> <td>Always On</td> <td>Always On</td> </tr> </tbody> </table> <p><b>Output</b> DONE : On if the function block is executed without error and holds on till next function block execution is requested. However, Off if the error occurs during executing the function block.</p> <p>STAT : Error status during the function block execution.</p>	No.	Symbol	Content	OUT1 LED	OUT2 LED	0		No comparison	Off	Off	1	<	Current counter value(CNT) < Comparison value(CMPD)	On	On	2	=	Current counter value(CNT) = Comparison value(CMPD)	On	On	3	≤	Current counter value(CNT) ≤ Comparison value(CMPD)	On	On	4	>	Current counter value(CNT) > Comparison value(CMPD)	On	On	5	≠	Current counter value(CNT) ≠ Comparison value(CMPD)	On	On	6	≥	Current counter value(CNT) ≥ Comparison value(CMPD)	On	On	7	-	Current counter value(CNT) - Comparison value(CMPD)	Always On	Always On
No.	Symbol	Content	OUT1 LED	OUT2 LED																																										
0		No comparison	Off	Off																																										
1	<	Current counter value(CNT) < Comparison value(CMPD)	On	On																																										
2	=	Current counter value(CNT) = Comparison value(CMPD)	On	On																																										
3	≤	Current counter value(CNT) ≤ Comparison value(CMPD)	On	On																																										
4	>	Current counter value(CNT) > Comparison value(CMPD)	On	On																																										
5	≠	Current counter value(CNT) ≠ Comparison value(CMPD)	On	On																																										
6	≥	Current counter value(CNT) ≥ Comparison value(CMPD)	On	On																																										
7	-	Current counter value(CNT) - Comparison value(CMPD)	Always On	Always On																																										

■ **Function**

Set the counter comparison value and large/small comparison value for respective module of G4F-HSCA module.

■ **Program example**



# HSC\_CMP

G5F-HSCA Module comparison value setting

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

Function block	Description																																													
	<p><b>Input</b></p> <p>REQ : Function block execution request at rising edge( <math>\uparrow</math> )                  MODL : Location number of G5F-HSCA module                  CMPD : Comparison value assignment(0~16,777,215)                  CMP1 : Large/Small comparison value 1 assignment(0~7)                  CMP2 : Large/Small comparison value 2 assignment(0~7)                  &lt; Large/Small comparison assignment &gt;                  Assign the large/small comparison value of OUT1 and OUT2</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Symbol</th> <th>Content</th> <th>OUT1 LED</th> <th>OUT2 LED</th> </tr> </thead> <tbody> <tr> <td>0</td> <td></td> <td>No comparison</td> <td>Off</td> <td>Off</td> </tr> <tr> <td>1</td> <td>&lt;</td> <td>Current counter value(CNT) &lt; Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>2</td> <td>=</td> <td>Current counter value(CNT) = Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>3</td> <td>≤</td> <td>Current counter value(CNT) ≤ Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>4</td> <td>&gt;</td> <td>Current counter value(CNT) &gt; Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>5</td> <td>≠</td> <td>Current counter value(CNT) ≠ Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>6</td> <td>≥</td> <td>Current counter value(CNT) ≥ Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>7</td> <td>-</td> <td>Current counter value(CNT) - Comparison value(CMPD)</td> <td>Always On</td> <td>Always On</td> </tr> </tbody> </table> <p><b>Output</b></p> <p>DONE : On if the function block is executed without error and holds on till next function block execution is requested. However, Off if the error occurs during executing the function block.                  STAT : Error status during the function block execution.</p>	No.	Symbol	Content	OUT1 LED	OUT2 LED	0		No comparison	Off	Off	1	<	Current counter value(CNT) < Comparison value(CMPD)	On	On	2	=	Current counter value(CNT) = Comparison value(CMPD)	On	On	3	≤	Current counter value(CNT) ≤ Comparison value(CMPD)	On	On	4	>	Current counter value(CNT) > Comparison value(CMPD)	On	On	5	≠	Current counter value(CNT) ≠ Comparison value(CMPD)	On	On	6	≥	Current counter value(CNT) ≥ Comparison value(CMPD)	On	On	7	-	Current counter value(CNT) - Comparison value(CMPD)	Always On	Always On
No.	Symbol	Content	OUT1 LED	OUT2 LED																																										
0		No comparison	Off	Off																																										
1	<	Current counter value(CNT) < Comparison value(CMPD)	On	On																																										
2	=	Current counter value(CNT) = Comparison value(CMPD)	On	On																																										
3	≤	Current counter value(CNT) ≤ Comparison value(CMPD)	On	On																																										
4	>	Current counter value(CNT) > Comparison value(CMPD)	On	On																																										
5	≠	Current counter value(CNT) ≠ Comparison value(CMPD)	On	On																																										
6	≥	Current counter value(CNT) ≥ Comparison value(CMPD)	On	On																																										
7	-	Current counter value(CNT) - Comparison value(CMPD)	Always On	Always On																																										

■ **Function**

Set the counter comparison value and large/small comparison value for respective module of G5F-HSCA module.

■ **Program example**

LD	IL
	<pre>                 CAL   HSC_CMP   HSCCMP                 REQ :=   %I0.0.0                 MODL :=   MODL                 CMPD :=   CMPD                 CMP1 :=   CMP1                 CMP2 :=   CMP2                  LD    HSCCMP.DONE                 ST    %Q0.1.0                  LD    HSCCMP.STAT                 ST    STAT             </pre>

# HSC\_PRE

G3F-HSCA module preset value setting

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

Function block	Description
	<p><b>Input</b></p> <p>REQ : Function block execution request at rising edge</p> <p>BASE : G3F-HSCA module installation base location number</p> <p>SLOT : Slot location number of G3F-HSCA module installation base</p> <p>CH : Assign the channel to be operated(0~1)</p> <p>PSET : Preset value assignment(0~16,777,215)</p> <p><b>Output</b></p> <p>DONE : On if the function block is executed without error and holds on till next function block execution is requested. However, Off if the error occurs during executing the function block.</p> <p>STAT : Error status display during the function block execution.</p>

■ **Function**

Set the counter preset value for respective channel of G3F-HSCA module.

■ **Program example**

LD	IL
	<pre> CAL   HSC_PRE   HSCPRES REQ := %I0.0.0 BASE := BASE SLOT := SLOT CH := CH PSET := PSET  LD    HSCPRES.DONE ST    %Q0.1.0  LD    HSCPRES.STAT ST    STAT         </pre>

# HSC\_PRE

G4F-HSCA module preset value setting

Product	GM1	GM2	GM3	GM4	GM5
Applicable				●	

Function block	Description
	<p><b>Input</b></p> <p>REQ : Function block execution request at rising edge</p> <p>BASE : G4F-HSCA module installation base location number</p> <p>SLOT : Slot location number of G4F-HSCA module installation base</p> <p>PSET : Preset value assignment(0~16,777,215)</p> <p><b>Output</b></p> <p>DONE : On if the function block is executed without error and holds on till next function block execution is requested. However, Off if the error occurs during executing the function block.</p> <p>STAT : Error status display during the function block execution.</p>

■ **Function**

Set the counter preset value for respective channel of G4F-HSCA module.

■ **Program example**

LD	IL
	<pre> CAL   HSC_PRE   HSCPRE       REQ :=    %I0.0.0       BASE :=   BASE       SLOT :=   SLOT       PSET :=   PSET  LD     HSCPRE.DONE ST     %Q0.1.0  LD     HSCPRE.STAT ST     STAT                     </pre>

# HSC\_PRE

G5F-HSCA module preset value setting

Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

Function block	Description
	<p><b>Input</b></p> <ul style="list-style-type: none"> <li>REQ : Function block execution request at rising edge</li> <li>MODL : G5F-HSCA module location number</li> <li>PSET : Preset value assignment(0~16,777,215)</li> </ul> <p><b>Output</b></p> <ul style="list-style-type: none"> <li>DONE : On if the function block is executed without error and holds on till next function block execution is requested. However, Off if the error occurs during executing the function block.</li> <li>STAT : Error status display during the function block execution.</li> </ul>

■ **Function**

Set the counter preset value for respective channel of G5F-HSCA module.

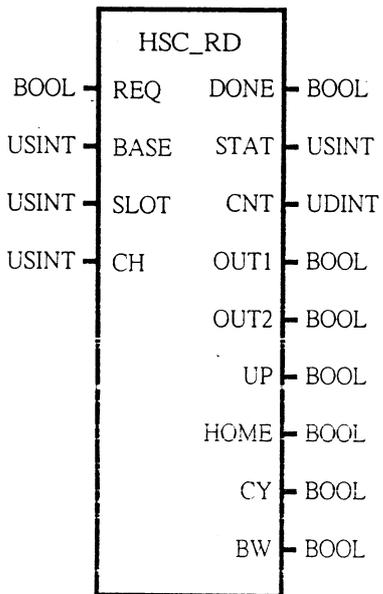
■ **Program example**

LD	IL
	<pre> CAL   HSC_PRE   HSCPRES       REQ : =   %I0.0.0       MODL : =   MODL       PSET : =   PSET  LD     HSCPRES.DONE ST     %Q0.1.0  LD     HSCPRES.STAT ST     STAT                     </pre>

**HSC\_RD**

G3F-HSCA operation status value reading

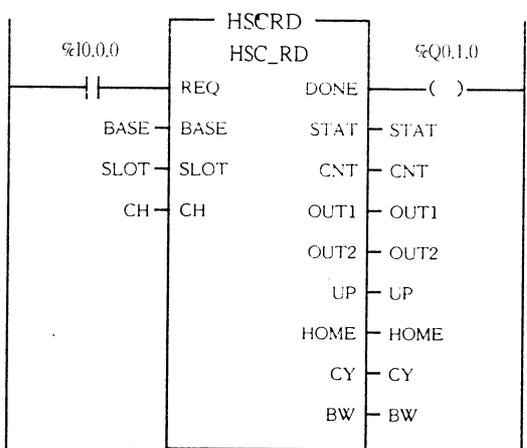
Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

Function block	Description
	<p><b>Input</b></p> <p>REQ : Function block execution request ( _L )</p> <p>BASE : G3F-HSCA module installation base location number</p> <p>SLOT : Slot location number of G3F-HSCA module installation base</p> <p>CH : Assign the channel to be operated(0~1)</p> <p><b>Output</b></p> <p>DONE : On if the function block is executed without error and off if the error occurs or the function block execution is not requested.</p> <p>Note 2) STAT : Error status display during the function block execution.</p> <p>Note 2) CNT : Current counter value read from G3F-HSCA module(0~16,777,215)</p> <p>Note 2) OUT1 : OUT1 status display(0: OFF, 1: ON)</p> <p>Note 2) OUT2 : OUT2 status display(0: OFF, 1: ON)</p> <p>Note 2) UP : Increase/Decrease status display (0: Decrease, 1: Increase)</p> <p>Note 2) HOME : Home input status display(0: OFF, 1: ON)</p> <p>Note 2) CY : Carry status display(0: OFF, 1: ON)</p> <p>Note 2) BW : Borrow status display(0: OFF, 1: ON)</p>

■ **Function**

Display the counter value and operation status of respective channel that G3F-HSCA module outputs during operation.

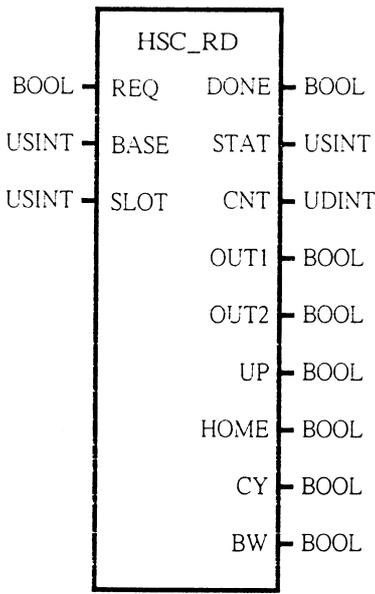
■ **Program example**

LD	IL
	<pre> CAL   HSC_RD      HSCRD       REQ : =      %I0.0.0       BASE : =     BASE       SLOT : =     SLOT       CH : =       CH  LD     HSCRD.DONE ST     %Q0.1.0 LD     HSCRD.STAT ST     STAT LD     HSCRD.CNT ST     CNT LD     HSCRD.OUT1 ST     OUT1 LD     HSCRD.OUT2 ST     OUT2 LD     HSCRD.UP ST     UP LD     HSCRD.HOME ST     HOME LD     HSCRD.CY ST     CY LD     HSCRD.BW ST     BW                     </pre>

# HSC\_RD

G4F-HSCA operation status value reading

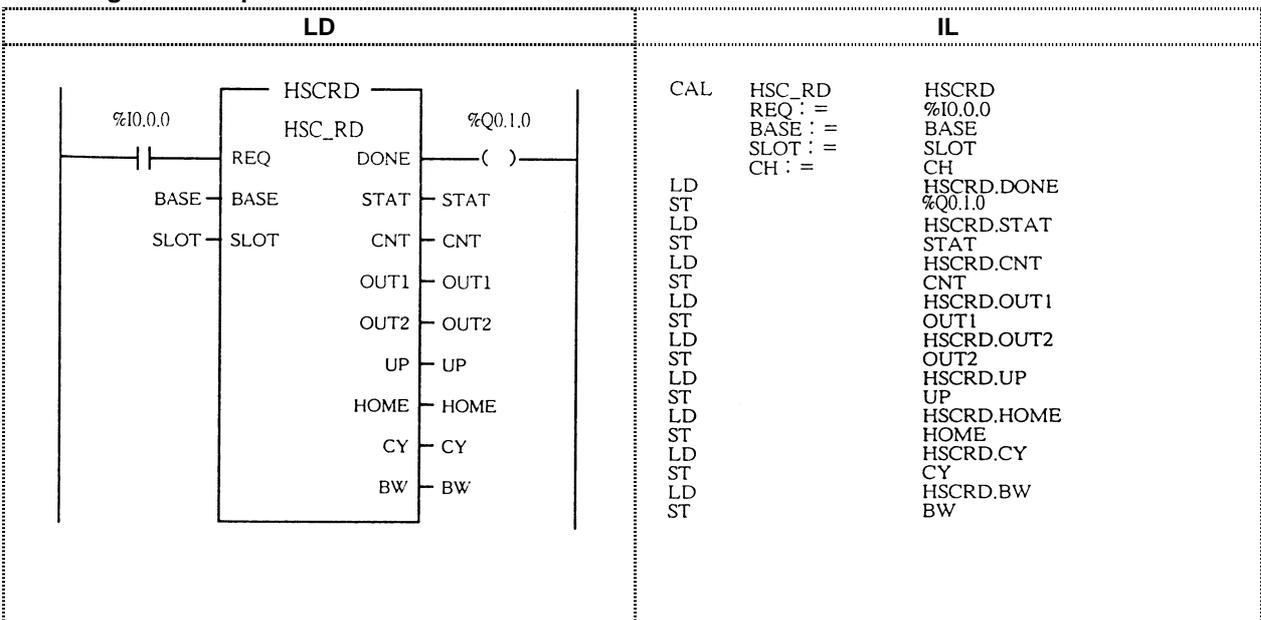
Product	GM1	GM2	GM3	GM4	GM5
Applicable				●	

Function block	Description
	<p><b>Input</b></p> <p>REQ : Function block execution request</p> <p>BASE : G4F-HSCA module installation base location number</p> <p>SLOT : Slot location number of G4F-HSCA module installation base</p> <p><b>Output</b></p> <p>DONE : On if the function block is executed without error and off if the error occurs or the function block execution is not requested.</p> <p>Note 2) STAT : Error status display during the function block execution.</p> <p>Note 2) CNT : Current counter value read from G4F-HSCA module(0~16,777,215)</p> <p>Note 2) OUT1 : OUT1 status display(0: OFF, 1: ON)</p> <p>Note 2) OUT2 : OUT2 status display(0: OFF, 1: ON)</p> <p>Note 2) UP : Increase/Decrease status display (0: Decrease, 1: Increase)</p> <p>Note 2) HOME : Home input status display(0: OFF, 1: ON)</p> <p>Note 2) CY : Carry status display(0: OFF, 1: ON)</p> <p>Note 2) BW : Borrow status display(0: OFF, 1: ON)</p>

■ **Function**

Display the counter value and operation status that G4F-HSCA module outputs during operation.

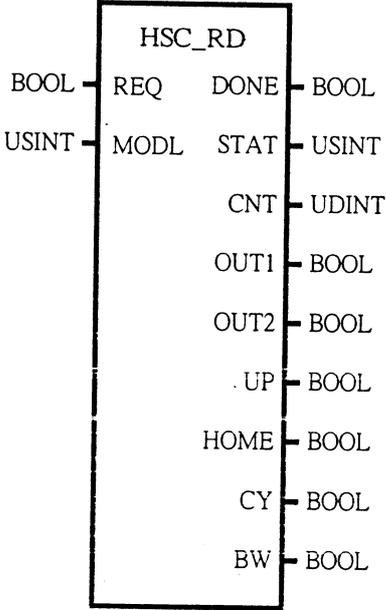
■ **Program example**



# HSC\_RD

G5F-HSCA operation status value reading

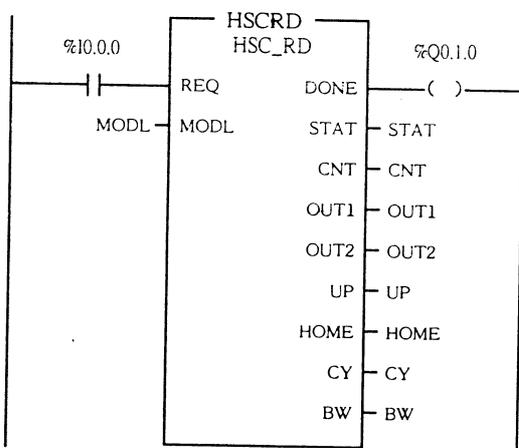
Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

Function block	Description
	<p><b>Input</b></p> <p>REQ : Function block execution request            MODL : G5F-HSCA module location number</p> <p><b>Output</b></p> <p>DONE : On if the function block is executed without error and off if the error occurs or the function block execution is not requested.</p> <p>Note 2) STAT : Error status display during the function block execution.</p> <p>Note 2) CNT : Current counter value read from G5F-HSCA module(0~16,777,215)</p> <p>Note 2) OUT1 : OUT1 status display(0: OFF, 1: ON)            Note 2) OUT2 : OUT2 status display(0: OFF, 1: ON)            Note 2) UP : Increase/Decrease status display (0: Decrease, 1: Increase)            Note 2) HOME : Home input status display(0: OFF, 1: ON)            Note 2) CY : Carry status display(0: OFF, 1: ON)            Note 2) BW : Borrow status display(0: OFF, 1: ON)</p>

■ **Function**

Display the counter value and operation status that G5F-HSCA module outputs during operation.

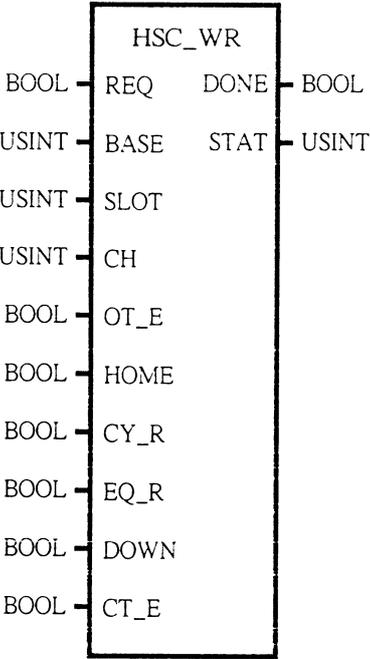
■ **Program example**

LD	IL
	<pre> CAL   HSC_RD      HSCRD       REQ :=      %I0.0.0       MODL :=     MODL LD     HSCRD.DONE ST     %Q0.1.0 LD     HSCRD.STAT ST     STAT LD     HSCRD.CNT ST     CNT LD     HSCRD.OUT1 ST     OUT1 LD     HSCRD.OUT2 ST     OUT2 LD     HSCRD.UP ST     UP LD     HSCRD.HOME ST     HOME LD     HSCRD.CY ST     CY LD     HSCRD.BW ST     BW           </pre>

# HSC\_WR

G3F-HSCA operation information writing

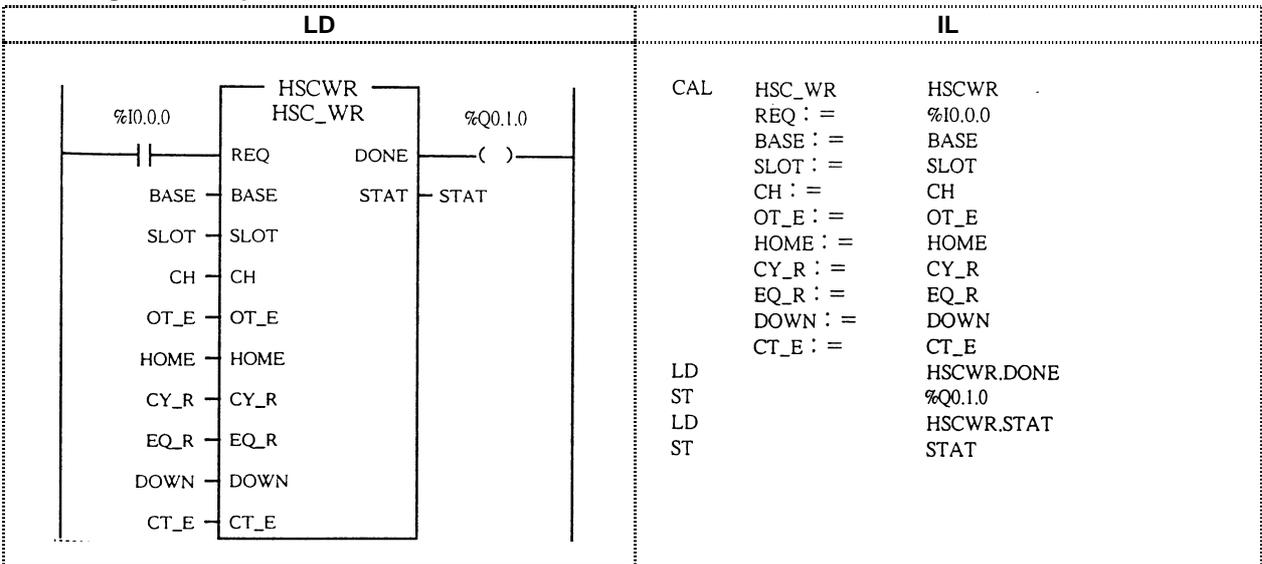
Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

Function block	Description
	<p><b>Input</b></p> <p>REQ : Function block execution request ( _L_ )</p> <p>BASE : G3F-HSCA module installation base location number</p> <p>SLOT : Slot location number of G3F-HSCA module installation base</p> <p>CH : Assign the channel to be operated(0~1)</p> <p>OT_E : Output allowance assignment (0: Prohibit, 1: Allowance)</p> <p>CY_R : Carry/Borrow Reset assignment (0: OFF, 1: ON)</p> <p>EQ_R : Equal Reset assignment(0: OFF, 1: ON)</p> <p>DOWN: Decrease counter assignment (0: Increase, 1: Decrease)</p> <p>CT_E : Counter allowance assignment (0: Prohibit, 1: Allowance)</p> <p><b>Output</b></p> <p>DONE : On if the function block is executed without error and off if the error occurs or the function block execution is not requested.</p> <p>Note 2) STAT : Error status display during the function block execution.</p>

■ **Function**

Set the allowance/prohibit of operation status for respective channel of G3F-HSCA module.

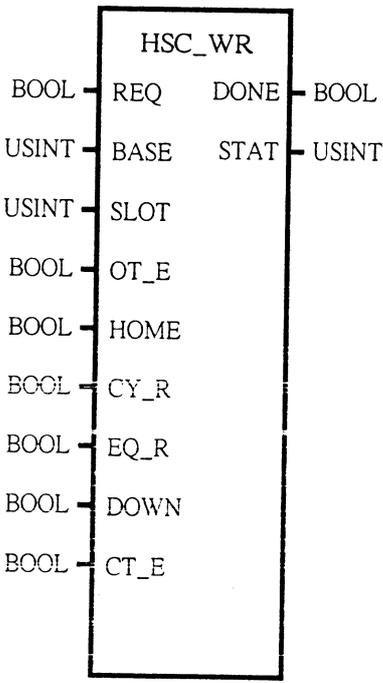
■ **Program example**



# HSC\_WR

G4F-HSCA operation information writing

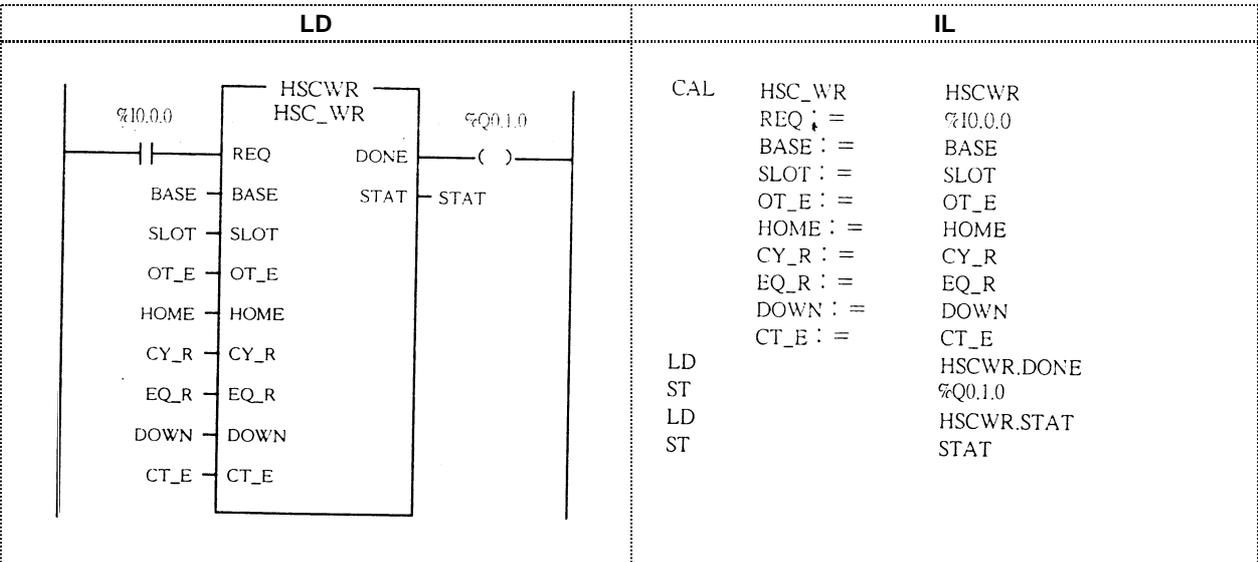
Product	GM1	GM2	GM3	GM4	GM5
Applicable				●	

Function block	Description
	<p><b>Input</b></p> <p>REQ : Function block execution request</p> <p>BASE : G4F-HSCA module installation base location number</p> <p>SLOT : Slot location number of G4F-HSCA module installation base</p> <p>OT_E : Output allowance assignment (0:Prohibit, 1:Allowance)</p> <p>HOME : Home-Latch allowance assignment (0:Prohibit, 1:Allowance)</p> <p>CY_R : Carry/Borrow Reset assignment (0: OFF, 1: ON)</p> <p>EQ_R : Equal Reset assignment(0: OFF, 1: ON)</p> <p>DOWN: Decrease counter assignment (0: Increase, 1: Decrease)</p> <p>CT_E : Counter allowance assignment (0: Prohibit, 1: Allowance)</p> <p><b>Output</b></p> <p>DONE : On if the function block is executed without error and off if the error occurs or the function block execution is not requested.</p> <p>Note 2) STAT : Error status display during the function block execution.</p>

**Function**

Set the allowance/prohibit of operation status of G4F-HSCA module.

**Program example**



# HSC\_WR

G5F-HSCA operation information writing

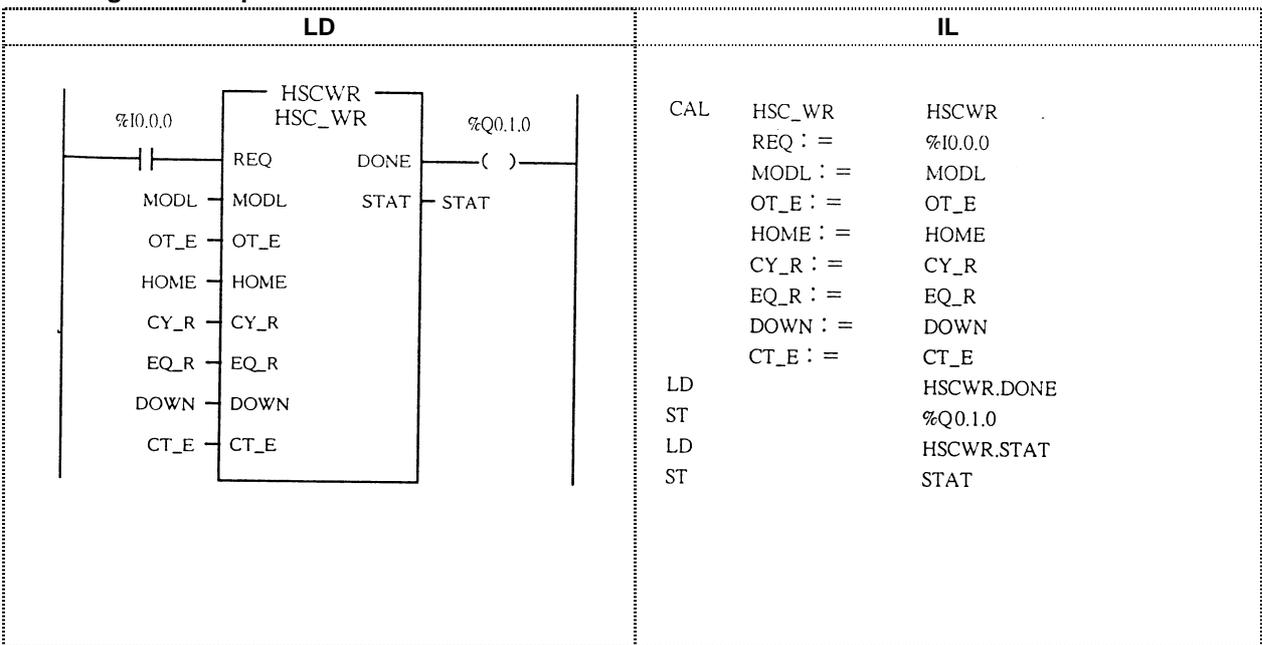
Product	GM1	GM2	GM3	GM4	GM5
Applicable					●

Function block	Description
	<p><b>Input</b></p> <ul style="list-style-type: none"> <li>REQ : Function block execution request</li> <li>MODL : G5F-HSCA module location number</li> <li>OT_E : Output allowance assignment (0:Prohibit, 1:Allowance)</li> <li>HOME : Home-Latch allowance assignment (0:Prohibit, 1:Allowance)</li> <li>CY_R : Carry/Borrow Reset assignment (0: OFF, 1: ON)</li> <li>EQ_R : Equal Reset assignment(0: OFF, 1: ON)</li> <li>DOWN : Decrease counter assignment (0: Increase, 1: Decrease)</li> <li>CT_E : Counter allowance assignment (0: Prohibit, 1: Allowance)</li> </ul> <p><b>Output</b></p> <ul style="list-style-type: none"> <li>DONE : On if the function block is executed without error and off if the error occurs or the function block execution is not requested.</li> <li>Note 2) STAT : Error status display during the function block execution.</li> </ul>

■ **Function**

Set the allowance/prohibit of operation status of G5F-HSCA module.

■ **Program example**



# HSCR0CMP

G4F-HSCA Module comparison value setting(Remote type)

Product	GM1	GM2	GM3	GM4	GM5
Applicable				●	

Function block	Description																																													
	<p><b>Input</b> REQ : Function block execution request at rising edge ( <math>\uparrow</math> )</p> <p>NET_NO: Slot location number(0~7) installed the communication module of local station(G4L-FUEA, G4L-FUOA) to send the function block</p> <p>ST_NO: Prefix number(0~63) of communication module (G4L-RBEA, G4L-RBOA) installed at remote I/O station</p> <p>BASE : G4F-HSCA module installation base location number</p> <p>SLOT : Slot location number of G4F-HSCA module installation base</p> <p>CMPD : Comparison value assignment(0~16,777,215)</p> <p>CMP1 : Large/Small comparison value 1 assignment(0~7)</p> <p>CMP2 : Large/Small comparison value 2 assignment(0~7)</p> <p>&lt;Large/Small comparison assignment&gt;</p> <p>Assign the large/small comparison value of OUT1 and OUT2</p> <table border="1" style="width:100%"> <thead> <tr> <th>No.</th> <th>Symbol</th> <th>Content</th> <th>OUT1 LED</th> <th>OUT2 LED</th> </tr> </thead> <tbody> <tr> <td>0</td> <td></td> <td>No comparison</td> <td>Off</td> <td>Off</td> </tr> <tr> <td>1</td> <td>&lt;</td> <td>Current counter value(CNT) &lt; Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>2</td> <td>=</td> <td>Current counter value(CNT) = Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>3</td> <td>≤</td> <td>Current counter value(CNT) ≤ Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>4</td> <td>&gt;</td> <td>Current counter value(CNT) &gt; Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>5</td> <td>≠</td> <td>Current counter value(CNT) ≠ Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>6</td> <td>≥</td> <td>Current counter value(CNT) ≥ Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>7</td> <td>-</td> <td>Current counter value(CNT) - Comparison value(CMPD)</td> <td>Always On</td> <td>Always On</td> </tr> </tbody> </table> <p><b>Output</b> NDR : On if the function block is executed without error and Off at next SCAN</p> <p>ERR : On when the error occurs during executing the function block.</p> <p>STAT: Error status display during the function block execution.</p>	No.	Symbol	Content	OUT1 LED	OUT2 LED	0		No comparison	Off	Off	1	<	Current counter value(CNT) < Comparison value(CMPD)	On	On	2	=	Current counter value(CNT) = Comparison value(CMPD)	On	On	3	≤	Current counter value(CNT) ≤ Comparison value(CMPD)	On	On	4	>	Current counter value(CNT) > Comparison value(CMPD)	On	On	5	≠	Current counter value(CNT) ≠ Comparison value(CMPD)	On	On	6	≥	Current counter value(CNT) ≥ Comparison value(CMPD)	On	On	7	-	Current counter value(CNT) - Comparison value(CMPD)	Always On	Always On
No.	Symbol	Content	OUT1 LED	OUT2 LED																																										
0		No comparison	Off	Off																																										
1	<	Current counter value(CNT) < Comparison value(CMPD)	On	On																																										
2	=	Current counter value(CNT) = Comparison value(CMPD)	On	On																																										
3	≤	Current counter value(CNT) ≤ Comparison value(CMPD)	On	On																																										
4	>	Current counter value(CNT) > Comparison value(CMPD)	On	On																																										
5	≠	Current counter value(CNT) ≠ Comparison value(CMPD)	On	On																																										
6	≥	Current counter value(CNT) ≥ Comparison value(CMPD)	On	On																																										
7	-	Current counter value(CNT) - Comparison value(CMPD)	Always On	Always On																																										

**Function**

Set the counter comparison value and large/small value of G4F-HSCA module installed at remote.

**Note** The execution request response speed of HSCR0SET function block relates to the remote station number(Refer to remote manual). Regarding the output content of HSCR0SET function block, the input preset value is input to G4F-HSCA module when NDR output is on.

**Program example**

LD	IL
	<pre> LDN      A AND      B ST       CMP_REQ CAL      HSCR0CMP REQ :=   CMP_REQ NET_NO := NET_NO ST_NO :=  ST_NO BASE :=  BASE SLOT :=  SLOT CMPD :=  CMPD CMP1 :=  CMP1 CMP2 :=  CMP2  LD       HSCR0CMP.NDR ST       A LD       HSCR0CMP.ERR ST       ERR LD       HSCR0CMP.STAT ST       STAT                     </pre>

# HSCR0PRE

G4F-HSCA Module PRESET value setting(Remote type)

Product	GM1	GM2	GM3	GM4	GM5
Applicable				●	

Function block	Description
	<p><b>Input</b></p> <p>REQ : Function block execution request at rising edge ( <math>\uparrow</math> )</p> <p>NET_NO: Slot location number(0~7) installed the communication module of local station (G4L-FUEA, G4L-FUOA) to send the function block</p> <p>ST_NO : Prefix number(0~63) of communication module(G4L-RBEA, G4L-RBOA) installed at remote I/O station</p> <p>BASE : G4F-HSCA module installation base location number</p> <p>SLOT : Slot location number of G4F-HSCA module installation base</p> <p>PSET : Preset value assignment(0~16,777,215)</p> <p><b>Output</b></p> <p>NDR : On if the function block is executed without error and Off at next SCAN</p> <p>ERR : On when the error occurs during executing the function block.</p> <p>STAT : Error status display during the function block execution.</p>

■ **Function**

Set the counter preset value of G4F-HSCA module installed at remote.

**Note** The execution request response speed of HSCR0SET function block relates to the remote station number(Refer to remote manual). Regarding the output content of HSCR0SET function block, the input preset value is input to G4F-HSCA module when NDR output is on.

■ **Program example**

LD	IL
	<pre> LDN AND ST CAL HSCR0PRE REQ := NET_NO := ST_NO := BASE := SLOT := PSET :=  LD ST LD ST LD ST HSCRPRE PRE_REQ PRE_REQ NET_NO ST_NO BASE SLOT PSET HSCRPRE.NDR A HSCRPRE.ERR ERR HSCRPRE.STAT STAT                     </pre>

# HSCR0RD

G4F-HSCA Operation status value reading(Remote type)

Product	GM1	GM2	GM3	GM4	GM5
Applicable				●	

Function block	Description
	<p><b>Input</b></p> <p>REQ : Function block execution request at rising edge (↑)</p> <p>NET_NO : Slot location number(0~7) installed the communication module of local station(G4L-FUEA, G4L-FUOA) to send the function block</p> <p>ST_NO : Prefix number(0~63) of communication module(G4L-RBEA, G4L-RBOA) installed at remote I/O station</p> <p>BASE : G4F-HSCA module installation base location number</p> <p>SLOT : Slot location number of G4F-HSCA module installation base</p> <p><b>Output</b></p> <p>NDR : On if the function block is executed without error and Off at next SCAN</p> <p>ERR : On when the error occurs during executing the function block.</p> <p>STAT : Error status display during the function block execution.</p> <p>CNT : Current counter value read from G4F-HSCA module(0~16,777,215)</p> <p>OUT1 : OUT1 status display(0: OFF, 1: ON)</p> <p>OUT2 : OUT2 status display(0: OFF, 1: ON)</p> <p>UP : Increase/Decrease status display (0: Decrease, 1: Increase)</p> <p>HOME : Home input status display(0: OFF, 1: ON)</p> <p>CY : Carry status display(0: OFF, 1: ON)</p> <p>BW : Borrow status display(0: OFF, 1: ON)</p>

**Function**

Display current counter value and operation status outputs during operation that G4F-HSCA module installed at remote.

**Note** The execution request response speed of HSCR0RD function block relates to the remote station number(Refer to remote manual). The output content of HSCR0RD function block is changed to new value when NDR output is on.

**Program example**

LD	IL
	<pre> LDN AND ST CAL HSCR0RD REQ = NET_NO = ST_NO = BASE = SLOT = A B RD_REQ HSCR0RD RD_REQ NET_NO ST_NO BASE SLOT HSCR0RD.NDR A HSCR0RD.ERR ERR HSCR0RD.STAT STAT HSCR0RD.CNT CNT HSCR0RD.OUT1 OUT1 HSCR0RD.OUT2 OUT2 HSCR0RD.UP UP HSCR0RD.HOME HOME HSCR0RD.CY CY HSCR0RD.BW BW                     </pre>

# HSCROWR

G4F-HSCA operation information writing(Remote type)

Product	GM1	GM2	GM3	GM4	GM5
Applicable				●	

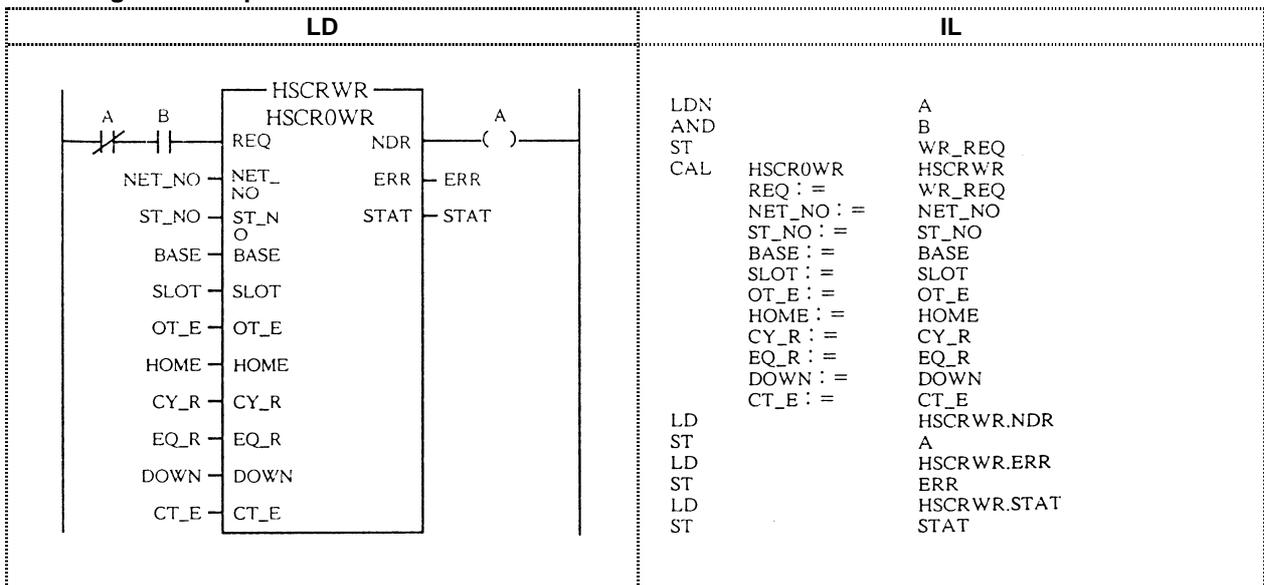
Function block	Description
<p>The diagram shows a central box labeled 'HSCROWR'. On the left side, there are inputs: REQ (BOOL), NET_NO (USINT), ST_NO (USINT), BASE (USINT), SLOT (USINT), OT_E (BOOL), HOME (BOOL), CY_R (BOOL), EQ_R (BOOL), DOWN (BOOL), and CT_E (BOOL). On the right side, there are outputs: NDR (BOOL), ERR (BOOL), STAT (USINT), and CT_E (BOOL).</p>	<p><b>Input</b></p> <ul style="list-style-type: none"> <li>REQ : Function block execution request (┘)</li> <li>NET_NO : Slot location number(0~7) installed the communication module of local station (G4L-FUEA, G4L-FUOA) to send the function block</li> <li>ST_NO : Prefix number(0~63) of communication module (G4L-RBEA, G4L-RBOA) installed at remote I/O station</li> <li>BASE : G4F-HSCA module installation base location number</li> <li>SLOT : Slot location number of G4F-HSCA module installation base</li> <li>OT_E : Output allowance assignment (0:Prohibit, 1:Allowance)</li> <li>HOME : Home input status display (0: OFF, 1: ON)</li> <li>CY_R : Carry/Borrow Reset assignment (0: OFF, 1: ON)</li> <li>EQ_R : Equal Reset assignment(0: OFF, 1: ON)</li> <li>DOWN : Decrease counter assignment (0: Increase, 1: Decrease)</li> <li>CT_E : Counter allowance assignment (0: Prohibit, 1: Allowance)</li> </ul> <p><b>Output</b></p> <ul style="list-style-type: none"> <li>NDR : On if the function block is executed without error and Off at next SCAN</li> <li>ERR : On when the error occurs during executing the function block.</li> <li>STAT : Error status display during the function block execution.</li> </ul>

■ **Function**

Set the allowance/prohib of operation status of G4F-HSCA module installed at remote.

**Note** The execution request response speed of HSCROWR function block relates to the remote station number(Refer to remote manual). Regarding the output content of HSCROWR function block, the nput preset value is input to G4F-HSCA module when NDR output is on.

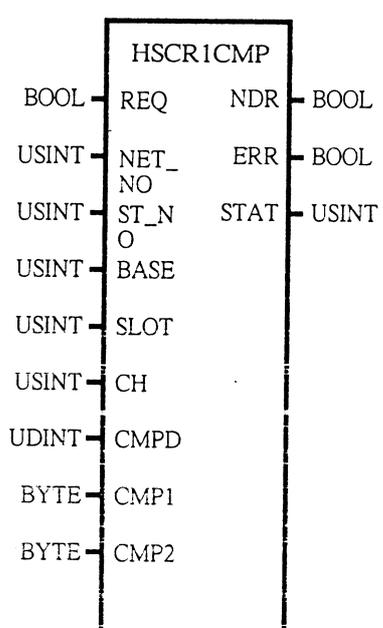
■ **Program example**



# HSCR1CMP

G3F-HSCA Module comparison value setting(Remote type)

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

Function block	Description																																													
	<p><b>Input</b></p> <ul style="list-style-type: none"> <li>REQ : Function block execution request at rising edge</li> <li>NET_NO : Slot location number(0~7) installed the communication module of local station(G3L-FUEA, G3L-FUOA) to send the function block</li> <li>ST_NO : Prefix number(0~63) of communication module(G3L-RBEA, G3L-RBOA) installed at remote I/O station</li> <li>BASE : G3F-HSCA module installation base location number</li> <li>SLOT : Slot location number of G3F-HSCA module installation base</li> <li>CH : Assign the channel number to be operated(0~1)</li> <li>CMPD : Comparison value assignment(0~16,777,215)</li> <li>CMP1 : Large/Small comparison value 1 assignment(0~7)</li> <li>CMP2 : Large/Small comparison value 2 assignment(0~7)</li> </ul> <p style="text-align: center;">&lt;Large/Small comparison assignment&gt; Assign the large/small comparison value of OUT1 and OUT2</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th>No.</th> <th>Symbol</th> <th>Content</th> <th>OUT1 LED</th> <th>OUT2 LED</th> </tr> </thead> <tbody> <tr> <td>0</td> <td></td> <td>No comparison</td> <td>Off</td> <td>Off</td> </tr> <tr> <td>1</td> <td>&lt;</td> <td>Current counter value(CNT) &lt; Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>2</td> <td>=</td> <td>Current counter value(CNT) = Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>3</td> <td>≤</td> <td>Current counter value(CNT) ≤ Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>4</td> <td>&gt;</td> <td>Current counter value(CNT) &gt; Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>5</td> <td>≠</td> <td>Current counter value(CNT) ≠ Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>6</td> <td>≥</td> <td>Current counter value(CNT) ≥ Comparison value(CMPD)</td> <td>On</td> <td>On</td> </tr> <tr> <td>7</td> <td>-</td> <td>Current counter value(CNT) - Comparison value(CMPD)</td> <td>Always On</td> <td>Always On</td> </tr> </tbody> </table> <p><b>Output</b></p> <ul style="list-style-type: none"> <li>NDR : On if the function block is executed without error and Off at next SCAN</li> <li>ERR : On when the error occurs during executing the function block.</li> <li>STAT : Error status display during the function block execution.</li> </ul>	No.	Symbol	Content	OUT1 LED	OUT2 LED	0		No comparison	Off	Off	1	<	Current counter value(CNT) < Comparison value(CMPD)	On	On	2	=	Current counter value(CNT) = Comparison value(CMPD)	On	On	3	≤	Current counter value(CNT) ≤ Comparison value(CMPD)	On	On	4	>	Current counter value(CNT) > Comparison value(CMPD)	On	On	5	≠	Current counter value(CNT) ≠ Comparison value(CMPD)	On	On	6	≥	Current counter value(CNT) ≥ Comparison value(CMPD)	On	On	7	-	Current counter value(CNT) - Comparison value(CMPD)	Always On	Always On
No.	Symbol	Content	OUT1 LED	OUT2 LED																																										
0		No comparison	Off	Off																																										
1	<	Current counter value(CNT) < Comparison value(CMPD)	On	On																																										
2	=	Current counter value(CNT) = Comparison value(CMPD)	On	On																																										
3	≤	Current counter value(CNT) ≤ Comparison value(CMPD)	On	On																																										
4	>	Current counter value(CNT) > Comparison value(CMPD)	On	On																																										
5	≠	Current counter value(CNT) ≠ Comparison value(CMPD)	On	On																																										
6	≥	Current counter value(CNT) ≥ Comparison value(CMPD)	On	On																																										
7	-	Current counter value(CNT) - Comparison value(CMPD)	Always On	Always On																																										

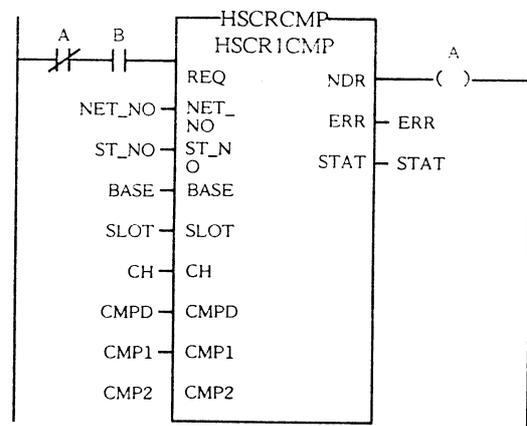
**Function**

Set the counter comparison value and large/small comparison value of G3F-HSCA module installed at remote.

**Note**

The execution request response speed of HSCR0SET function block relates to the remote station number(Refer to remote manual). Regarding the output content of HSCR0SET function block, the input preset value is input to G4F-HSCA module when NDR output is on.

**Program example**

LD	IL
	<pre> LDN      A AND      B ST       CMP_REQ CAL      HSCR1CMP           REQ := NET_NO           NET_NO := NET_NO           ST_NO := ST_NO           BASE := BASE           SLOT := SLOT           CH := CH           CMPD := CMPD           CMP1 := CMP1           CMP2 := CMP2  LD       HSCR1CMP.NDR ST       A LD       HSCR1CMP.ERR ST       ERR LD       HSCR1CMP.STAT ST       STAT         </pre>

# HSCR1PRE

G3F-HSCA Module PRESET value setting(Remote type)

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

Function block	Description
	<p><b>Input</b></p> <p>REQ : Function block execution request at rising edge</p> <p>NET_NO: Slot location number(0~7) installed the communication module of local station (G3F-FUEA, G3F-FUOA) to send the function block</p> <p>ST_NO : Prefix number(0~63) of communication module(G3F-RBEA, G3F-RBOA) installed at remote I/O station</p> <p>BASE : G3F-HSCA module installation base location number</p> <p>SLOT : Slot location number of G3F-HSCA module installation base</p> <p>CH : Assign the channel number to be operated(0~1)</p> <p>PSET : Preset value assignment(0~16,777,215)</p> <p><b>Output</b></p> <p>NDR : On if the function block is executed without error and Off at next SCAN</p> <p>ERR : On when the error occurs during executing the function block.</p> <p>STAT : Error status display during the function block execution.</p>

■ **Function**

Set the counter preset value of G3F-HSCA module installed at remote.

**Note** The execution request response speed of HSCR1PRE function block relates to the remote station number (Refer to remote manual). Regarding the output content of HSCR1PRE function block, the input preset value is input to G3F-HSCA module when NDR output is on.

■ **Program example**

LD	IL
	<pre> LDN      A AND      B ST       PRE_REQ CAL      HSCR1PRE           REQ := PRE_REQ           NET_NO := NET_NO           ST_NO := ST_NO           BASE := BASE           SLOT := SLOT           CH := CH           PSET := PSET  LD       HSCR1PRE.NDR ST       A LD       HSCR1PRE.ERR ST       ERR LD       HSCR1PRE.STAT ST       STAT                     </pre>

# HSCR1RD

G3F-HSCA Operation status value reading(Remote type)

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

Function block	Description
	<p><b>Input</b></p> <p>REQ : Function block execution request at rising edge</p> <p>NET_NO : Slot location number(0~7) installed the communication module of local station(G3L-FUEA, G3L-FUOA) to send the function block</p> <p>ST_NO : Prefix number(0~63) of communication module (G3L-RBEA, G3L-RBOA) installed at remote I/O station</p> <p>BASE : G3F-HSCA module installation base location number</p> <p>SLOT : Slot location number of G3F-HSCA module installation base</p> <p>CH : Assign the channel number to be operated(0~1)</p> <p><b>Output</b></p> <p>NDR : On if the function block is executed without error and Off at next SCAN</p> <p>ERR : On when the error occurs during executing the function block.</p> <p>STAT : Error status display during the function block execution.</p> <p>CNT : Current counter value read from G3F-HSCA module(0~16,777,215)</p> <p>OUT1 : OUT1 status display(0: OFF, 1: ON)</p> <p>OUT2 : OUT2 status display(0: OFF, 1: ON)</p> <p>UP : Increase/Decrease status display (0: Decrease, 1: Increase)</p> <p>HOME : Home input status display(0: OFF, 1: ON)</p> <p>CY : Carry status display(0: OFF, 1: ON)</p> <p>BW : Borrow status display(0: OFF, 1: ON)</p>

**Function**

Display current counter value and operation status outputs during operation that G3F-HSCA module installed at remote.

**Note** The execution request response speed of HSCR1RD function block relates to the remote station number(Refer to remote manual). The output content of HSCR1RD function block is changed to new value when NDR output is on.

**Program example**

LD	IL
	<pre> LDN AND ST CAL HSCR1RD REQ := NET_NO := ST_NO := BASE := SLOT := CH := A HSCR1RD.NDR A HSCR1RD.ERR ERR HSCR1RD.STAT STAT HSCR1RD.CNT CNT HSCR1RD.OUT1 OUT1 HSCR1RD.OUT2 OUT2 HSCR1RD.UP UP HSCR1RD.HOME HOME HSCR1RD.CY CY HSCR1RD.BW BW                     </pre>

# HSCR1WR

G3F-HSCA operation information writing(Remote type)

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

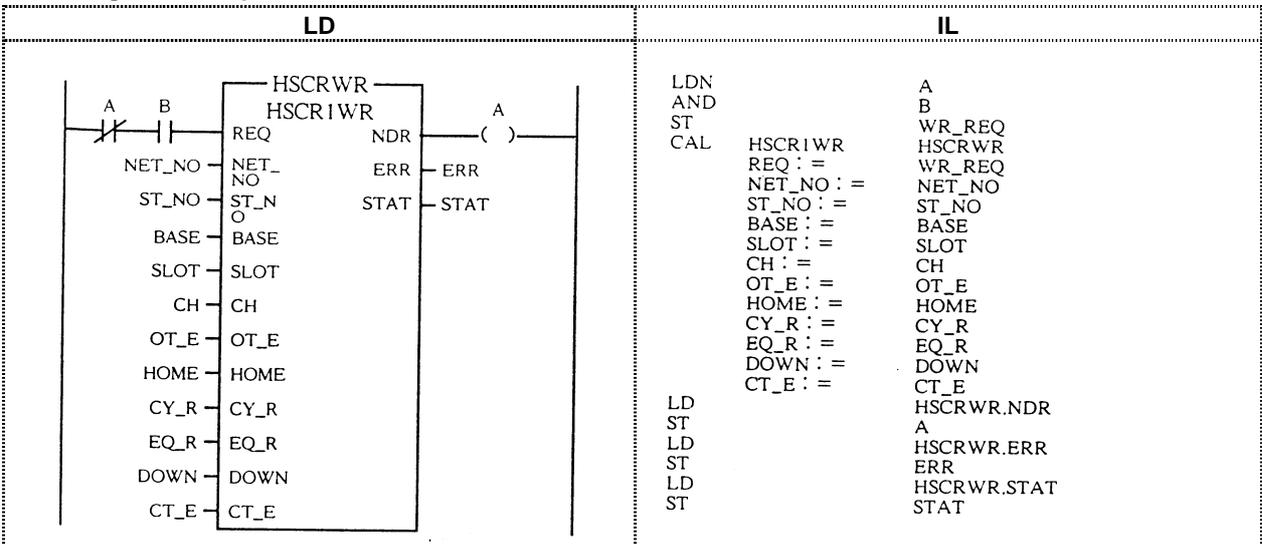
Function block	Description
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <p style="text-align: center;">HSCR1WR</p> <p>                     BOOL- REQ    NDR- BOOL                      USINT- NET_NO    ERR- BOOL                      USINT- ST_NO    STAT- USINT                      USINT- BASE                      USINT- SLOT                      USINT- CH                      BOOL- OT_E                      BOOL- HOME                      BOOL- CY_R                      BOOL- EQ_R                      BOOL- DOWN                      BOOL- CT_E                 </p> </div>	<p><b>Input</b></p> <p>REQ : Function block execution request at rising edge</p> <p>NET_NO : Slot location number(0~7) installed the communication module of local station(G3L-FUEA, G3L-FUOA) to send the function block</p> <p>ST_NO : Prefix number(0~63) of communication module (G3L-RBEA, G3L-RBOA) installed at remote I/O station</p> <p>BASE : G3F-HSCA module installation base location number</p> <p>SLOT : Slot location number of G3F-HSCA module installation base</p> <p>CH : Assign the channel number to be operated(0~1)</p> <p>OT_E : Output allowance assignment (0:Prohibit, 1:Allowance)</p> <p>HOME : Home input status display(0: OFF, 1: ON)</p> <p>CY_R : Carry/Borrow Reset assignment(0: OFF, 1: ON)</p> <p>EQ_R : Equal Reset assignment(0: OFF, 1: ON)</p> <p>DOWN : Decrease counter assignment (0: Increase, 1: Decrease)</p> <p>CT_E : Counter allowance assignment (0: Prohibit, 1: Allowance)</p> <p><b>Output</b></p> <p>NDR : On if the function block is executed without error and Off at next SCAN</p> <p>ERR : On when the error occurs during executing the function block.</p> <p>STAT : Error status display during the function block execution.</p>

■ **Function**

Set the allowance/prohibit of operation status of G3F-HSCA module installed at remote.

**Note** The execution request response speed of HSCR1WR function block relates to the remote station number(Refer to remote manual). Regarding the output content of HSCR1WR function block, the input preset value is input to G3F-HSCA module when NDR output is on.

■ **Program example**



PID3ARD

G4F-PIDA handling value reading(Array type)

Product	GM1	GM2	GM3	GM4	GM5
Applicable				●	

Function block	Description
	<p><b>Input</b></p> <p>REQ : Function block execution request</p> <p>BASE : G4F-PIDA module installation base location number</p> <p>SLOT : Slot location number of G4F-PIDA module installation base</p> <p>Note 1) LOOP : Loop assignment to read handling value. Assign '1' of respective element value for loop assignment.</p> <p>Note 1) PV : Current value input for the operation loop control. (Input value range:0~16000)</p> <p>Note 1) A/M : Handling value assignment for the operation loop control. ('0': Automatic operation(PID operation) handling value assignment) ('1': Manual(compulsive) handling value assignment)</p> <p><b>Output</b></p> <p>DONE : On if the function block is executed without error and off if the error occurs or the function block execution is not requested.</p> <p>Note 2) STAT : Error status display during the function block execution.</p> <p>Note 3) ACT : Channel display that read the conversion value after completing the function block. The element value of the channel will be '1'.</p> <p>Note 3) MV : Handling value data of each loop assigned by operation loop. (Handling value range: 0~16000)</p>
<p>[ ] : Indicate ARRAY variable and number in the parenthesis is the element number.</p>	

■ Function

Input the current value(PV) of operating loop control and read the handling value(MV), Also, the handling value can be selected to PID automatic handling value or manual(compulsive) handling value.

■ Program example

LD	IL
	<pre> CAL  PID3ARD      PID_ARD       REQ* :=      %I0.0.0       BASE :=      BASE       SLOT :=      SLOT       LOOP :=      LOOP       PV :=        PV       A/M :=       AM  LD   PID_ARD.DONE ST   %Q0.1.0 LD   PID_ARD.STAT ST   STAT LD   PID_ARD.ACT ST   ACT LD   PID_ARD.MV ST   MV                     </pre>

# PID3INI

G4F-PIDA module initialization

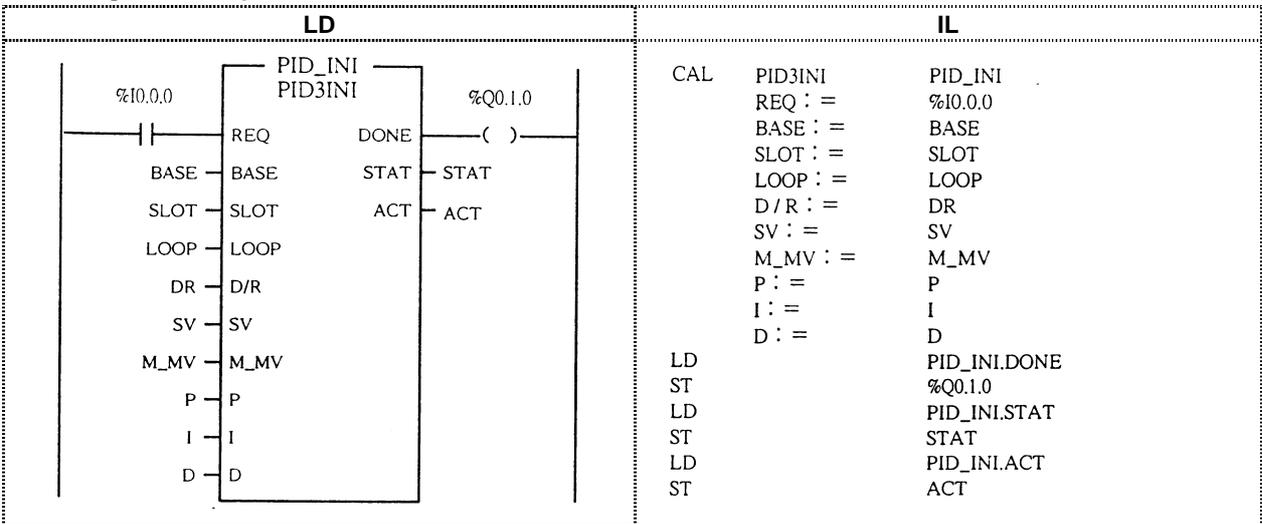
Product	GM1	GM2	GM3	GM4	GM5
Applicable				●	

Function block	Description
	<p><b>Input</b></p> <ul style="list-style-type: none"> <li>REQ : Function block execution request at rising edge</li> <li>BASE : G4F-PIDA module installation base location number</li> <li>SLOT : Slot location number of G4F-PIDA module installation base</li> <li>Note 1) LOOP : Loop assignment to read handling value. Assign '1' of respective element value for loop assignment.</li> <li>Note 1) D/R : Normal/Reverse operation selection assignment for the operation loop. ('0': Normal, '1': Reverse)</li> <li>Note 1) SV : Control target value input for operation loop (Input value range: 0~16000)</li> <li>Note 1) M_MV : Manual handling value for the operation loop (Input value range: 0~16000)</li> <li>Note 1) P : Proportional constant of the operation loop (0.01~100.00%) (Input value range: 1~10000)</li> <li>Note 1) I : Integral constant of the operation loop (0.0~3000.0 sec.) (Input value range: 0~30000) Integral operation disable in case of I=0.</li> <li>Note 1) D : Differential constant of the operation Loop (0.0~3000.0 sec.) (Input value range: 0~30000) Differential operation disable in case of D=0.</li> </ul> <p><b>Output</b></p> <ul style="list-style-type: none"> <li>DONE : On if the function block is executed without error and holds on till next function block execution is requested. However, off if the error occurs during the function block execution.</li> <li>STAT : Error status display during the function block execution.</li> <li>Note 1) ACT : Channel display that read the conversion value after completing the function block. The element value of the channel will be '1'.</li> </ul>
<p>[ ]: Indicate ARRAY variable and number in the parenthesis is the element number.</p>	

■ **Function**

Assign the preset value for each loop to operate G4F-PIDA module.

■ **Program example**



**PID3RD**

G4F-PIDA handling value reading(Single type)

Product	GM1	GM2	GM3	GM4	GM5
Applicable				●	

Function block	Description
	<p><b>Input</b></p> <p>REQ : Function block execution request                  BASE : G4F-PIDA module installation base location number                  SLOT : Slot location number of G4F-PIDA module installation base                  LOOP : Loop assignment to read handling value.                  PV : Current value input for the operation loop control. (Input value range: 0~16000)                  A/M : Handling value assignment for the operation loop control.                  ('0': Automatic operation(PID operation) handling value assignment)                  ('1': Manual(compulsive) handling value assignment)</p> <p><b>Output</b></p> <p>DONE : On if the function block is executed without error and off if the error occurs or the function block execution is not requested.</p> <p>Note 2) STAT : Error status display during the function block execution.</p> <p>Note 2) MV : Handling value data of each loop assigned by operation loop. (Handling value range: 0~16000)</p>

■ **Function**

Input the current value(PV) of operating loop control and read the handling value(MV), Also, the handling value can be selected to PID automatic handling value or manual(compulsive) handling value.

■ **Program example**

LD	IL
	<pre>                 CAL  PID3RD      PID_RD                 REQ := %I0.0.0                 BASE := BASE                 SLOT := SLOT                 LOOP := LOOP                 PV := PV                 A/M := AM                  LD  PID_RD.DONE                 ST  %Q0.1.0                  LD  PID_RD.STAT                 ST  STAT                  LD  PID_RD.MV                 ST  MV             </pre>

# PID5ARD

G3F-PIDA handling value reading(Array type)

Product	GM1	GM2	GM3	GM4	GM5
Applicable	●	●	●		

Function block	Description
	<p><b>Input</b></p> <ul style="list-style-type: none"> <li>REQ : Function block execution request</li> <li>BASE : G3F-PIDA module installation base location number</li> <li>SLOT : Slot location number of G3F-PIDA module installation base</li> <li>Note 1) LOOP : Loop assignment to be operated Assign the respective element value to '1' for operation loop.</li> <li>Note 1) PV : Current value input for the operation loop control. (Input value range: 0~16000)</li> <li>Note 1) A/M : Handling value assignment for the operation loop control. ('0': Automatic operation(PID operation) handling value assignment) ( '1': Manual(compulsive) handling value assignment)</li> </ul> <p><b>Output</b></p> <ul style="list-style-type: none"> <li>DONE : On if the function block is executed without error and off if the error occurs or the function block execution is not requested.</li> <li>Note 2) STAT : Error status display during the function block execution.</li> <li>Note 3) ACT : Channel display that read the conversion value after completing the function block. The element value of the channel will be '1'.</li> <li>Note 2) MV : Handling value data of each loop assigned by operation loop. (Handling value range: 0~16000)</li> </ul>
<p>[ ] : Indicate ARRAY variable and number in the parenthesis is the element number</p>	

■ **Function**

Input the current value(PV) of operating loop control and read the handling value(MV), Also, the handling value can be selected to PID automatic handling value or manual(compulsive) handling value.

■ **Program example**

