☆☆☆ Updating of FBs OS V4.53   04/16/2008

● Add new floating point instructions: FUN214 (Napierian logarithm, $\log_e x$)、 FUN215 (Exponential, e^x)、 FUN216 (Logarithm, $\log_{10} x$)、 FUN217 (Power, x^y)、 FUN218 (Arc sine, $\sin^{-1}$)、 FUN219 (Arc cosine, $\cos^{-1}$)、 FUN220 (Arc tangent, $\tan^{-1}$)

   Please refer to the attached file FUN214_220-EN.pdf for detailed description

● Add RUN/STOP indicator

   M1926=0, PLC is working at STOP mode
   M1926=1, PLC is working at RUN mode

● Add communication indicators

   M1970=1, Port 0 received and replied one message packet
   M1971=1, Port 1 received and replied one message packet
   M1972=1, Port 2 received and replied one message packet
   M1950=1, Port 3 received and replied one message packet
   M1951=1, Port 4 received and replied one message packet

● Add new address mapping for Modbus slave communication protocol; out of range access, the PLC will reply communication error

Register No.	Value	Description
R3968	=A55AH	New address mapping for Modbus slave communication protocol (Detailed as below)
	=Others	Existed address mapping for Modbus slave comm. protocol
R3969	0 ~ 65535	. Assign the starting address of discrete output of Modbus . 0 ~ 65535 : it means discrete output 000001 ~ 065536 . Apply to function code 01, 05, 15 of Modbus protocol
R3970	0 ~ 2001	. Assign the starting address of internal relay of Fatek . 0 ~ 2001 : it means internal relay M0 ~ M2001 . Apply to function code 01, 05, 15 of Modbus protocol
R3971	1 ~ 2001	. Assign the range of access both for discrete output (Modbus) and internal relay (Fatek) . 1 ~ 2001 : it means access range between 1 ~ 2001 point . It is the group R3969 ~ R3971 for mapping the discrete output (Modbus) and internal relay (Fatek) for access (R3968 should be A55AH)
R3972	0 ~ 65535	. Assign the starting address of discrete input of Modbus . 0 ~ 65535 : it means discrete input 100001 ~ 165536 . Apply to function code 02 of Modbus protocol
R3973	0 ~ 2001	. Assign the starting address of internal relay of Fatek . 0 ~ 2001 : it means internal relay M0 ~ M2001 . Apply to function code 02 of Modbus protocol
R3974	1 ~ 2001	. Assign the range of access both for discrete input (Modbus) and internal relay (Fatek) . 1 ~ 2001 : it means access range between 1 ~ 2001 point . It is the group R3972 ~ R3974 for mapping the discrete input (Modbus) and internal relay (Fatek) for access (Don't care R3968)

R3975	0 ~ 65535	. Assign the starting address of register input of Modbus . 0 ~ 65535 : it means register input 300001 ~ 365536 . Apply to function code 04 of Modbus protocol
R3976	0 ~ 3839	. Assign the starting address of R register of Fatek . 0 ~ 3839 : it means R register R0 ~ R3839 . Apply to function code 04 of Modbus protocol

R3977	1 ~ 3840	. Assign the range of access both for register input
		  (Modbus) and R register (Fatek)
		. 1 ~ 3840 : it means access range between 1 ~ 3840 word
		. It is the group R3975 ~ R3977 for mapping the register
		  input (Modbus) and R register (Fatek) for access
		  (Don't care R3968)

R3978	0 ~ 65535	. Assign the starting address of holding register of Modbus . 0 ~ 65535 : it means holding register 400001 ~ 465536 . Apply to function code 03, 06,16 of Modbus protocol
R3979	0 ~ 3839	. Assign the starting address of R register of Fatek . 0 ~ 3839 : it means R register R0 ~ R3839 . Apply to function code 03, 06,16 of Modbus protocol

R3980	1 ~ 3840	. Assign the range of access both for holding register
		  (Modbus) and R register (Fatek)
		. 1 ~ 3840 : it means access range between 1 ~ 3840 word
		. It is the group R3978 ~ R3980 for mapping the holding
		  register (Modbus) and R register (Fatek) for access
		  (R3968 should be A55AH)

For exa. R3968=A55AH, it means new address mapping for Modbus slave comm. protocol

R3969=0, R3970=1000, R3971=100: Mapping 000001 ~ 000100 (Modbus)

M1000~M1099   (Fatek)

R3972=10, R3973=1100, R3974=50: Mapping 100011 ~ 100060 (Modbus)

M1100 ~ M1149   (Fatek)

R3975=50, R3976=1000, R3977=10: Mapping 300051 ~ 300060 (Modbus)

R1000 ~ R1009   (Fatek)

R3978=100, R3979=2000, R3980=200: Mapping 400101 ~ 400300 (Modbus)

R2000 ~ R2199   (Fatek)

● Improve on smooth stop while executing DRVC (In FUN140 instruction) command for motion control, which not completes the pulse output and the condition M1991 is ON