

	1	2	3	4	5	6	7	8								
A	<table border="1"> <tr> <td>M96</td><td></td></tr> <tr> <td>M97</td><td></td></tr> <tr> <td>M98</td><td>CALL SUB-PROGRAM</td></tr> <tr> <td>M99</td><td>RETURN PROGRAM</td></tr> </table>								M96		M97		M98	CALL SUB-PROGRAM	M99	RETURN PROGRAM
M96																
M97																
M98	CALL SUB-PROGRAM															
M99	RETURN PROGRAM															
B																
C																
D																
E																
			DRAWN	CHECK	DATE	DRAW NO.	TITLE: FANUC 01MC/211MB M CODE									
			TSENG		06/12/2005	FM0004C	PAGE									
								M4								

	1	2	3	4	5	6	7	8
A	<p style="text-align: center;">O I-MC</p> <p style="text-align: center;">GENOA TYPE</p> <p style="text-align: center;">PLC PARAMETER</p> <p style="text-align: center;">KEEP RELAY</p>							
B								
C								
D								
E								
	1	2	3	4	5	6	7	8

	1	2	3	4	5	6	7	8	
A									A
B									B
C									C
D									D
E									E

K00	0	0	0	0	0	0	0	0	K10	0	0	0	0	0	0	0	0
K01	1	0	0	0	1	1	0	0	K11	0	0	0	0	0	0	0	0
K02	0	0	0	1	0	0	0	0	K12	0	0	0	0	0	0	0	0
K03	0	0	0	0	0	0	1	0	K13	0	0	0	0	0	0	0	0
K04	0	0	0	0	0	0	0	0	K14	0	0	0	0	0	0	0	0
K05	0	1	0	0	0	0	0	1	K15	0	0	0	0	0	0	0	0
K06	0	0	0	0	0	0	0	1	K16	0	0	0	0	0	0	0	0
K07	0	0	0	0	0	0	0	0	K17	0	0	0	0	0	0	0	0
K08	0	0	0	0	0	0	0	0	K18	0	0	0	0	0	0	0	0
K09	0	0	0	0	0	0	0	0	K19	0	0	0	0	0	0	0	0

	DRAWN	CHECK	DATE	DRAW NO.	TITLE: KEEP RELAY SETTING (GENDA TYPE)	PAGE
	TSENG		06/12/2005	FK0001B	(OI-MC/OI MATE-MC)	P1

	1	2	3	4	5	6	7	8	
A									A
B									B
C									C
D									D
E									E

K00	0								K02	0	0: 4TH AXIS UNCLAMP WHEN SOLENOID ON
K00	1	0: LUBRICATION RUN WITHOUT TIMER CONTROL							K02	1	1: 4TH AXIS UNCLAMP WHEN SOLENOID OFF
K00	2	1: LUBRICATION RUN WITH TIMER CONTROL							K02	2	0: AUTO TOOL LENGTH MEASURE FUNCTION INVALID
K00	3	0: SPINDLE STOP C.T.S STOP							K02	3	1: AUTO TOOL LENGTH MEASURE OVERSTROKE DETECT
K00	4	1: SPINDLE STOP C.T.S NO STOP							K02	4	0: WITHOUT SPINDLE COOLER
K00	5	0: DOOR RELEASE FOR MANUAL MODE OR FEED HOLD							K02	5	1: WITH SPINDLE COOLER
K00	6	1: DOOR RELEASE FOR MACHINE STOP STATUS							K02	6	0: WITHOUT 4TH AXIS
K00	7	0: HAS LEFT-SIDE DOOR INTERLOCK SWITCH							K02	7	1: WITH 4TH AXIS
K01	0	1: NO LEFT-SIDE DOOR INTERLOCK SWITCH							K02	8	0: AUTO TOOL CHANGE EXECUTION SINGLE BLOCK VALID
K01	1	0: HAS FRONT DOOR INTERLOCK SWITCH							K02	9	1: AUTO TOOL CHANGE EXECUTION SINGLE BLOCK INVALID
K01	2	1: NO FRONT DOOR INTERLOCK SWITCH							K02	10	0: ALARM LAMP (RED LAMP) FLASH
K01	3	0: LUBRICATION ALARM OCCURRENCE SINGLE BLOCK							K02	11	1: ALARM LAMP (RED LAMP) NO FLASH
K01	4	1: LUBE ALARM IN M02/M30 PROGRAM STOP							K02	12	0: MACHINE LOCK ON OCCURRENCE MST CODE LOCK
K01	5	0: AUTO&TAPE MODE SPINDLE CW&CCW NO MEMORY							K02	13	1: MACHINE LOCK ON OCCURRENCE MST LOCK INCALID
K01	6	1: AUTO&TAPE MODE SPINDLE CW&CCW MEMORY							K02	14	0: AIR ALARM MESSAGE NO HOLD
K01	7	0: ATC NO READY MESSAGE DISPLAY							K02	15	1: AIR ALARM MESSAGE HOLD
K01	8	1: ATC NO READY MESSAGE NO DISPLAY							K02	16	0: LUBE. LOW LEVEL DETECT SIGNAL "1"
K01	9	0: SPINDLE ZERO SPEED COOLANT CAN'T ACTIVE							K02	17	1: LUBE. LOW LEVEL DETECT SIGNAL "0"
K01	10	1: SPINDLE ZERO SPEED COOLANT CAN ACTIVE							K02	18	0: AUTO LUBRICATION
K01	11	0: X AXIS ZERO RETURN POINT FOR (+)DIRECTION							K02	19	1: GREASE
K01	12	1: X AXIS ZERO RETURN POINT FOR (-)DIRECTION							K02	20	0: X AXIS PUSH BUTTON(+)(-)DIRECTION NO CHANGE
K01	13	0: 4TH AXIS ZERO RETURN POINT FOR (+)DIRECTION							K02	21	1: X AXIS PUSH BUTTON(+)(-)DIRECTION CHANGE
K01	14	1: 4TH AXIS ZERO RETURN POINT FOR (-)DIRECTION							K02	22	0: DOOR INTERLOCK SWITCH INVALID
K01	15	0: AXIS NO HOME CAN NOT CYCLE START							K02	23	1: DOOR INTERLOCK SWITCH VALID
K01	16	1: AXIS NO HOME CAN CYCLE START							K02	24	0: DOOR OPEN JOG FEEDRATE LIMIT
K01	17	0: 4TH AXIS IN JOG/RAPID MODE NO USE							K02	25	1: DOOR OPEN JOG FEEDRATE NO LIMIT
K01	18	1: 4TH AXIS IN JOG/RAPID MODE CAN USE							K02	26	0:
K01	19	0: 4TH AXIS WITH UNCLAMP SWITCH DETECT							K02	27	1: M0/O1 COMMAND ELECTRICMAGNETIC TYPE DOOR OPEN
K01	20	1: 4TH AXIS WITHOUT UNCLAMP SWITCH DETECT.TIMER VALID							K02	28	0: ELECTRICMAGNETIC TYPE DOOR OPEN MANUAL RELEASE
K01	21	0: LUBE PRESSURE DETECT VALID							K02	29	1: ELECTRICMAGNETIC TYPE DOOR OPEN AUTO. RELEASE
K01	22	1: LUBE PRESSURE DETECT INVALID							K02	30	0: CYCLE START ON CHIP CONVEYER FORWARD ON
									K02	31	1: CYCLE START ON CHIP CONVEYER FORWARD NO ACTIVE

	DRAWN	CHECK	DATE	DRAW NO.	TITLE: KEEP RELAY EXPLANATION(GENDA TYPE)	PAGE
	TSENG		12/01/2005	FK0002E	(OI-MC/OI MATE-MC)	P2

A
B
C
D
E

K04	0	0:M02 COMMAND NO USE 1:M02 COMMAND USE
K04	1	0: ATC NO READY CAN'T CYCLE START 1: ATC NO READY CAN CYCLE START
K04	2	0:M00/M01 COOLANT/BLAST STOP 1:M00/M01 COOLANT/BLAST NO STOP
K04	3	0:IN MANUAL MODE 4th AXIS CAN UNCLAMP 1:4th AXIS ONLY M28 COMMAND CAN UNCLAMP
K04	4	0:IN MANUAL MODE 4th AXIS CAN UNCLAMP 1:4th AXIS ONLY M28 COMMAND CAN UNCLAMP
K04	5	0:4th UNCLAMP OUTPUT RESET OFF 1:4th AXIS UNCLAMP OUTPUT RESET KEEP
K04	6	0:MAGAZINE COUNTER SIGANL "0" 1:MAGAZINE COUNTER SIGANL "1"
K04	7	0:HAS MAGAZINE DEVICE 1:NO MAGAZINE DEVICE
K05	0	0:M02/M30 CAN NOT OPEN DOOR INTERLOK 1:M30/M02 CAN OPEN DOOR INTERLOCK(CONJUGATION K0.3)
K05	1	0:MANUAL ABSOLUTE INVALID 1:MANUAL ABSOLUTE VALID
K05	2	0:SPINDLE OVERRIDE 5% INCREAMENT/DECELEMENT 1:SPINDLE OVERRIDE 10% INCREAMENT/DECELEMENT
K05	3	0:ELECTRICMAGNETIC TYPE DOOR RELEASE ONLY HANDLE MODE VALID 0:ELECTRICMAGNETIC TYPE DOOR RELEASE ANY MODE VALID
K05	4	0:LUBRICATION ALARM FOR SINGLE BLOCK 1:LUBRICATION ALARM SINGLE BLOCK INVALID
K05	5	0:LUBRICATION RUN ON CYCLE START 1:LUBRICATION RUN ON SERVO READY
K05	6	0:AUTO TOOL CHANGE COMMAND IN MDI MODE NO FINISH 1:AUTO TOOL CHANCE COMMAND IN MDI MODE ACTIVE
K05	7	0:SPINDLE CW/CCW M00/M01 STOP 1:SPINDLE CW/CCW/ M00/M01 NO STOP

K06	0	0:USE SINGLE FLASHER LAMP 1:USE TRI-LEVEL FLASHER LAMP
K06	1	0:HOME RETURN DIRCTION ONLY X-Y-Z: + 1:HOME RETURN DIRCTION SETTING X+Y-Z:-CAN ACTIVE
K06	2	0:COOLANT A,B RUN SAME MOTOR 1:COOLANT A,B RUN DIFFERENT MOTOR
K06	3	0:TOOL COMMAND IN MDI MODE NO FINISH 1:TOOL COMMAND IN MDI MODE ACTIVE
K06	4	0:COOLANT B M09 COMMAND CAN'T OFF 1:COOLANT B M09 COMMAND CAN OFF
K06	5	0:SPINDLE CW/CCW STOP FOR MODE CHANGE 1:SPINDLE CW/CCW NO STOP FOR MODE CHANGE
K06	6	0:SPINDLE OVERRIDE 120% 1SPINDLE OVERRIDE 200%
K06	7	0:SPINDLE FOR BELT TYPE 1:SPINDLE GEAR TYPE FOR AIR SYSTEM
K07	0	0:MACHINE OPERATION PANEL STATUSE NO BACK-UP 0:MACHINE OPERATION PANEL STATUSE BACK-UP
K07	1	0:COOLANT AUTO MESSAGE HLOD 1:COOLANT AUTO MESSAGE NO HOLD
K07	2	0:COOLANT AUTO NO ON CAN'T CYCLE START 1:COOLANT AUTO NO ON CNA CYCLE START
K07	3	0:WITHOUT COOLANT GUN 1:WITH COOLANT GUN
K07	4	0:CUTTING AIR BLOW M09 OFF INVALID 1:CUTTING AIR BLOW M09 VALID
K07	5	0:COOLANT AUTO VALID 1:COOLANT AUTO INVALID
K07	6	0:USE KIT DEVICE 1:USE C.T.S. SYSTEM (PAPER FILTER)
K07	7	

A
B
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E

DRAWN	CHECK	DATE	DRAW NO.	TITLE: KEEP RELAY EXPLANATION(GENDA TYPE) (OI-MC/OI MATE-MC)	PAGE
TSENG		12/02/2005	FK0003C		P3

	1	2	3	4	5	6	7	8
A	K08	0			K10	0	0:CHIP CONVEYER BACKWARD NO MODE LIMIT 1:CHIP CONVEYER BACKWARD MODE LIMIT	
	K08	1	1:HOME AUTO EXCUTION XYZ SAME ACTIVE		K10	1	1:SPINDLE UNCLAMP BLOW NO TIMER CONTROL	A
B	K08	2	0:MAGAZINE TOOL TOTAL NUMBER 20 1:MAGAZINE TOOL TOTAL NUMBER 16		K10	2	1:AUTO MODE CHIP CONVEYER RESET VALID	
	K08	3	0:MAGAZINE TOOL TOTAL NUMBER 20 1:MAGAZINE TOOL TOTAL NUMBER 12		K10	3	1:SPINDLE GEAR TYPE FOR ZF BOX 0:DOOR INTERLOCK Z&X AXIS LOCK	B
C	K08	4	0:MACHINE LOCK SWITCH IN ANY TIME VALID		K10	4	1:DOOR INTERLOC X&Z AISX HANDLE MODE CAN ACTIVE	
	K08	5			K10	5	0:AUTO TOOL CHANGE ACTIVE MODE SELECT VALID 1:AUTO TOOL CHANGE ACTIVE MODE SELECT INVALID	
D	K08	6			K10	6	0:MANUAL HANDLE INTERRUPTION INVALID 1:MANUAL HANDLE INTERRUPTION VALID	
	K08	7	0:AIR ALARM CAN'T CYCLE START 1:AIR ALARM CAN CYCLE START		K10	7	1: CUTTING AIR BLAST FLASH CONTROL	C
E	K09	0	0:4TH AXIS CLAMP SERVO ON 1:4TH AXIS CLAMP SERVO OFF		K11	0		
	K09	1	0:SPINDLE MANUAL SPEED DISABLE 1SPINDLE MANUAL SPEED ENABLE		K11	1		
	K09	2			K11	2		
	K09	3			K11	3		D
	K09	4			K11	4		
	K09	5			K11	5		
	K09	6	0:FIXTURE WITH PRESSURE SWITCH 1:FIXTURE WITHOUT PRESSURE SWITCH		K11	6		E
	K09	7			K11	7		

	DRAWN	CHECK	DATE	DRAW NO.	TITLE: KEEP RELAY EXPLANATION(GENDA TYPE) (OI-MC/OI MATE-MC)	PAGE
	TSENG		12/02/2005	FK0004B		P4

	1	2	3	4	5	6	7	8
A	K12	0	1: LUBRICATION CONTROL WITH TIMER			K14	0	1: M90 COMMANE IN]VALID 1: M90 COMMANE VALID
	K12	1				K14	1	0: T COD EQUAL 0 INVALID 0: T COD EQUAL 0 VALID
	K12	2				K14	2	
	K12	3				K14	3	
B	K12	4				K14	4	
	K12	5				K14	5	
	K12	6				K14	6	
	K12	7				K14	7	
C	K13	0				K15	0	
	K13	1				K15	1	0: 1: MAGAZINE IN HANDLE MODE X+&X- OPERATIO IN/OUT 0: MAGAZINE EXTEND SPINDLE CAN NO ORIENTATION
	K13	2				K15	2	1: AXIS NO ZERO RETURN FINISH CAN CYCLE START 0: AXIS NO ZERO RETURN CAN NOT CYCLE START
	K13	3				K15	3	1: AXIS NO ZERO RETURN FINISH CAN CYCLE START 0: FRONT DOOR OPEN SPINDLE RUNNIG INVALID
D	K13	4				K15	4	1: FRONT DOOR OPEN CAN SPINDLE RUNNIG
	K13	5				K15	5	0: 1: C.T.S. FOR FILTER
	K13	6				K15	6	
	K13	7				K15	7	
E								

MANFORD MACHINERY CO., LTD.	DRAWN	CHECK	DATE	DRAW NO.	TITLE: KEEP RELAY EXPLANATION(GENDA TYPE) (OI-MC/OI MATE-MC)	PAGE
	TSENG		12/02/2005	FK0005B		P5

	1	2	3	4	5	6	7	8
A	K16	0				K18	0	
	K16	1				K18	1	
	K16	2				K18	2	
	K16	3				K18	3	
B	K16	4				K18	4	
	K16	5				K18	5	
	K16	6				K18	6	
	K16	7				K18	7	
C	K17	0				K19	0	
	K17	1				K19	1	
	K17	2				K19	2	
	K17	3				K19	3	
D	K17	4				K19	4	
	K17	5				K19	5	
	K17	6				K19	6	
	K17	7				K19	7	
E								

MANFORD MACHINERY CO., LTD.	DRAWN	CHECK	DATE	DRAW NO.	TITLE: KEEP RELAY EXPLANATION(GENDA TYPE) (OI-MC/OI MATE-MC)	PAGE
	TSENG		12/02/2005	FK0006B		P6

01-MC GENOA TYPEPLC PARAMETERTIMER

TIMER NO.	PRESET
TIMER 1	900000
TIMER 2	15000
TIMER 3	
TIMER 4	
TIMER 5	
TIMER 6	
TIMER 7	
TIMER 8	
TIMER 9	12000
TIMER 10	
TIMER 11	
TIMER 12	
TIMER 13	
TIMER 14	5000
TIMER 15	30000

TIMER NO.	PRESET
TIMER 16	30000
TIMER 17	
TIMER 18	
TIMER 19	
TIMER 20	
TIMER 21	
TIMER 22	
TIMER 23	
TIMER 24	
TIMER 25	
TIMER 26	
TIMER 27	
TIMER 28	
TIMER 29	
TIMER 30	

TIMER NO.	PRESET
TIMER 31	
TIMER 32	
TIMER 33	
TIMER 34	
TIMER 35	
TIMER 36	
TIMER 37	
TIMER 38	
TIMER 39	
TIMER 40	

DRAWN	CHECK	DATE	DRAW NO.
TSENG		12/02/2005	FK0070A

TITLE: TIMER SETTING VALUE(GENOA TYPE)
(01-MC/01 MATE-MC)

PAGE
P7

	1	2	3	4	5	6	7	8
A	TIMER 1	LUBRICATION RUN TIMER			TIMER 17			
	TIMER 2	LUBRICATION STOP TIMER			TIMER 18			
	TIMER 3				TIMER 19			
	TIMER 4				TIMER 20			
B	TIMER 5				TIMER 21			
	TIMER 6	CUTTIN AIR BLAST FASH ON TIMER			TIMER 22			
C	TIMER 7	CUTTING AIR BLAST FLASH OFF TIMER			TIMER 23			
	TIMER 8	M52 MAGAZINE EXTEND DELAY FINISH TIMER			TIMER 24			
	TIMER 9	LUBE PRESSURE DETECT DELAY TIME(12000)			TIMER 25			
D	TIMER 10	M41 COMMAND DELAY FINISH TIMER			TIMER 26			
	TIMER 11	4TH AXIS NO UNCLAMP SWITCH DELAY TIMER			TIMER 27			
	TIMER 12	MAGAZINE CW STOP DELAY TIMER			TIMER 28			
	TIMER 13	MAGAZINE CCW STOP DELAY TIMER			TIMER 29			
E	TIMER 14				TIMER 30			
	TIMER 15	C.T.S COOLANT TANK LOW LEVEL DETECT TIMER			TIMER 31			
	TIMER 16	C.T.S COOLANT TANK LEVEL DETECT TIMER			TIMER 32			
MANFORD MACHINERY CO., LTD.			DRAWN TSENG	CHECK	DATE 12/02/2005	DRAW NO. FK0007C	TITLE: TIMER SETTING EXPLANATION(GENDA TYPE) (01-MC/01 MATE-MC)	
							PAGE P8	

	1	2	3	4	5	6	7	8																
A	<table><tr><td>TIMER 33</td><td></td></tr><tr><td>TIMER 34</td><td></td></tr><tr><td>TIMER 35</td><td></td></tr><tr><td>TIMER 36</td><td></td></tr><tr><td>TIMER 37</td><td></td></tr><tr><td>TIMER 38</td><td></td></tr><tr><td>TIMER 39</td><td></td></tr><tr><td>TIMER 40</td><td></td></tr></table>								TIMER 33		TIMER 34		TIMER 35		TIMER 36		TIMER 37		TIMER 38		TIMER 39		TIMER 40	
TIMER 33																								
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TIMER 40																								
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		DRAWN	CHECK	DATE	DRAW NO.	TITLE: TIMER SETTING EXPLANATION(GENDA TYPE) (01-MC/01 MATE-MC)		PAGE																
		TSENG		12/02/2005	FK0008B			P9																

01-MC GENOA TYPEPLC PARAMETERCOUNTER

COUNTER NO.	PRESET	CURRENT
COUNTER 1	20	
COUNTER 2		
COUNTER 3		
COUNTER 4		
COUNTER 5		
COUNTER 6		
COUNTER 7		
COUNTER 8		
COUNTER 9		
COUNTER 10	3C	
COUNTER 11	312	
COUNTER 12		
COUNTER 13		
COUNTER 14		
COUNTER 15		

COUNTER NO.	PRESET	CURRENT
COUNTER 16		
COUNTER 17		
COUNTER 18		
COUNTER 19		
COUNTER 20		

DRAWN
TSENG

CHECK

DATE
12/02/2005

DRAW NO.
FK0010B

TITLE: COUNTER SETTING VALUE (GENOA TYPE)
(01-MC/01 MATE-MC)

PAGE
P10

	1	2	3	4	5	6	7	8	
A	COUNTER 1	MAGAZINE POSITION COUNT			COUNTER 16				A
	COUNTER 2				COUNTER 17				
	COUNTER 3				COUNTER 18				
B	COUNTER 4				COUNTER 19				B
	COUNTER 5				COUNTER 20				
	COUNTER 6								
	COUNTER 7								
C	COUNTER 8								C
	COUNTER 9								
	COUNTER 10								
D	COUNTER 11	GREASE RUN TIMER 1							D
	COUNTER 12	GREASE RUN TIME 2(RUN TOTAL TIME)							
	COUNTER 13								
	COUNTER 14								
E	COUNTER 15								E
				DRAWN	CHECK	DATE	DRAW NO.	TITLE: COUNTER EXPLANATION(GENOA TYPE) (OI-MC/OI MATE-MC)	PAGE
				TSENG		12/02/2005	FK0009B		P11

	1	2	3	4	5	6	7	8	
A	<h1 style="text-align: center;">OI-MC</h1> <h2 style="text-align: center;">ARM TYPE</h2> <h2 style="text-align: center;">PLC PARAMETER</h2> <h2 style="text-align: center;">KEEP RELAY</h2>								A
B									B
C									C
D									D
E									E
	1	2	3	4	5	6	7	8	

	1	2	3	4	5	6	7	8																																																																																																																																																	
A	<table><tr><td>BIT NO.</td><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>0</td></tr><tr><td>K00</td><td>0</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>K01</td><td>1</td><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td><td>1</td><td>0</td></tr><tr><td>K02</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td></tr><tr><td>K03</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>K04</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>K05</td><td>1</td><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td><td>1</td><td>0</td></tr><tr><td>K06</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>K07</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>K08</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td></tr><tr><td>K09</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>0</td></tr><tr><td>K10</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>K11</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>K12</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>K13</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>K14</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr></table>								BIT NO.	7	6	5	4	3	2	1	0	K00	0	1	0	0	0	0	0	0	K01	1	0	0	1	0	0	1	0	K02	1	0	0	0	0	0	1	0	K03	0	0	0	0	0	0	0	0	K04	0	0	0	0	0	0	0	0	K05	1	0	0	1	0	0	1	0	K06	0	0	0	1	0	0	0	0	K07	0	0	0	0	0	0	1	1	K08	0	0	0	0	0	0	0	1	K09	0	0	0	1	0	1	0	0	K10	0	0	0	0	0	0	0	0	K11	0	0	0	0	0	0	0	0	K12	0	0	0	0	0	0	0	0	K13	0	0	0	0	0	0	0	0	K14	0	0	0	0	0	0	0	0	
BIT NO.	7	6	5	4	3	2	1	0																																																																																																																																																	
K00	0	1	0	0	0	0	0	0																																																																																																																																																	
K01	1	0	0	1	0	0	1	0																																																																																																																																																	
K02	1	0	0	0	0	0	1	0																																																																																																																																																	
K03	0	0	0	0	0	0	0	0																																																																																																																																																	
K04	0	0	0	0	0	0	0	0																																																																																																																																																	
K05	1	0	0	1	0	0	1	0																																																																																																																																																	
K06	0	0	0	1	0	0	0	0																																																																																																																																																	
K07	0	0	0	0	0	0	1	1																																																																																																																																																	
K08	0	0	0	0	0	0	0	1																																																																																																																																																	
K09	0	0	0	1	0	1	0	0																																																																																																																																																	
K10	0	0	0	0	0	0	0	0																																																																																																																																																	
K11	0	0	0	0	0	0	0	0																																																																																																																																																	
K12	0	0	0	0	0	0	0	0																																																																																																																																																	
K13	0	0	0	0	0	0	0	0																																																																																																																																																	
K14	0	0	0	0	0	0	0	0																																																																																																																																																	
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A	<table><tr><td>BIT NO.</td><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>0</td></tr><tr><td>K15</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>K16</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>K17</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>K18</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>K19</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>K20</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr></table>								BIT NO.	7	6	5	4	3	2	1	0	K15	0	0	0	0	0	0	0	0	K16	0	0	0	0	0	0	0	0	K17	0	0	0	0	0	0	0	0	K18	0	0	0	0	0	0	0	0	K19	0	0	0	0	0	0	0	0	K20	0	0	0	0	0	0	0	0	
BIT NO.	7	6	5	4	3	2	1	0																																																																
K15	0	0	0	0	0	0	0	0																																																																
K16	0	0	0	0	0	0	0	0																																																																
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K19	0	0	0	0	0	0	0	0																																																																
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	DRAWN	CHECK	DATE	DRAW NO.	TITLE: KEEP RELAY SETTING (OI-MC)	PAGE
	TSENG		11/29/2005	FK0071A		P1

1	2	3	4	5	6	7	8	
A	K00	0	0: ATC NO READY AXES MANUAL MODE CNA'T ACTIVE 0: ATC NO READY AXES MANUAL MODE CNA ACTIVE		K02	0	0: MAGAZINE IN-POSITION SIGNAL USE A CONTACT (NOMAL OPEN) 0: MAGAZINE IN-POSITION SIGNAL USE B CONTACT (NOMAL CLOSE)	
	K00	1	0: 4TH AXIS HOME POINT RETURN IGNORE 1: 4TH AXIS HOME POINT RETURN VALID		K02	1	0: ARM NO READY Z AXIS INRELOCK INVALID 1: ARM NO READY HANDLE MODLE Z AXIS INTERLOCK VALID	
	K00	2	0: AXES HOME POINT RETURN VALID 1: AXES HOME POINT RETURN IGNORE		K02	2	0: ARM NO READY SPINDLE ORIENTATION IGNORE 1: ARM NO READY SPINDLE ORIENTATION ACTIVE	
	K00	3	0: HOME START X&Y AND Z AXIS SAME ACTIVE 1: HOME START X&Y AXIS AFTER Z AXIS RETURN FINISH		K02	3	0: DOOR INTERLOK MODE (AXIS MOVE) 1: MAINTENANCE MODE (SPINDLE SPEDD & AXIS MOVE)	
	K00	4	0: M00/M01 COMMAND COOLANT STOP 1: M00/M01 COMMAND COOLANT NO STOP		K02	4	0: TOOL LIFE OVER MESSAGE IGNORE 1: TOOL LIFE OVER MESSAGE DISPLAY VALID	
	K00	5			K02	5	0: 4TH AXIS WITH UNCLAMP SWITCH DETECT 1: 4TH AXIS WITHOUT UNCLAMP SWITCH DETECT: TIMER VALID	
	K00	6	0: SPINDLE GEAR CHANGE VALID 1: SPINDLE GEAR CHNAGE INVALID		K02	6	0: SPINDLE OVERRIDE STAND OVERRIDE COMMAND 1: SPINDLE OVERRIDE ANALOG COMMAND	
	K00	7	0: AUTO POWER OFF M02 COMMAND INVALID 1: AUTO POWER OFF M02 COMMAND VALID		K02	7	0: X AXIS ZERO RETURN POINT FOR (+)DIRECTION 1: X AXIS ZERO RETURN POINT FOR (-)DIRECTION	
	K01	0	0: USE TRI-LEVEL FLASHER LAMP 1: USE SINGLE FLASHER LAMP		K03	0	0: MAGAZINE DECELERATION USE COUNTER SENSER 0: MAGAZINE DECELERATION USE MAGAZINE IN-POSITION SENSER	
	K01	1	0: AUTO TOOL CHANGE X&Y AXIS 2ND HOME POINT VALID 1: AUTO TOOL CHANGE X&Y AXIS 2ND HOME POINT IGNORE		K03	1	0: ARM DETECT SIGNAL NC 1: ARM DETECT SIGNAL NO	
B	K01	2	0: SPINDLE TOOL UNCLAMP NO BEFOREHAND ACTIVE 1: SPINDLE TOOL UNCLAMP BEFOREHAND ACTIVE		K03	2		
	K01	3	0: MAGAZINE TOOL POT UP RELAY NO KEEP 1: MAGAZINE TOOL POT UP RELAY KEEP		K03	3	0: MAGAZINE TOOL POT STAND-BY : POT UP 1: MAGAZINE TOOL POT STAND-BY : POT DOWN	
	K01	4	0: ATC READY ARM CAN ACTIVE 1: Z AXIS IN 2ND HOME POINT ARM CAN ACTIVE		K03	4	0: MAGAZINE ZERO RETURN(POSITION NO.1) VALID 0: MAGAZINE ZERO RETURN(POSITION NO.1) INVALID	
	K01	5	0: SPINDLE COOLER DETCT IGNORE 1: SPINDLE COOLER DETECT VALID		K03	5	0: OIL SKIMMER RUNNING WHEN EMERGENCE READY 1: OIL SKIMMER RUNNING WHEN CNC POWER ON	
	K01	6	0: SPINDLE CLAMP ACTIVE NO KEEP 1: SPINDLE CLAMP ACTIVE KEEP		K03	6	0: Y7.6 OUTPUT CONTROL OIL SKIMMER 1: Y7.6 OUTPUT CONTOLR INDEX TABLE(M27)	
	K01	7	0: LUBE PRESSURE DETECT INVALID 1: LUBE PRESSURE DETECT VALID		K03	7	0: OVERRIDE LIMITED CONTROL VALID WHEN DOOR OPEN 1: OVERRIDE LIMITED CONTROL INVALID WHEN DOOR OPEN	
C								
D								
E								
		DRAWN	CHECK	DATE	DRAW NO.	TITLE: KEEP RELAY EXPLANATION(ARM TYPE) (OI-MC)		PAGE
		TSENG		05/12/2005	FK0072A			P2

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B

C

D

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K04	0	
K04	1	
K04	2	
K04	3	
K04	4	
K04	5	
K04	6	
K04	7	
K05	0	0: MDI MODE JIG B CLAMP DETECT INVALID 1: MDI MODE JIG B CLAMP DETECT VALID
K05	1	0: MAGAZINE TOOL POT NUMBER: 20 1: MAGAZINE TOOL POT NUMBER: 24
K05	2	0: JIG B CLAMP NO USE SOLENOID 1: JIG B CLAMP USE SOLENOID
K05	3	
K05	4	0: LUBE ALARM SIGNAL "1" 1: LUBE ALARM SIGNAL "0"
K05	5	0: JIG NO CLAMP MESSAGE NO DISPLAY 1: JIG NO CLAMP MESSAGE DISPLAY
K05	6	0: JIG CLAMP USE SOLENOID 1: JIG CLAMP NO USE SOLENOID
K05	7	0: MAGAZINE COUNTER SWITCH DETEC SIGNAL N.O. 1: MAGAZINE COUNTER SWITCH DETCT SIGNAL N.C.

K06	0	0: 4TH AXIS UNCLAMP WHEN SOLENOID ON 1: 4TH AXIS UNCLAMP WHEN SOLENOID OFF
K06	1	0: JIG CONTROL FOOT SWITCH MANUAL MODE VALID 1: JIG CONTROL FOOT SWITCH ALL MODE VALID
K06	2	0: MDI MODE JIG CLAMP DETECT INVALID 1: MDI MODE JIG CLAMP DETECT VALID
K06	3	0: EMERGENECY STOP JIG B NO CLAMP LATCH 1: EMERGENECY STOP JIG B CLAMP LATCH
K06	4	0: WORK LAMP OPERATION PANEL CONTROL INVALID 1: WORK LAMP OPERATION PANEL CONTROL VALID
K06	5	0: OPERATION MODE CHANGE INVALID 1: OPERATION MODE CHANGE VALID
K06	6	1: MANUAL ABSOLUTE VALID 1: MANUAL ABSOLUTE INVALID
K06	7	0: M00/M01 SPINDLE STOP 1: M00/M01 SPINDLE NO STOP
K07	0	0: AUTO LUBE CYCLE TIME EXTERNAL SETTING 1: AUTO LUBE CYCLE TIME PMC CONTROL
K07	1	0: PROGRAM NO RUNNIG AUTO LUBRICATION ONETIME ON 1: AUTO LUBE RUNNING BY CYCLE TIME CONTROL
K07	2	0: COOLANT B COOALNT A USE SAME PUMP 1: COOLANT B COOLANT B USE OTHER PUMP
K07	3	0: MODE CHANGE SPINDLE STOP 1: OPERATION MODE CHANGE SPINDLE ROTATION MEMORY
K07	4	0: COOLANT B M09 COMMAND STOP VALID 1: COOLANT B M09 COMMAND STOP INVALID
K07	5	0: NO C.T.S. DEVICE 1: C.T.S. DEVICE USE
K07	6	0: CAM DRIVE ARM DEVICE 1: QUICK TOOL CHANGE DEVICE
K07	7	0: ARM JOG STEP BY STEP ACTIVE 1: ARM JOG CONTINUE ACTIVE

	DRAWN	CHECK	DATE	DRAW NO.	TITLE: KEEP RELAY EXPLANATION(ARM TYPE)	PAGE
	TSENG		11/29/2005	FK0073A	(01-MC)	P3

1	2	3	4	5	6	7	8
A	K08	0	0: HOME RETURN DIRECTION ONLY X-Y: +Z: + 1: HOME RETURN DIRECTION SETTING X+Y: -Z: -CAN ACTIVE	K10	0	0: SPINDLE OVERRIDE INTERVAL: 10% 1: SPINDLE OVERRIDE INTERVAL: 5%	
	K08	1	0: SPINDLE OIL MIST FUNCTION IGNORE 1: SPINDLE OIL MIST FUNCTION DETECT VALID	K10	1	0: SPINDLE OVERRIDE MAXMAN: 120% 1: SPINDLE OVERRIDE MAXMAN: 200%	A
	K08	2	0: 4TH AXIS CLAMP SERVO OFF IGNORE 1: 4TH AXIS CLAMP SERVO OFF VALID	K10	2	0: CHIP CONVEYER CONTINUE FORWARD RUNNING 1: CHIP CONVEYER DISCONTINUOUS FORWARD	
	K08	3	0: COOLANT AUTO OFF MESSAGE DISPLAY 1: COOLANT AUTO OFF MESSAGE NO DISPLAY	K10	3	0: CUTTING AIR BLAST CONTINUE ACTIVE 1: CUTTING AIR BLAST FLASH	
B	K08	4	0: SPINDLE RIGID TAPPING ROTATION 1: SPINDLE GEAR CHANGE ROTATION	K10	4	0: Y7.4 OUTPUT CONTROL M37 COMMAND (SPARE FUNCTION) 0: Y7.4 OUTPUT CONTROL HYDRAULIC MOTOR INDICATION	B
	K08	5	0: MAGAZINE TOOL POT NUMBER: 24 or 20 1: MAGAZINE TOOL POT NUMBER THAN 24 or 20	K10	5	0: 1: HYDRAULIC MOTOR ON WHEN SERVO READY	
	K08	6	0: JOG MODE 4TH AXIS UNCLAMP ACTIVE 1: +4&-4 PUSH BUTTON ON 4TH AXIS UNCLAMP ACTIVE	K10	6	0: 1: TEACH IN JOG/HANDLE VALID	
C	K08	7	0: CHIP CONVEYER FORWARD FOR CYCLE START 1: CHIP CONVEYER FORWARD CYCLE NO ACTIVE	K10	7	0: ELECTRICMAGNETIC TYPE FRONT DOOR OPEN ONLY HANDLE MODE VALID 1: ELECTRICMAGNETIC TYPE FRONT DOOR OPEN ANY MODE VALID	C
	K09	0	0: CHIP CONVEYER FORWARD ALL MODE VALID 1: CHIP CONVEYER FORWARD MANUAL MODE VALID	K11	0	1: ARM FROM 0° TO 65°	
	K09	1	0: HOME START XY AXES AFTER Z AXIS HOME RETURN 1: HOME START XYZ AXES COINCIDE ACTIVE	K11	1	1: ARM 65° IN-POSITION	
	K09	2	0: SIDE DOOR INTERLOC DETECT VALID 1: SIDE DOOR INTERLOCK DETECT INVALID	K11	2	1: ARM 180° ROTATION	
D	K09	3	0: M02/M30 DOOR INTERLOCK RELEASE INVALID 1: M02/M30 DOOR INTERLOCK RELEASE VALID	K11	3	1: ARM 180° ROTATION IN-POSITION	D
	K09	4	0: FRONT DOOR INTERLOC DETECT VALID 1: FRONT DOOR INTERLOC DETECT INVALID	K11	4	1: ARM FROM 180° TO 0°	
	K09	5	0: DOOR INTERLOCK COIL AUTO. RELEASE 1: DOOR INTERLOCK COIL MANUAL RELEASE	K11	5	0: JIG UNCLAMP 1: JIG CLAMP LATCH	
E	K09	6	0: 1: RAPID OVERRIDE CANALE	K11	6		E
	K09	7	0: AIR ALARM SINGLE BLOCK VALID 1: AIR ALARM SINGLE BLOCK INVALID	K11	7	0: JIG B UNCLAMP 1: JIG B CLAMP LATCH	
				TITLE: KEEP RELAY EXPLANATION (ARM TYPE) (01-MC)			
DRAWN				CHECK	DATE	DRAW NO.	PAGE
TSENG					06/12/2005	FK0074A	P4

	1	2	3	4	5	6	7	8
A	K12	0			K14	0		
	K12	1			K14	1		
	K12	2			K14	2		
	K12	3			K14	3		
B	K12	4			K14	4		
	K12	5			K14	5		
	K12	6			K14	6		
	K12	7			K14	7		
C	K13	0			K15	0		
	K13	1			K15	1	0: 1: MAGAZINE POT UP/DOWN BY +Z&-Z PUSH BUTTON	
	K13	2			K15	2		
	K13	3			K15	3		
D	K13	4			K15	4		
	K13	5			K15	5	0: 1: C.T.S FOR FILTER UNIT	
	K13	6			K15	6	0: SPINDLE FORWARD/REVERSE WHEN SPINDLE GEAR CHANGE 1: SPINDLE FORWARD WHEN SPINDLE GEAR CHANGE	
	K13	7			K15	7		
E								

DRAWN	CHECK	DATE	DRAW NO.	TITLE: KEEP RELAY EXPLANATION(ARM TYPE)	PAGE
TSENG		06/12/2005	FK0075A	(OI-MC)	P5

	1	2	3	4	5	6	7	8
A	K16	0			K18	0		
	K16	1			K18	1		
	K16	2			K18	2		
	K16	3			K18	3		
B	K16	4			K18	4		
	K16	5			K18	5		
	K16	6			K18	6		
	K16	7			K18	7		
C	K17	0			K19	0		
	K17	1			K19	1		
	K17	2			K19	2		
	K17	3			K19	3		
D	K17	4			K19	4		
	K17	5			K19	5		
	K17	6			K19	6		
	K17	7			K19	7		
E								

DRAWN	CHECK	DATE	DRAW NO.	TITLE: KEEP RELAY EXPLANATION(ARM TYPE)	PAGE
TSENG		06/12/2005	FK0076A	(OI-MC)	P6

01-MC ARM TYPEPLC PARAMETERTIMER

NO.	ADDR.	DATA
1	0	3000
2	2	3000
3	4	10000
4	6	
5	8	0
6	10	0
7	12	0
8	14	12000
9	16	0
10	18	0
11	20	0
12	22	0
13	24	0
14	26	0
15	28	0

NO.	ADDR.	DATA
16	30	0
17	32	0
18	34	0
19	36	0
20	38	0
21	40	0
22	42	0
23	44	0
24	46	0
25	48	3000
26	50	0
27	52	0
28	54	0
29	56	0
30	58	0

NO.	ADDR.	DATA
31	60	0
32	62	0
33	64	0
34	66	0
35	68	0
36	70	0
37	72	0
38	74	0
39	76	0
40	78	0

DRAWN	CHECK	DATE	DRAW NO.
TSENG		06/12/2005	FK0077A

TITLE: TIMER SETTING (ARM TYPE)
(01-MC)

PAGE
P7

	2	3	4	5	6	7	8
A <							

	1	2	3	4	5	6	7	8
A	ITEM NO.	FUNCTION						
	TIMER 33							
B	TIMER 34							
	TIMER 35							
	TIMER 36							
C	TIMER 37							
	TIMER 38							
	TIMER 39	OIL SKIMMER STOP TIME						
D	TIMER 40	OIL SKIMMER RUNNING TIME						
			DRAWN	CHECK	DATE	DRAW NO.	TITLE: TIMER FUNCTION EXPLANATION(ARM TYPE) (OI-MC)	PAGE
			TSENG		06/12/2005	FK0080A		P10

0 I-MC ARM TYPEPLC PARAMETERCOUNTER

NO.	ADDR.	PRESET	CURRENT
1	C0	0	0
2	C4	0	0
3	C8	0	0
4	C12	0	0
5	C16	0	0
6	C20	0	0
7	C24	0	0
8	C28	0	0
9	C32	0	0
10	C36	0	0
11	C40	0	0
12	C44	0	0
13	C48	0	0
14	C52	0	0
15	C56	0	0

NO.	ADDR.	PRESET	CURRENT
16	C60	0	0
17	C64	0	0
18	C68	0	0
19	C72	0	0
20	C76	0	0

1		2		3		4		5		6		7		8	
A B C D E	ITEM NO.	FUNCTION													
	COUNTER 1														
	COUNTER 2														
	COUNTER 3														
	COUNTER 4														
	COUNTER 5														
	COUNTER 6														
	COUNTER 7														
	COUNTER 8														
	COUNTER 9														
	COUNTER 10														
	COUNTER 11														
	COUNTER 12														
	COUNTER 13														
	COUNTER 14														
	COUNTER 15														
COUNTER 16															
		DRAWN	CHECK	DATE	DRAW NO.	TITLE: COUNTER FUNCTION EXPLANATION(ARM TYPE)						PAGE			
		TSENG		06/12/2005	FK0081A	(OI-MC)						P11			

1		2		3		4		5		6		7		8	
A B C D E	<h1>O I-MC</h1> <h2>ARM TYPE</h2> <h3>PLC PARAMETER</h3> <h3>DATA TABLE</h3>														
1		2		3		4		5		6		7		8	

1	2	3	4	5	6	7	8