

**SRVO-062 排除  
+  
零點復歸執行**

# 編撰紀錄

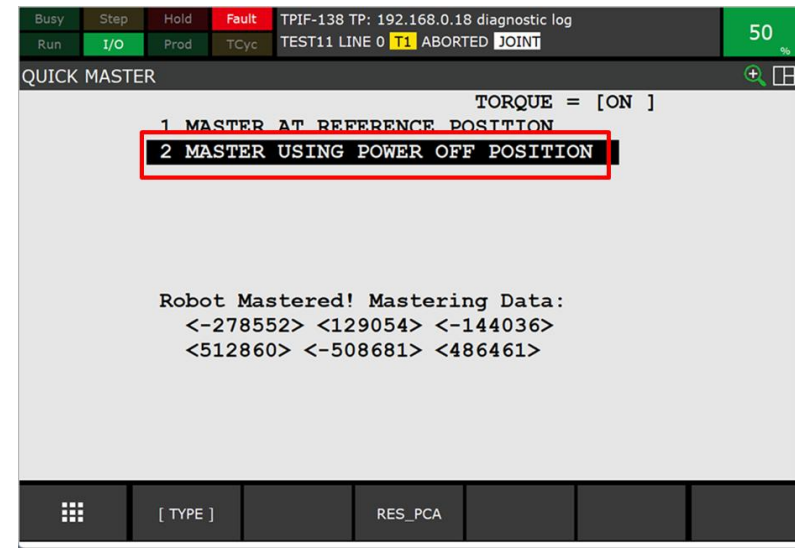
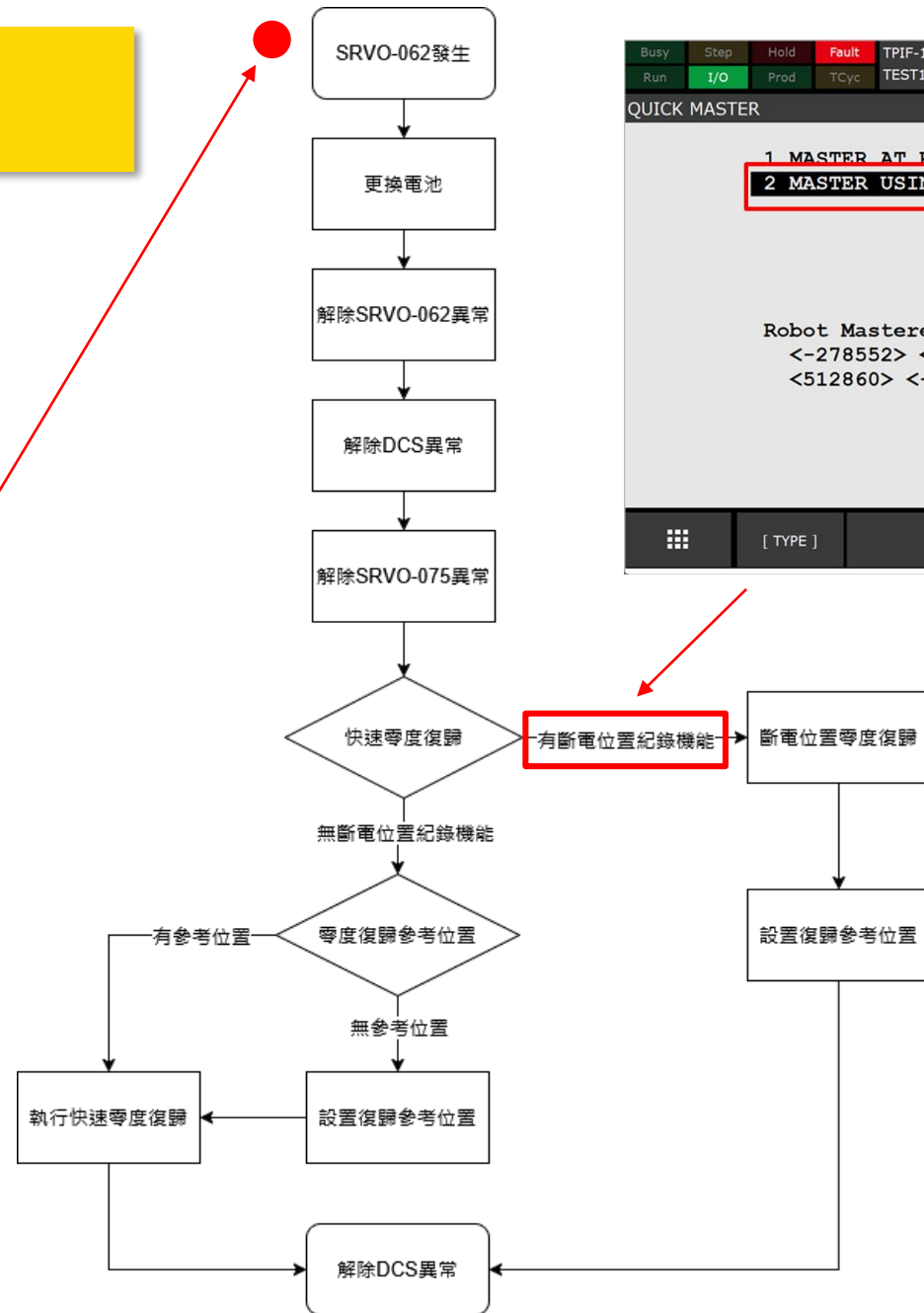
版次	編撰日期	編撰者	更新內容
V 1.0	2026/04/17	謝宗恩	

# 注意事項

- 請優先參考**FANUC**官網「售後服務」->「常見問題」->「ROBOT」內的**SRVO-062**異常排除方法操作。
- 於快速零度復歸操作階段，若出現參考斷電前編碼器數值的選項，請優先選擇該項目操作。
- 建議於新機階段，即完成「快速零度復歸參考設置」項目操作。
- 此說明書過程略有簡化，因此可參考**FANUC**官網，**SRVO-062**異常排除方法同時操作。

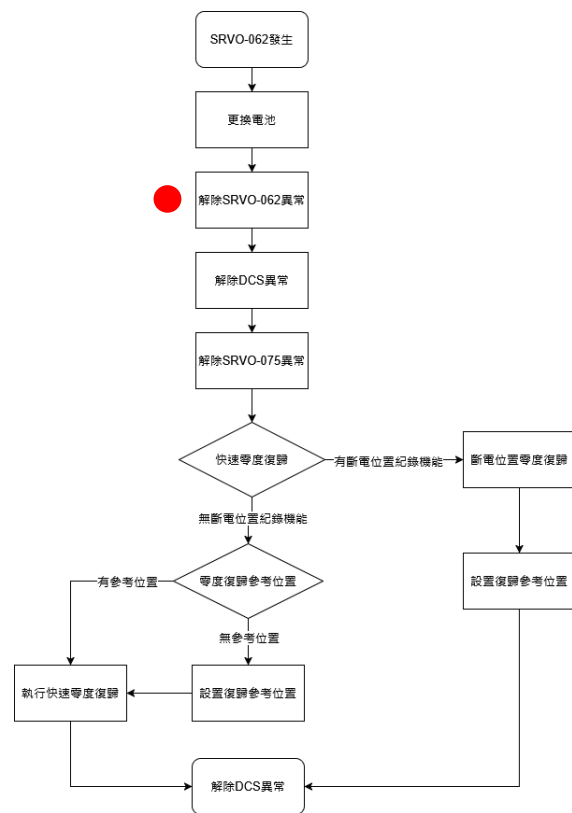
# 操作流程圖

後續將以紅點配合流程圖  
做為操作引導。



# SRVO-062解除

當發生SRVO-062，請先進行電池更換。



Busy	Step	Hold	Fault	TPIF-138 TP: 192.168.0.18 diagnostic log	10
Run	I/O	Prod	TCyc	TEST20260303_1 LINE 11 T1 PAUSED JOINT	%

Alarm : Active

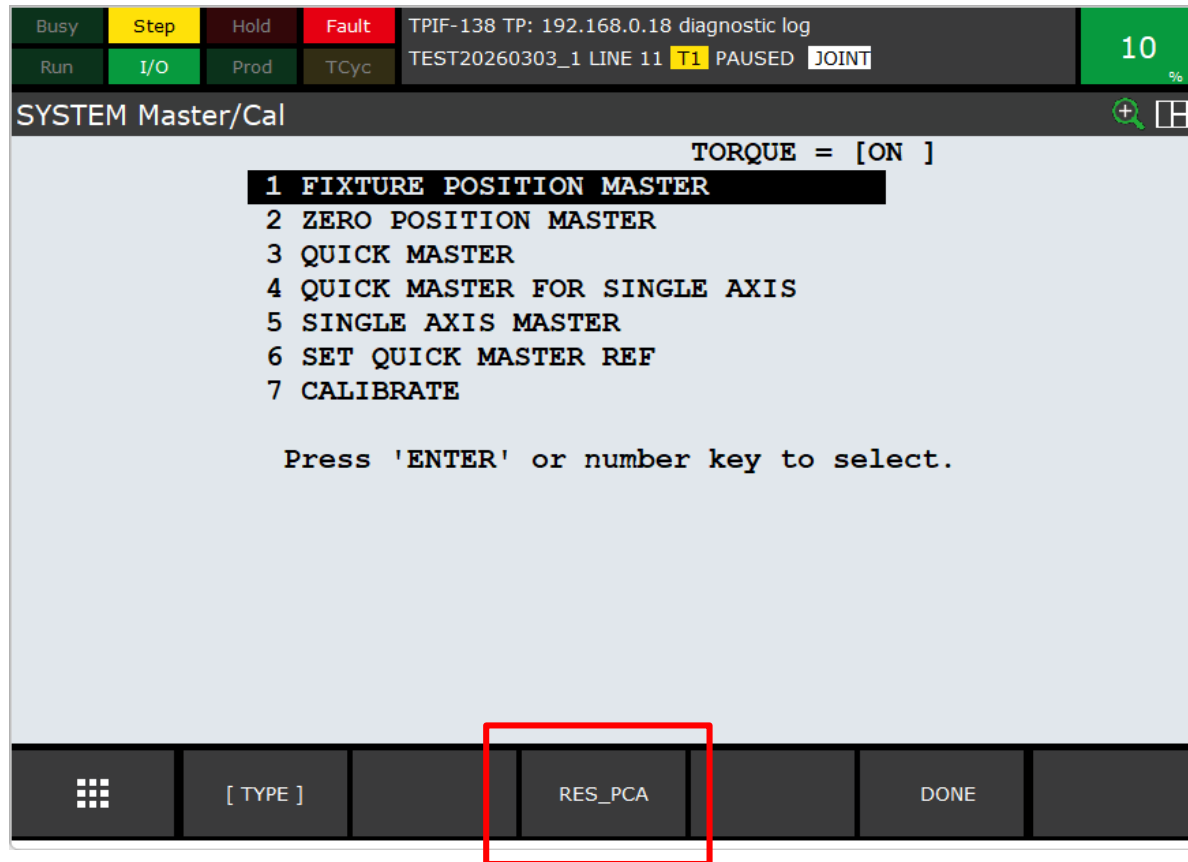
1/8

- 1 SYST-212 Need to apply to DCS param
- 2 SRVO-003 Deadman switch released
- 3 SRVO-062 BZAL alarm (Group:1 Axis:6)
- 4 SRVO-062 BZAL alarm (Group:1 Axis:5)
- 5 SRVO-062 BZAL alarm (Group:1 Axis:4)
- 6 SRVO-062 BZAL alarm (Group:1 Axis:3)
- 7 SRVO-062 BZAL alarm (Group:1 Axis:2)
- 8 SRVO-062 BZAL alarm (Group:1 Axis:1)

[ TYPE ] [ VIEW ] HIST RES\_1CH

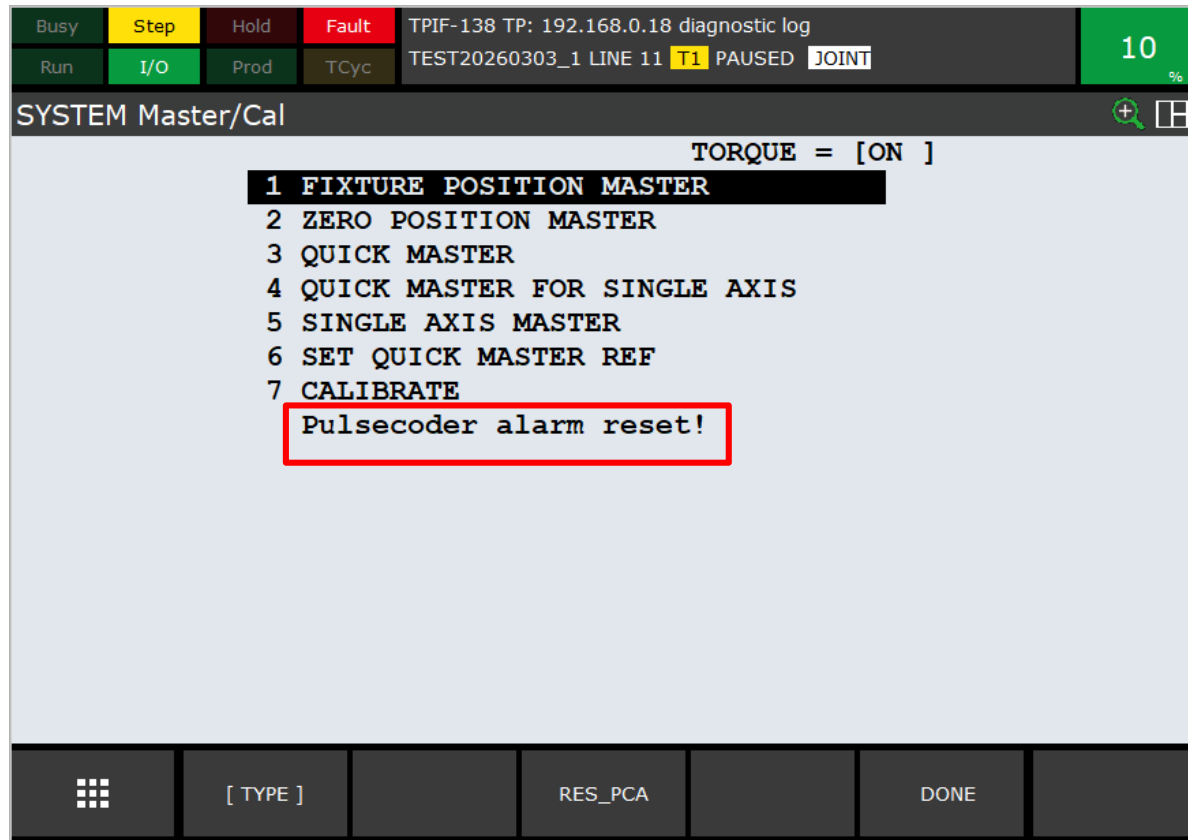
# SRVO-062解除

進入零度設置介面，進行異常解除。



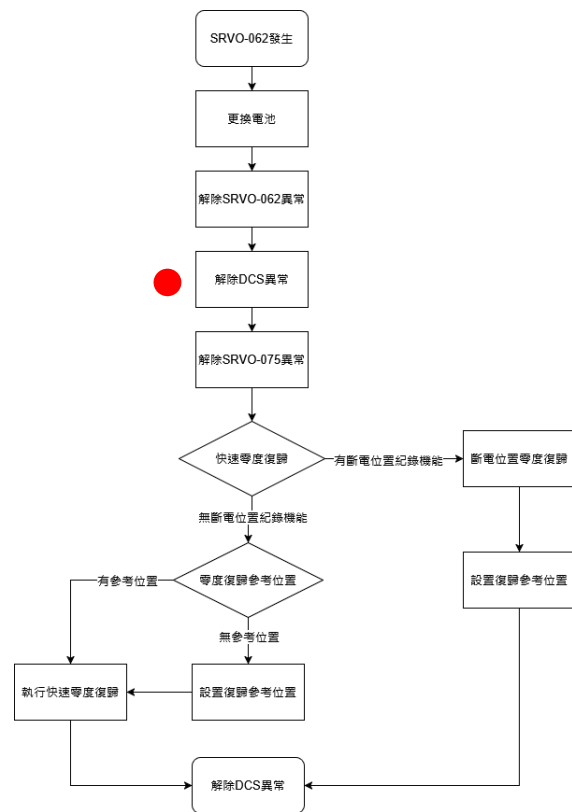
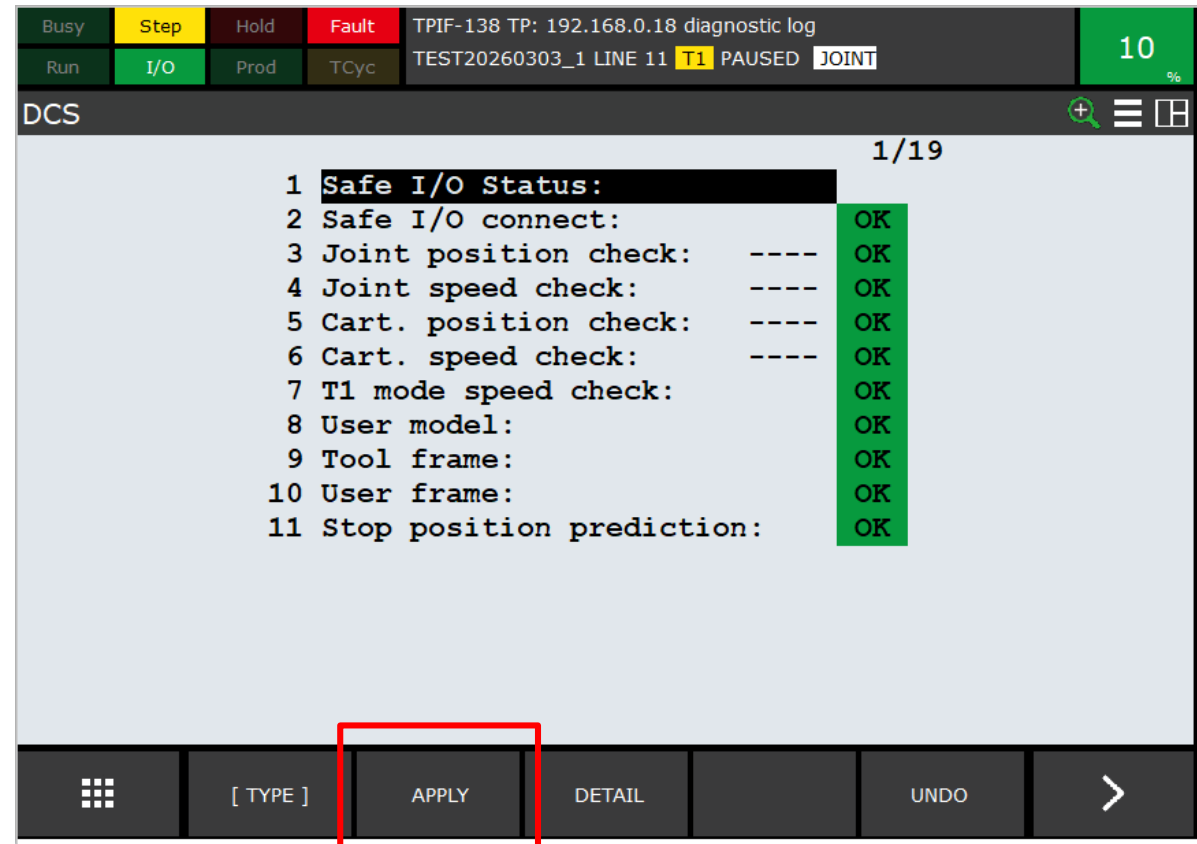
# SRVO-062解除

異常解除後，進行後續DCS應用步驟。



# SRVO-062解除

進入DCS介面，進行DCS應用步驟。

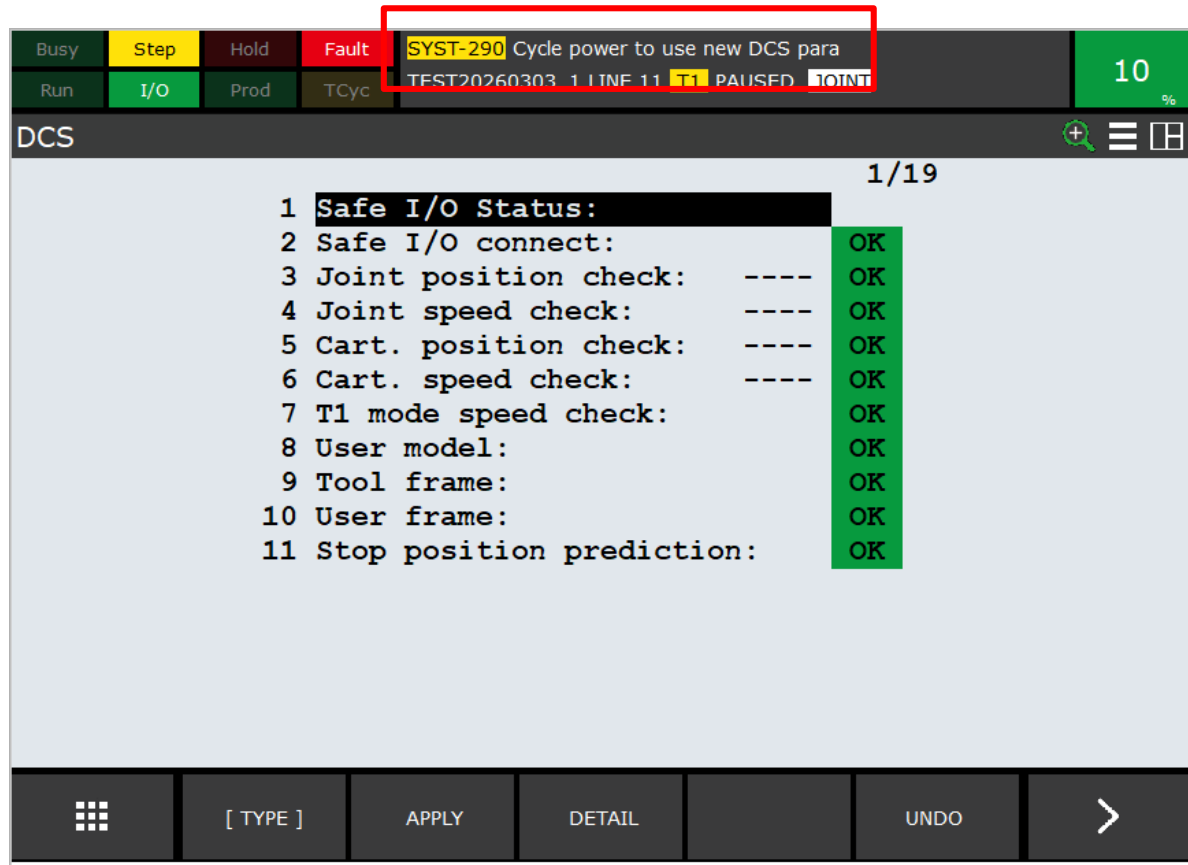
The screenshot shows the DCS diagnostic log interface. The top status bar includes 'Busy', 'Step', 'Hold', 'Fault', 'Run', 'I/O', 'Prod', 'TCyc', and 'TPIF-138 TP: 192.168.0.18 diagnostic log'. The main display area shows a list of diagnostic items:

Item	Status
1 Safe I/O Status:	
2 Safe I/O connect:	OK
3 Joint position check:	---- OK
4 Joint speed check:	---- OK
5 Cart. position check:	---- OK
6 Cart. speed check:	---- OK
7 T1 mode speed check:	OK
8 User model:	OK
9 Tool frame:	OK
10 User frame:	OK
11 Stop position prediction:	OK

The 'APPLY' button at the bottom is highlighted with a red box.

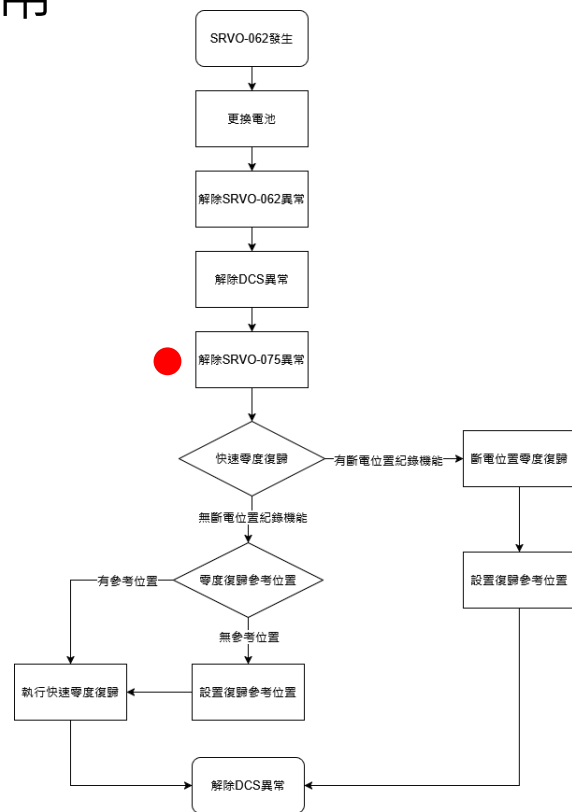
# SRVO-062解除

應用後，進行斷電重新啟動。



# SRVO-075解除

SRVO-062成功解除後，即顯示SRVO-075異常，將各軸旋轉約15度後，即可解除異常。



Busy	Step	Hold	Fault	TPIF-138 TP: 192.168.0.18 diagnostic log	10
Run	I/O	Prod	TCyc	TEST20260303_1 LINE 11 T1 PAUSED JOINT	%

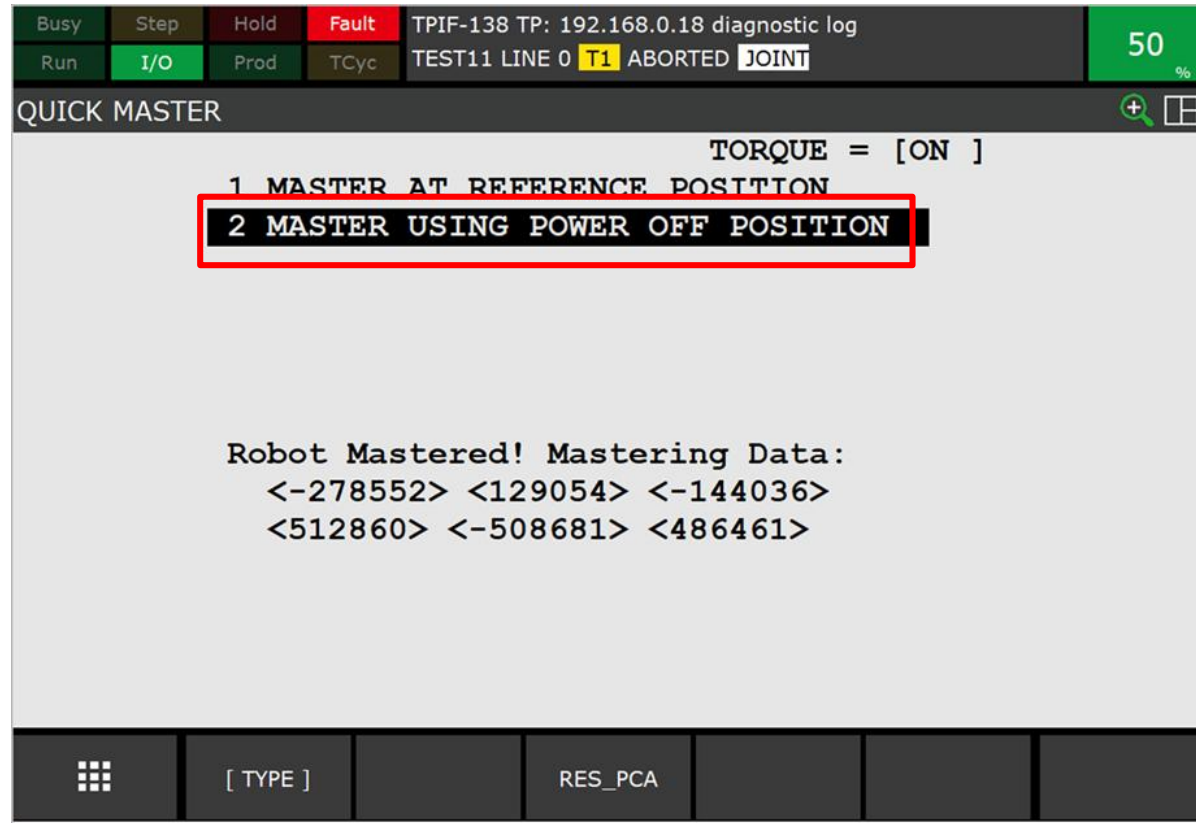
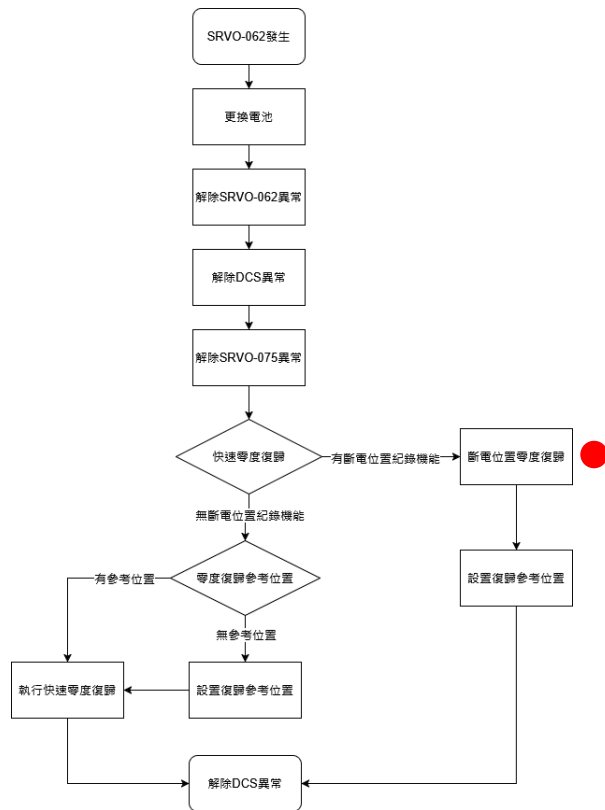
Motion Alarm 1/50

- 1 SRVO-003 Deadman switch released
- 2 SRVO-075 Pulse not established(G:1 A
- 3 SRVO-075 Pulse not established(G:1 A
- 4 SRVO-075 Pulse not established(G:1 A
- 5 SRVO-075 Pulse not established(G:1 A
- 6 SRVO-075 Pulse not established(G:1 A
- 7 SRVO-075 Pulse not established(G:1 A
- 8 SRVO-003 Deadman switch released
- 9 SRVO-075 Pulse not established(G:1 A
- 10 SRVO-075 Pulse not established(G:1 A
- 11 SRVO-075 Pulse not established(G:1 A

[ TYPE ] [ VIEW ] CLEAR DETAIL

# 快速零度復歸

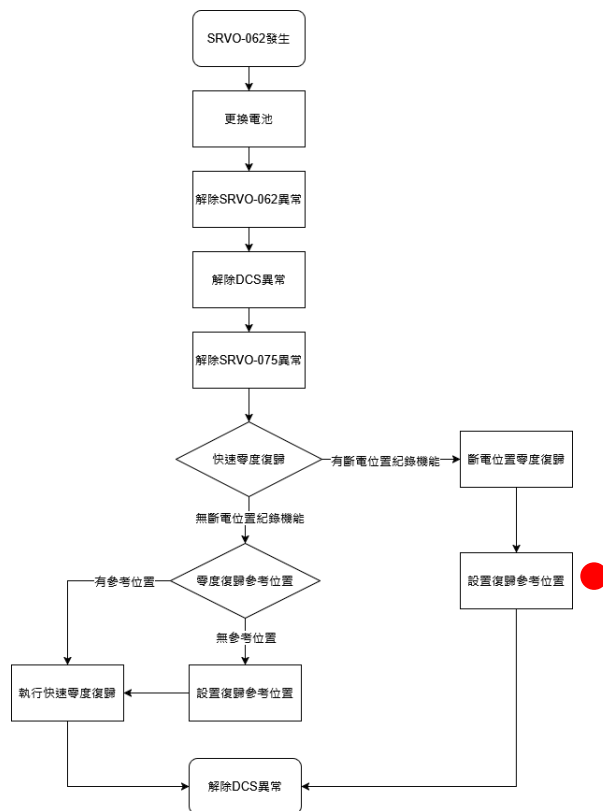
若該機台快速零度復歸，附有斷電位置紀錄機能，則選擇其零度復歸選項。



# 零度參考位置設置

備註：若該系統配置擁有其他參考位置要求，則依需求進行設置，並自行設置實體對位依據。

若先前無設置零度復歸參考位置，則可於完成快速零度復歸後，以程式點位執行將各軸移至零度，並進行零度復歸參考位置設置。



Busy	Step	Hold	Fault	TPIF-138 TP: 192.168.0.18 diagnostic log		65%
Run	I/O	Prod	TCyc	TEST11 LINE 7 T1 PAUSED JOINT		

SYSTEM Master/Cal

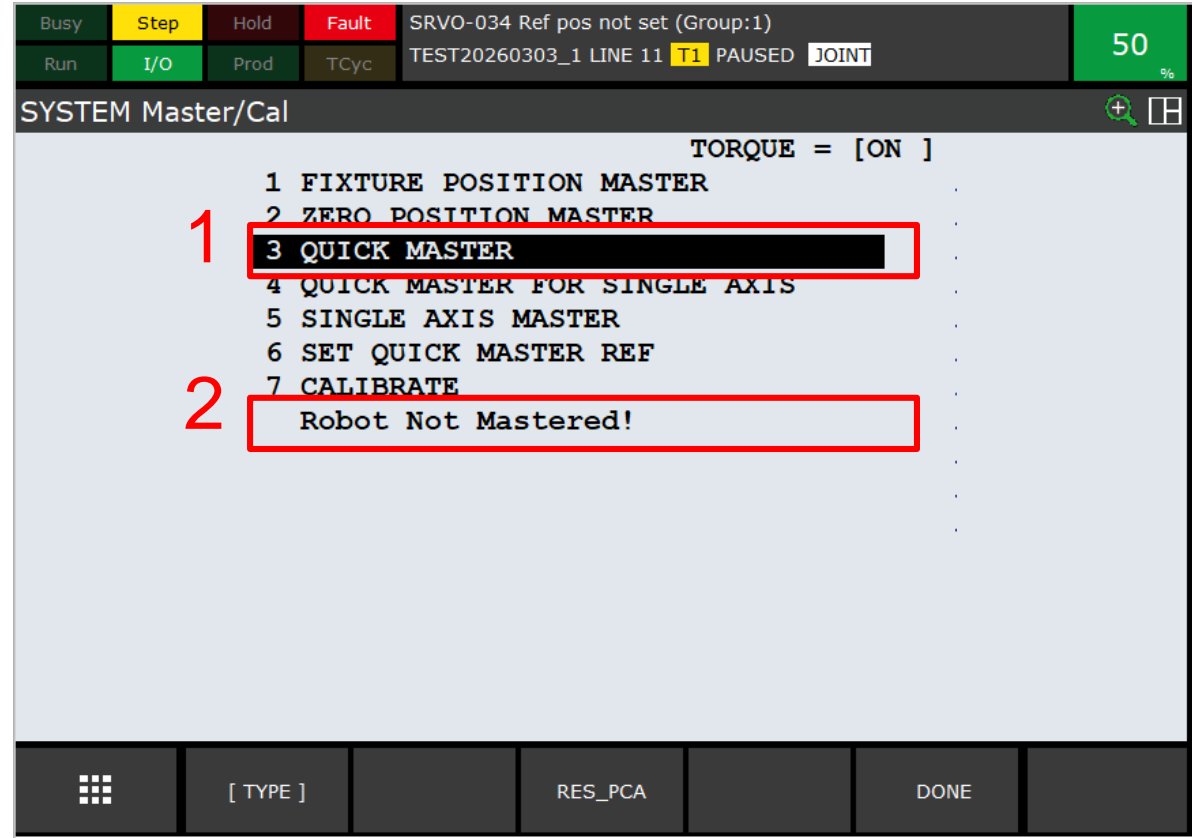
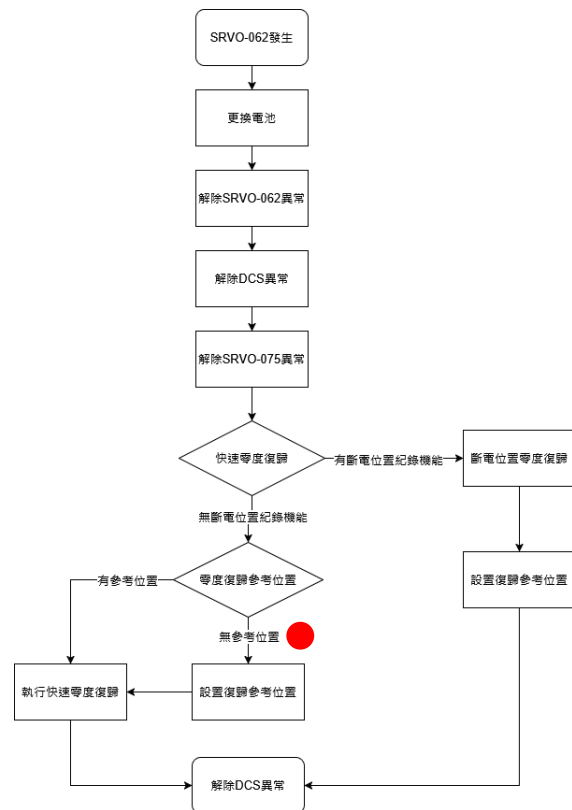
TORQUE = [ON ]

- 1 FIXTURE POSITION MASTER
- 2 ZERO POSITION MASTER
- 3 QUICK MASTER
- 4 QUICK MASTER FOR SINGLE AXIS
- 5 SINGLE AXIS MASTER
- 1 6 SET QUICK MASTER REF
- 7 CALIBRATE
- 2 Quick Master Reference Set!

[ TYPE ] RES\_PCA DONE

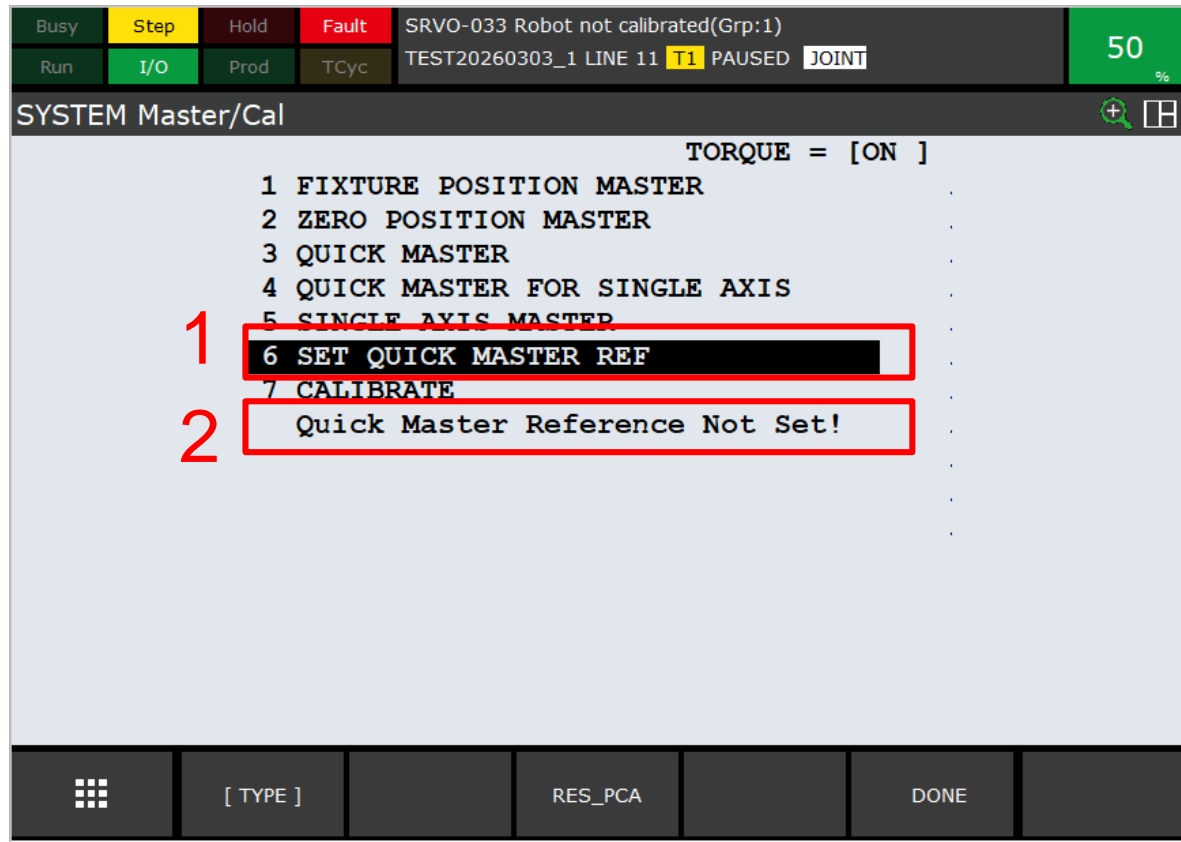
# 快速零度復歸-失敗

將各軸對準標籤後，進入零度設置介面，進行快速零度復歸。若發生下述狀態，請接續後續步驟。



# 參考位置設置-失敗

進行零度位置參考設置，若發生下述狀態，請接續後續步驟。



# 零度參考位置設置

準備購買該機台取得的「檢查成績書」。

確認機台號碼

零度參考位置參數

List of The **FANUC Robot CRX-5iA** Inspection Data Sheet 檢查成績書

Order No. 製番 **YH32** Mecha. Unit Serial No. 機構部機番 **R2 9EA**

Specification 機構部仕様 **A05B-1703-B201** Controller No. 制御部機番 **E2 481**

Date of Test 検査年月日 **2022/07/25** Edition of Software ソフトウェア版数 **7DF5/31**

This Inspection Data Sheet describes the performance of the product, with corresponding serial number, inspected upon the in-house inspection tolerance at the time of manufacture.  
本検査成績書は、当社の検査許容値を基に検査した機番に該当する製品の出荷時における状態を示します。

顧客名 Customer TAIWAN FANUC CORPORATION

承認 Approved by **Y. SASAKI**  
担当者 Checked by **F. HORIUCHI**

項	Check Items 検査項目	Check 確認
1	Appearance Check 外観／梱包検査	OK
2	Durability Running Check 連続運転検査	OK
3	Function Check 機能検査	OK
4	Insulation Resistance Check(option) 絶縁検査(オプション)	OK
5	Option Unit Check オプションユニット検査	N/A

マスタリングデータ Mastering Data (システム変数 SYSTEM VARIABLE)

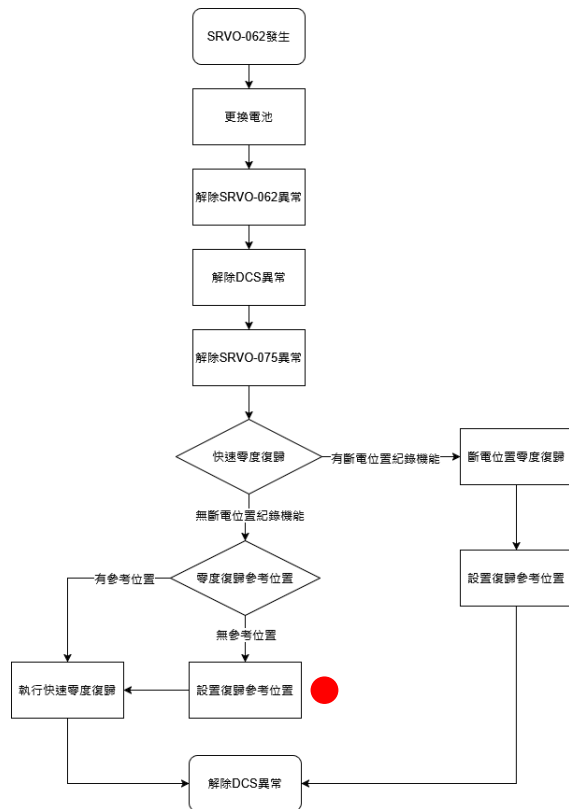
	\$DMR_GRP[ 1 ]	\$DMR_GRP[ 2 ]	\$DMR_M3_GRP[ 1 ]
\$MASTER_COUN[ 1 ]	-1407967	0	N/A
\$MASTER_COUN[ 2 ]	51676581	0	N/A
\$MASTER_COUN[ 3 ]	368979	0	N/A
\$MASTER_COUN[ 4 ]	2150977	0	N/A
\$MASTER_COUN[ 5 ]	663134	0	N/A
\$MASTER_COUN[ 6 ]	-232942	0	N/A
\$MASTER_COUN[ 7 ]	0	0	N/A
\$MASTER_COUN[ 8 ]	0	0	N/A
\$MASTER_COUN[ 9 ]	0	0	N/A
重力補正マスタリング Mastering with Gravity Compensation	N/A	N/A	

トルクマージンデータ(オプション) Torque Margin Data(option) (システム変数 SYSTEM VARIABLE)

\$PLCL_GRP[1]			\$PLCL_GRP[2]				
TRQ_MGN[3]	1	TQ_MGN3A[3]	1	TRQ_MGN[3]	1	TQ_MGN3A[3]	1
TRQ_MGN[4]	1	TQ_MGN3A[4]	1	TRQ_MGN[4]	1	TQ_MGN3A[4]	1
TRQ_MGN[5]	1	TQ_MGN3A[5]	1	TRQ_MGN[5]	1	TQ_MGN3A[5]	1
TRQ_MGN[6]	1	TQ_MGN3A[6]	1	TRQ_MGN[6]	1	TQ_MGN3A[6]	1

# 零度參考位置設置

進入「REF\_COUNT」變數頁面。




The screenshot shows the 'SYSTEM Variables' page. The status bar at the top indicates 'SRVO-033 Robot not calibrated(Grp:1)' and 'TEST20260303\_1 LINE 11 T1 PAUSED JOINT' with a 50% battery level. The variable list is as follows:

Variable	Value
\$DMR_GRP[1]	7/31
1 \$MASTER_DONE	FALSE
2 \$OT_MINUS	[9] of BOOLEAN
3 \$OT_PLUS	[9] of BOOLEAN
4 \$MASTER_COUN	[9] of INTEGER
5 \$REF_DONE	FALSE
6 \$REF_POS	[9] of REAL
7 \$REF_COUNT	[9] of INTEGER
8 \$BCKLSH_SIGN	[9] of BOOLEAN
9 \$EACHMST_DON	[9] of INTEGER
10 \$SPC_COUNT	[9] of INTEGER
11 \$SPC_MOVE	[9] of BOOLEAN

Red boxes and numbers 1 and 2 highlight the '\$DMR\_GRP[1]' variable and the '\$REF\_COUNT' variable, respectively.

# 零度參考位置設置

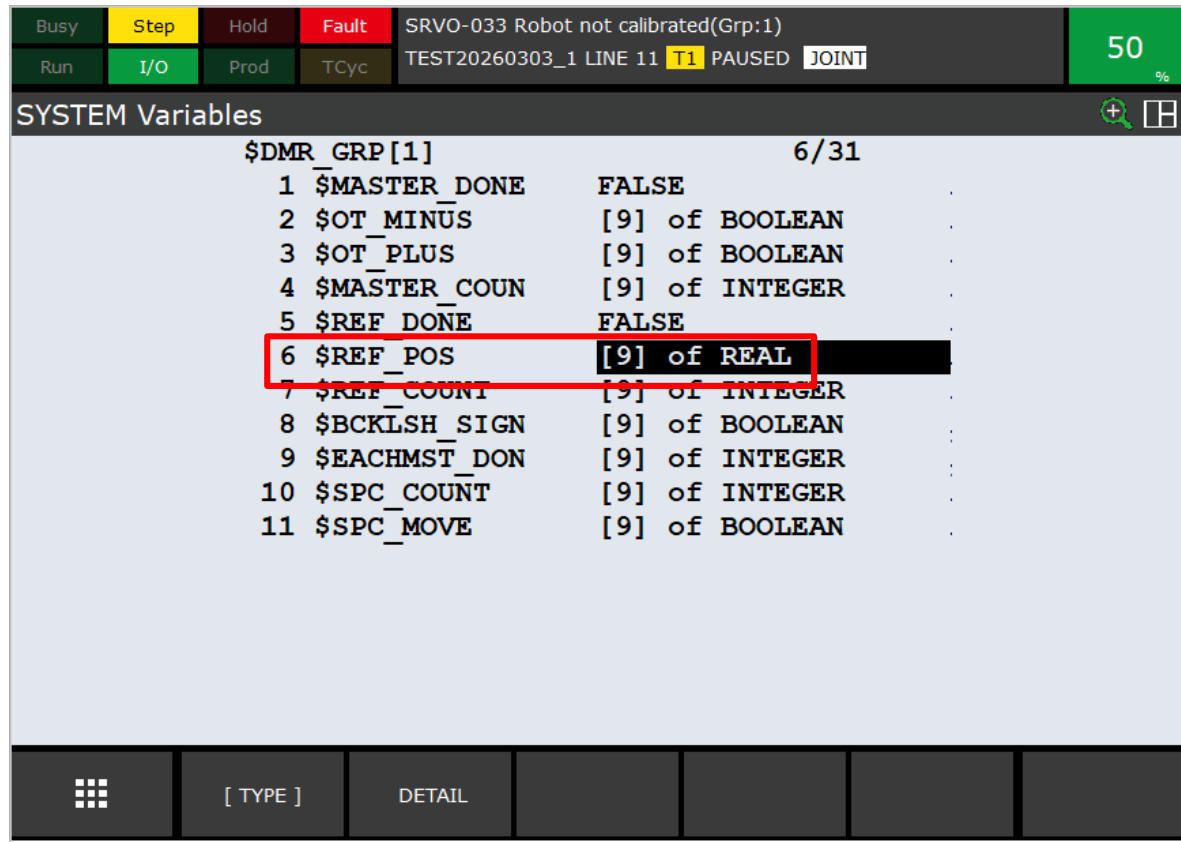
將檢查成績書標示之「MASTER\_COUN」，輸入對應項目。



	\$DMR_GRP[1].SREF_COUNT	1/9
1	[1] -195353	
2	[2] 212865	
3	[3] -383856	
4	[4] 290140	
5	[5] -330497	
6	[6] 446886	
7	[7] 0	
8	[8] 0	
9	[9] 0	

# 零度參考位置設置

輸入「REF\_COUNT」完畢後，返回進入「REF\_POS」介面。



Variable Name	Value
\$DMR_GRP[1]	6/31
1 \$MASTER_DONE	FALSE
2 \$OT_MINUS	[9] of BOOLEAN
3 \$OT_PLUS	[9] of BOOLEAN
4 \$MASTER_COUN	[9] of INTEGER
5 \$REF_DONE	FALSE
6 \$REF_POS	[9] of REAL
7 \$REF_COUNT	[9] of INTEGER
8 \$BCKLSH_SIGN	[9] of BOOLEAN
9 \$EACHMST_DON	[9] of INTEGER
10 \$SPC_COUNT	[9] of INTEGER
11 \$SPC_MOVE	[9] of BOOLEAN

# 零度參考位置設置

將1至6軸數值設定為0。

Busy	Step	Hold	Fault	SRVO-033 Robot not calibrated(Grp:1)	50%
Run	I/O	Prod	TCyc	TEST20260303_1 LINE 11 T1 PAUSED JOINT	
SYSTEM Variables					
\$DMR_GRP[1].\$REF_POS				1/9	
1	[1]		0.000		
2	[2]		0.000		
3	[3]		0.000		
4	[4]		0.000		
5	[5]		0.000		
6	[6]		0.000		
7	[7]		0.000		
8	[8]		0.000		
9	[9]		0.000		

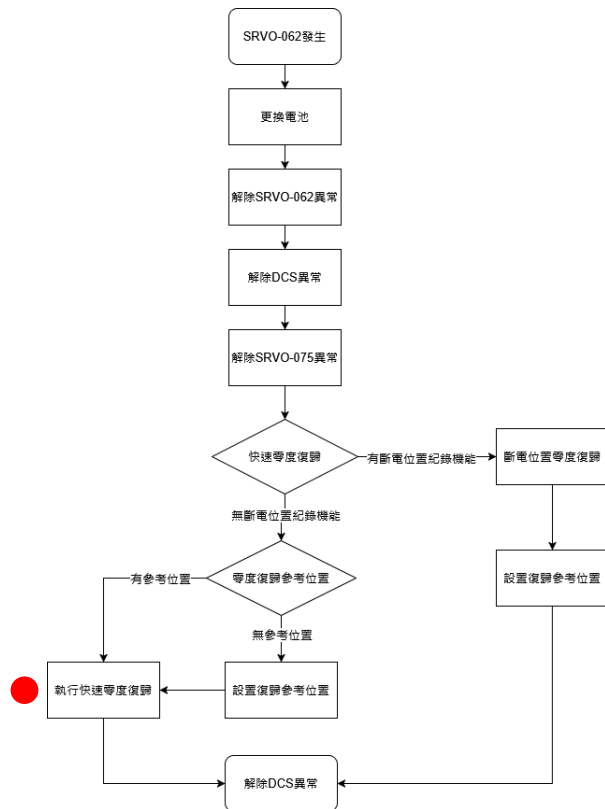
# 零度參考位置設置

將「REF\_DONE」改為「TRUE」。

Busy	Step	Hold	Fault	SRVO-033 Robot not calibrated(Grp:1)	50%
Run	I/O	Prod	TCyc	TEST20260303_1 LINE 11 T1 PAUSED JOINT	
SYSTEM Variables					
\$DMR_GRP[1] 5/31					
1	\$MASTER_DONE	FALSE			
2	\$OT_MINUS	[9] of BOOLEAN			
3	\$OT_PLUS	[9] of BOOLEAN			
4	\$MASTER_COUN	[9] of INTEGER			
5	\$REF_DONE	TRUE			
6	\$REF_POS	[9] of REAL			
7	\$REF_COUNT	[9] of INTEGER			
8	\$BCKLSH_SIGN	[9] of BOOLEAN			
9	\$EACHMST_DON	[9] of INTEGER			
10	\$SPC_COUNT	[9] of INTEGER			
11	\$SPC_MOVE	[9] of BOOLEAN			

# 零度復歸

返回零度復歸介面，進行快速零度復歸。



Busy	Step	Hold	Fault	SYST-212 Need to apply to DCS param	50%
Run	I/O	Prod	TCyc	TEST20260303_1 LINE 11 T1 PAUSED JOINT	

SYSTEM Master/Cal

TORQUE = [ON ]

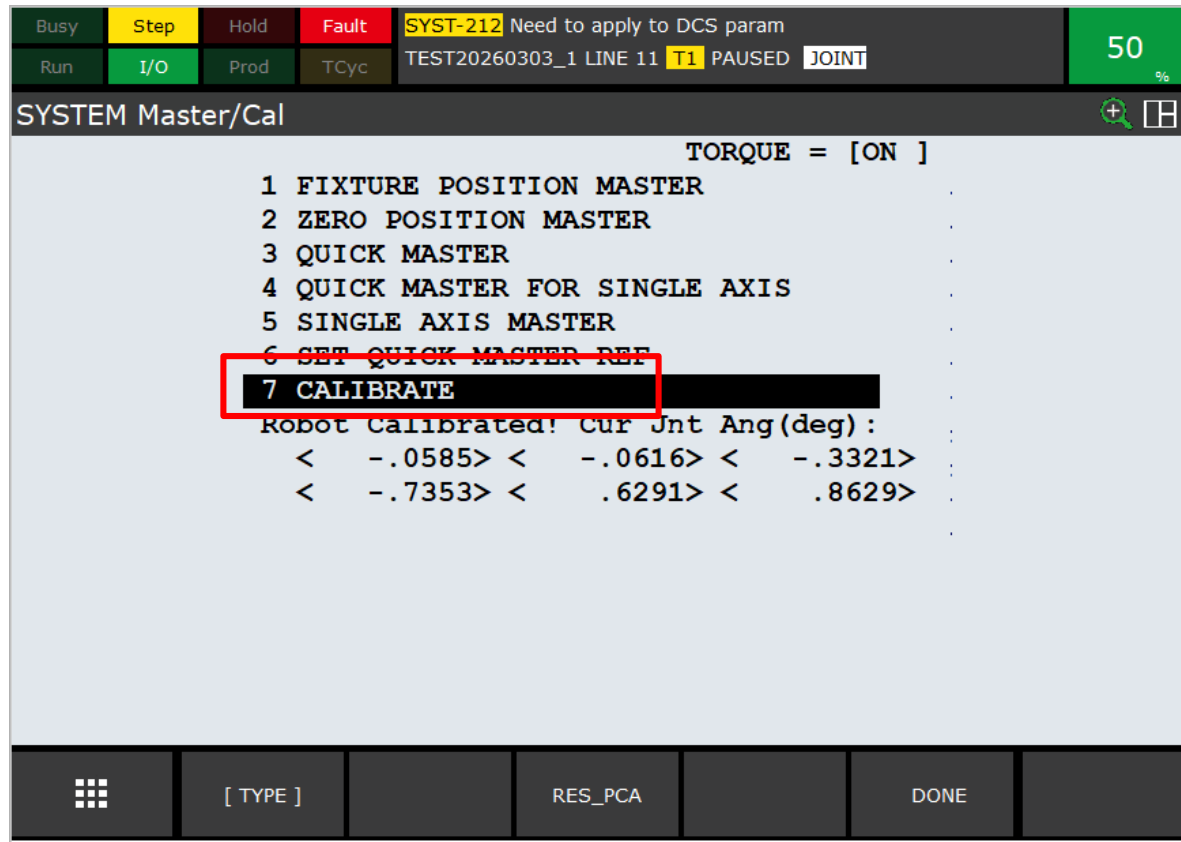
- 1 FIXTURE POSITION MASTER
- 2 ZERO POSITION MASTER
- 3 QUICK MASTER**
- 4 QUICK MASTER FOR SINGLE AXIS
- 5 SINGLE AXIS MASTER
- 6 SET QUICK MASTER REF
- 7 CALIBRATE

Robot Mastered! Mastering Data:  
 <-195353> <212865> <-383856>  
 <290140> <-330497> <446886>

[ TYPE ] RES\_PCA DONE

# 零度復歸

進行各軸角度計算，各軸小於1度即可。



The screenshot shows the FANUC SYSTEM Master/Cal interface. At the top, there are status indicators: Busy (Step), Hold (Fault), Run (I/O), and Prod (TCyc). The main display area shows a list of calibration options, with '7 CALIBRATE' highlighted in a red box. Below the list, the text 'Robot Calibrated! Cur Jnt Ang(deg):' is followed by two rows of joint angles.

```
Busy Step Hold Fault SYST-212 Need to apply to DCS param 50
Run I/O Prod TCyc TEST20260303_1 LINE 11 T1 PAUSED JOINT %
SYSTEM Master/Cal TORQUE = [ON ]
1 FIXTURE POSITION MASTER
2 ZERO POSITION MASTER
3 QUICK MASTER
4 QUICK MASTER FOR SINGLE AXIS
5 SINGLE AXIS MASTER
6 SET QUICK MASTER REF
7 CALIBRATE
Robot Calibrated! Cur Jnt Ang(deg):
< -.0585> < -.0616> < -.3321>
< -.7353> < .6291> < .8629>
```

# DCS參數應用

最終進行DCS應用後，重新開機，即完成零度復歸。

