

```
00 Label:          Step:
```

<b>Ra47_0</b> ] [	<b>X_end</b> ] [	<b>Asp_2</b> ( ) %Q5301.7	<b>EV aspirazione 2 (X5)</b>
%Ra47.0	%V503.0	<b>As_2</b> ( ) %Q4500.6	<b>Abilitazione aspirazione central</b>
<b>Mand_inv</b> ]/[		<b>goto(RETE)</b> (T)	
%M802.2			

```
01 Label:          Step:
```

Ra47_0, X_end ] [ _____ ]/[ _____ %Ra47.0, %V503.0  Test_mt1 ] [ _____ %V26.0	App_freq1_0, Emer_inv1 ] [ _____ %V22.6, %I4001.0	Res_sell ]/[ _____ %Q4101.3	Rot_man1 (S) %Q4000.3	Rotazione mandrini testa princip
M_m109 ] / [ _____ %V8b.3	Rot_man1 ] [ _____ %Q4000.3	Man_orx1, Man_orx2, Man_orx4, Man_ory2, Man_ory1, Man_orx3 ] / [ _____ %Q4301.2, %Q4601.0, %Q4701.5, %Q4701.6, %Q4301.3, %Q4701.4	Cuffia_m ( ) %Q4601.1	Abilitazione cuffia mandrini
	Man_suppl1 & 255 != 0 ] > [ _____ %Q4800.B & 0xff != 0x0  Man_suppl2 & 7 != 0 ] > [ _____ %Q4801.B & 0x7 != 0x0		Cuff_ms ( ) %Q4801.7	Cuffia mandrini supplementare

```
(1) %V503.1, %R122.2      : X_mod0_sim, M05_1
```

Author:		<b>NUM TOOLS</b>	
Company:			
Project: 1040_78.mch	<b>TITRE</b>	Date	28-02-2018
Module: MANDRINI.XLA		%SP45 (00)	Page 1

02 Label: Step:

Gestione rotazione mandrini da inverter

<div>E_raz</div> <div>—] [—</div> <div>%R3.0</div>		<div>Rot_man1</div> <div>—(R)—</div> <div>%Q4000.3</div>
<div>Ra47_0, Test_mt1</div> <div>—]/[—</div> <div>%Ra47.0, %V26.0</div>		
<div>M05_1, X_end</div> <div>—] [—</div> <div>%R122.2, %V503.0</div>		
		<div>goto(DWSP)</div> <div>—(T)—</div>

Rotazione mandrini testa princip

03 Label: RETE Step:

Gestione rotazione mandrini standard con motore 50hz

<div>Ra47_0</div> <div>—] [—</div> <div>%Ra47.0</div>	<div>X_mod0_sim</div> <div>—]/[—</div> <div>%V503.1</div>	<div>X_end</div> <div>—] [—</div> <div>%V503.0</div>	<div>M100_1, M191_1</div> <div>—]/[—</div> <div>%V664.0, %V6bf.0</div>	<div>TOF_00(500)</div> <div>E Q</div>	<div>Rot_man1</div> <div>—( )—</div> <div>%Q4000.3</div>
<div>Test_mt1</div> <div>—] [—</div> <div>%V26.0</div>			<div>(1)</div> <div>—]/[—</div> <div>%V8b.3</div>	<div>M_m109</div> <div>—]/[—</div> <div>%V8b.3</div>	<div>Cuffia_m</div> <div>—( )—</div> <div>%Q4601.1</div>
<div>Ra47_1</div> <div>—] [—</div> <div>%Ra47.1</div>				<div>M_m109</div> <div>—]/[—</div> <div>%V8b.3</div>	<div>Cuff_ms</div> <div>—( )—</div> <div>%Q4801.7</div>
<div>Test_mt2</div> <div>—] [—</div> <div>%V26.1</div>					

Rotazione mandrini testa princip

Abilitazione cuffia mandrini

Cuffia mandrini supplementare

(1) %Q4301.2, %Q4601.0, %Q4701.5, %Q4701.6, %Q4301.3, %Q4701.4 : Man\_orx1, Man\_orx2, Man\_orx4, Man\_ory2, Man\_ory1, Man\_orx3  
[T] TOF\_00(0x1f4) : TOF\_00(500)

Author:		NUM TOOLS	
Company:			
Project: 1040_78.mch	TITRE	Date	28-02-2018
Module: MANDRINI.XLA		%SP45 (02)	Page 2

04 Label: DWSP Step:

Evolution	Ra47_0	X_mod0_sim	X_end	Icil_basso	Gruppo_on	EV discesa gruppo mandrini
]/[	]/[	]/[	]/[	]/[	(S)	
%M803.1	%Ra47.0	%V503.1	%V503.0	%I4500.4	%Q4501.6	
	E10023	Modo_xil == 4			Gruppo_off	EV salita gruppo mandrini
	]/[	]/>[			(R)	
	%Rf.7	%V514.W == 0x4			%Q4501.7	
Ra47_0, Test_mt1, Pez_sb10, E10023					Gruppo_off	EV salita gruppo mandrini
	]/[				(S)	
%Ra47.0, %V26.0, %Vf.6, %Rf.7					%Q4501.7	
					Gruppo_on	EV discesa gruppo mandrini
					(R)	
					%Q4501.6	

05 Label: Step:

Discesa mandrini verticali

Ra03.0	X_mod0_sim	X_end	Man_1	Abilitazione mandrino 1
]/[	]/[	]/[	( )	
%Ra03.0	%V503.1	%V503.0	%Q4300.0	
Test_m1				
]/[				
%V80.0				
Ra03.1	X_mod0_sim	X_end	Man_2	Abilitazione mandrino 2
]/[	]/[	]/[	( )	
%Ra03.1	%V503.1	%V503.0	%Q4300.1	
Test_m2				
]/[				
%V80.1				
Ra03.2	X_mod0_sim	X_end	Man_3	Abilitazione mandrino 3
]/[	]/[	]/[	( )	
%Ra03.2	%V503.1	%V503.0	%Q4300.2	
Test_m3				
]/[				
%V80.2				

Author:		NUM TOOLS	
Company:			
Project: 1040_78.mch	TITRE	Date	28-02-2018
Module: MANDRINI.XLA		%SP45 (04)	Page 3

06 Label: Step:

Discesa mandrini verticali

Ra03.3	X_mod0_sim	X_end	Man_4	Abilitazione mandrino 4
-] [-	-]/[-	-] [-	( )	
%Ra03.3	%V503.1	%V503.0	%Q4300.3	
Test_m4				
-] [-				
%V80.3				
Ra03.4	X_mod0_sim	X_end	Man_5	Abilitazione mandrino 5
-] [-	-]/[-	-] [-	( )	
%Ra03.4	%V503.1	%V503.0	%Q4300.4	
Test_m5				
-] [-				
%V80.4				
Ra03.5	X_mod0_sim	X_end	Man_6	Abilitazione mandrino 6
-] [-	-]/[-	-] [-	( )	
%Ra03.5	%V503.1	%V503.0	%Q4300.5	
Test_m6				
-] [-				
%V80.5				

07 Label: Step:

Discesa mandrini verticali

Ra03.6	X_mod0_sim	X_end	Man_7	Abilitazione mandrino 7
-] [-	-]/[-	-] [-	( )	
%Ra03.6	%V503.1	%V503.0	%Q4300.6	
Test_m7				
-] [-				
%V80.6				
Ra03.7	X_mod0_sim	X_end	Man_8	Abilitazione mandrino 8
-] [-	-]/[-	-] [-	( )	
%Ra03.7	%V503.1	%V503.0	%Q4300.7	
Test_m8				
-] [-				
%V80.7				
Ra02.0	X_mod0_sim	X_end	Man_9	Abilitazione mandrino 9
-] [-	-]/[-	-] [-	( )	
%Ra02.0	%V503.1	%V503.0	%Q4301.0	
Test_m9				
-] [-				
%V81.0				

Author:		NUM TOOLS	
Company:			
Project: 1040_78.mch	TITRE	Date	28-02-2018
Module: MANDRINI.XLA		%SP45 (06)	Page 4

08 Label: Step:

Discesa mandrini verticali

Ra02.1	X_mod0_sim	X_end	Man_10	Abilitazione mandrino 10
]	[	]/[	( )	
%Ra02.1	%V503.1	%V503.0	%Q4301.1	
Test_m10				
]	[			
%V81.1				
Ra02.2	X_mod0_sim	X_end	Man_11	Abilitazione mandrino 11
]	[	]/[	( )	
%Ra02.2	%V503.1	%V503.0	%Q4600.0	
Test_m11				
]	[			
%V81.2				
Ra02.3	X_mod0_sim	X_end	Man_12	Abilitazione mandrino 12
]	[	]/[	( )	
%Ra02.3	%V503.1	%V503.0	%Q4600.1	
Test_m12				
]	[			
%V81.3				

09 Label: Step:

Discesa mandrini verticali

Ra02.4	X_mod0_sim	X_end	Man_13	Abilitazione mandrino 13
]	[	]/[	( )	
%Ra02.4	%V503.1	%V503.0	%Q4600.2	
Test_m13				
]	[			
%V81.4				
Ra02.5	X_mod0_sim	X_end	Man_14	Abilitazione mandrino 14
]	[	]/[	( )	
%Ra02.5	%V503.1	%V503.0	%Q4600.3	
Test_m14				
]	[			
%V81.5				
Ra02.6	X_mod0_sim	X_end	Man_15	Abilitazione mandrino 15
]	[	]/[	( )	
%Ra02.6	%V503.1	%V503.0	%Q4600.4	
Test_m15				
]	[			
%V81.6				

Author:		NUM TOOLS	
Company:			
Project: 1040_78.mch	TITRE	Date	28-02-2018
Module: MANDRINI.XLA		%SP45 (08)	Page 5

10 Label: Step:

Discesa mandrini verticali

Ra02.7	X_mod0_sim	X_end	Man_16	Abilitazione mandrino 16
]	[	]/[	( )	
%Ra02.7	%V503.1	%V503.0	%Q4600.5	
Test_m16				
]	[			
%V81.7				
Ra01.0	X_mod0_sim	X_end	Man_17	Abilitazione mandrino 17
]	[	]/[	( )	
%Ra01.0	%V503.1	%V503.0	%Q4600.6	
Test_m17				
]	[			
%V82.0				
Ra01.1	X_mod0_sim	X_end	Man_18	Abilitazione mandrino 18
]	[	]/[	( )	
%Ra01.1	%V503.1	%V503.0	%Q4600.7	
Test_m18				
]	[			
%V82.1				

11 Label: Step:

Discesa mandrini verticali

Ra07.4	X_mod0_sim	X_end	Man_19	Abilitazione mandrino 19
]	[	]/[	( )	
%Ra07.4	%V503.1	%V503.0	%Q4700.0	
Test_m19				
]	[			
%V82.2				
Ra01.3	X_mod0_sim	X_end	Man_20	Abilitazione mandrino 20
]	[	]/[	( )	
%Ra01.3	%V503.1	%V503.0	%Q4700.1	
Test_m20				
]	[			
%V82.3				
Ra01.4	X_mod0_sim	X_end	Man_21	Abilitazione mandrino 21
]	[	]/[	( )	
%Ra01.4	%V503.1	%V503.0	%Q4700.2	
Test_m21				
]	[			
%V82.4				

Author:		NUM TOOLS	
Company:			
Project: 1040_78.mch	TITRE	Date	28-02-2018
Module: MANDRINI.XLA		%SP45 (10)	Page 6

12 Label: Step:

Discesa mandrini verticali

Ra01.5	X_mod0_sim	X_end	Man_22	Abilitazione mandrino 22
]	[	]/[	( )	
%Ra01.5	%V503.1	%V503.0	%Q4700.3	
Test_m22				
]	[			
%V82.5				
Ra01.6	X_mod0_sim	X_end	Man_23	Abilitazione mandrino 23
]	[	]/[	( )	
%Ra01.6	%V503.1	%V503.0	%Q4700.4	
Test_m23				
]	[			
%V82.6				
Ra01.7	X_mod0_sim	X_end	Man_24	Abilitazione mandrino 24
]	[	]/[	( )	
%Ra01.7	%V503.1	%V503.0	%Q4700.5	
Test_m24				
]	[			
%V82.7				

13 Label: Step:

Discesa mandrini verticali

Ra00.0	X_mod0_sim	X_end	Man_25	Abilitazione mandrino 25
]	[	]/[	( )	
%Ra00.0	%V503.1	%V503.0	%Q4700.6	
Test_m25				
]	[			
%V83.0				
Ra00.1	X_mod0_sim	X_end	Man_26	Abilitazione mandrino 26
]	[	]/[	( )	
%Ra00.1	%V503.1	%V503.0	%Q4700.7	
Test_m26				
]	[			
%V83.1				
Ra00.2	X_mod0_sim	X_end	Man_27	Abilitazione mandrino 27
]	[	]/[	( )	
%Ra00.2	%V503.1	%V503.0	%Q4701.0	
Test_m27				
]	[			
%V83.2				

Author:		NUM TOOLS	
Company:			
Project: 1040_78.mch	TITRE	Date	28-02-2018
Module: MANDRINI.XLA		%SP45 (12)	Page 7

14 Label: Step:

Discesa mandrini verticali

Ra00.3	X_mod0_sim	X_end	Man_28	Abilitazione mandrino 28
— ] [ —	— ]/[ —	— ] [ —	( ) —	
%Ra00.3	%V503.1	%V503.0	%Q4701.1	
Test_m28				
— ] [ —				
%V83.3				
Ra00.4	X_mod0_sim	X_end	Man_29	Abilitazione mandrino 29
— ] [ —	— ]/[ —	— ] [ —	( ) —	
%Ra00.4	%V503.1	%V503.0	%Q4701.2	
Test_m29				
— ] [ —				
%V83.4				
Ra07.3	X_mod0_sim	X_end	Man_30	Abilitazione mandrino 30
— ] [ —	— ]/[ —	— ] [ —	( ) —	
%Ra07.3	%V503.1	%V503.0	%Q4701.3	
Test_m30				
— ] [ —				
%V79.6				

15 Label: Step:

Discesa mandrini orizzontali

Ra00.5	X_mod0_sim	X_end	Man_orx1	Abilitazione mandrino orizzontal
— ] [ —	— ]/[ —	— ] [ —	( ) —	
%Ra00.5	%V503.1	%V503.0	%Q4301.2	
Test_mo1				
— ] [ —				
%V83.5				
Pez_sb10	Man_orx1			
— ] [ —	— ] [ —			
%Vf.6	%Q4301.2			
Ra00.6	X_mod0_sim	X_end	Man_ory1	Abilitazione mandrino orizzontal
— ] [ —	— ]/[ —	— ] [ —	( ) —	
%Ra00.6	%V503.1	%V503.0	%Q4301.3	
Test_mo2				
— ] [ —				
%V83.6				
Pez_sb10	Man_ory1			
— ] [ —	— ] [ —			
%Vf.6	%Q4301.3			

Author:		NUM TOOLS	
Company:			
Project: 1040_78.mch	TITRE	Date	28-02-2018
Module: MANDRINI.XLA		%SP45 (14)	Page 8



16 Label: Step:

Discesa mandrini orizzontali

Ra00.7	X_modo_sim	X_end	Man_orx2
]	[	]/[	( )
%Ra00.7	%V503.1	%V503.0	%Q4601.0
Test_mo3			
]	[		
%V83.7			
Pez_sblo	Man_orx2		
]	[		
%Vf.6	%Q4601.0		
Ra07.1	X_modo_sim	X_end	Man_orx4
]	[	]/[	( )
%Ra07.1	%V503.1	%V503.0	%Q4701.5
Test_mo5			
]	[		
%V84.1			
Pez_sblo	Man_orx4		
]	[		
%Vf.6	%Q4701.5		

Abilitazione mandrino orizzontal

Abilitazione mandrino orizzontal

17 Label: Step:

Discesa mandrini orizzontali

Ra07.2	X_modo_sim	X_end	Man_ory2
]	[	]/[	( )
%Ra07.2	%V503.1	%V503.0	%Q4701.6
Test_mo6			
]	[		
%V84.2			
Pez_sblo	Man_ory2		
]	[		
%Vf.6	%Q4701.6		
Ra07.0	X_modo_sim	X_end	Man_orx3
]	[	]/[	( )
%Ra07.0	%V503.1	%V503.0	%Q4701.4
Test_mo4			
]	[		
%V84.0			
Pez_sblo	Man_orx3		
]	[		
%Vf.6	%Q4701.4		

Abilitazione mandrino orizzontal

Abilitazione mandrino orizzontal

Author:		NUM TOOLS	
Company:			
Project: 1040_78.mch	TITRE		Date 28-02-2018
Module: MANDRINI.XLA		%SP45 (16)	Page 9

18 Label: Step:

Discesa mandrini verticali supplementari

Ra05.3	X_mod0_sim	X_end	Man_s_1	Abilitazione mandrino supplement
-] [-	-]/[-	-] [-	( )	
%Ra05.3	%V503.1	%V503.0	%Q4800.0	
Test_ms1				
-] [-				
%V7a.0				
Ra05.4	X_mod0_sim	X_end	Man_s_2	Abilitazione mandrino supplement
-] [-	-]/[-	-] [-	( )	
%Ra05.4	%V503.1	%V503.0	%Q4800.1	
Test_ms2				
-] [-				
%V7a.1				
Ra05.5	X_mod0_sim	X_end	Man_s_3	Abilitazione mandrino supplement
-] [-	-]/[-	-] [-	( )	
%Ra05.5	%V503.1	%V503.0	%Q4800.2	
Test_ms3				
-] [-				
%V7a.2				

19 Label: Step:

Discesa mandrini verticali supplementari

Ra05.6	X_mod0_sim	X_end	Man_s_4	Abilitazione mandrino supplement
-] [-	-]/[-	-] [-	( )	
%Ra05.6	%V503.1	%V503.0	%Q4800.3	
Test_ms4				
-] [-				
%V7a.3				
Ra05.7	X_mod0_sim	X_end	Man_s_5	Abilitazione mandrino supplement
-] [-	-]/[-	-] [-	( )	
%Ra05.7	%V503.1	%V503.0	%Q4800.4	
Test_ms5				
-] [-				
%V7a.4				
Ra04.0	X_mod0_sim	X_end	Man_s_6	Abilitazione mandrino supplement
-] [-	-]/[-	-] [-	( )	
%Ra04.0	%V503.1	%V503.0	%Q4800.5	
Test_ms6				
-] [-				
%V7a.5				

Author:		NUM TOOLS	
Company:			
Project: 1040_78.mch	TITRE	Date	28-02-2018
Module: MANDRINI.XLA		%SP45 (18)	Page 10

20 Label: Step:

Discesa mandrini verticali supplementari

Ra04.1	X_mod0_sim	X_end	Man_s_7	Abilitazione mandrino supplement
]	[	]/[	( )	
%Ra04.1	%V503.1	%V503.0	%Q4800.6	
Test_ms7				
]	[			
%V7a.6				
Ra04.2	X_mod0_sim	X_end	Man_s_8	Abilitazione mandrino supplement
]	[	]/[	( )	
%Ra04.2	%V503.1	%V503.0	%Q4800.7	
Test_ms8				
]	[			
%V7a.7				
Ra04.3	X_mod0_sim	X_end	Man_s_9	Abilitazione mandrino supplement
]	[	]/[	( )	
%Ra04.3	%V503.1	%V503.0	%Q4801.0	
Test_ms9				
]	[			
%V7b.0				

21 Label: Step:

Discesa mandrini verticali supplementari

Ra04.4	X_mod0_sim	X_end	Man_s_10	Abilitazione mandrino supplement
]	[	]/[	( )	
%Ra04.4	%V503.1	%V503.0	%Q4801.1	
Test_ms10				
]	[			
%V7b.1				