

frmPrincipal - 1

Option Explicit

```
Private objModbusTCP As clsModbusTCP
Private colParametres As Collection
Private intSegons As Integer
Private intPeriodePLC As Integer
Private bolComsPLC As Boolean
Private strVariablesAlarmes As String
Private colAlarmes As Collection
```

```
Private dblComanda1 As Double
Private dblComanda2 As Double
Private dblComanda3 As Double
Private dblComanda4 As Double
Private dblComandaAnterior1 As Double
Private dblComandaAnterior2 As Double
Private dblComandaAnterior3 As Double
Private dblComandaAnterior4 As Double
```

```
'Numero de reintents en cas de fallada de comunicacions
Private Const CTE_REINTENTS = 1
```

```
'Comandes relacionades amb els botons de les diferents pantalles
Private Const CTE_PANELL_CARREGA = "carregar"
Private Const CTE_PANELL_PRODUIR = "produir"
Private Const CTE_PANELL_EXPEDIR = "expedir"
Private Const CTE_PANELL_SIMULADOR = "simulador"
Private Const CTE_CMD_INCR_VAR_M11 = "incr_var_M11"
Private Const CTE_CMD_DECR_VAR_M11 = "decr_var_M11"
Private Const CTE_CMD_INCR_VAR_M14 = "incr_var_M14"
Private Const CTE_CMD_DECR_VAR_M14 = "decr_var_M14"
```

```
'Variables del PLC que controlen els variadors (en percentatges)
Private Const VARIABLE_VAR_M11 = "MX100.400"
Private Const VARIABLE_VAR_M14 = "MX100.402"
```

```
'Variables del PLC per interactuar amb els panells
Private Const CONFIG_PROD_CARREGAR = "MX100.256"
Private Const CONFIG_QUANT_CARREGAR = "MX100.258"
Private Const CONFIG_CARREGAR_ONOFF = "MX100.260"
Private Const CONFIG_PROD_FABRICAR = "MX100.276"
Private Const CONFIG_QUANT_FABRICAR = "MX100.278"
Private Const CONFIG_FABRICAR_ONOFF = "MX100.280"
Private Const CONFIG_PROD_EXPEDIR = "MX100.284"
Private Const CONFIG_QUANT_EXPEDIR = "MX100.286"
Private Const CONFIG_EXPEDIR_ONOFF = "MX100.288"
```

```
'Variables per enviar al PLC: MX100.500-MX100.506
Private Const PC_COMANDES_ADR = "40249"
Private Const PC_COMANDES_NUM = 4
```

```
Private Sub cmdRecarregar_Click()
Dim i As Integer
Dim intTab As Integer
```

```
    intTab = Me.tabPantalles.SelectedItem.Index - 1
    For i = 1 To Me.ctlElementP00.Count - 1
        Unload Me.ctlElementP00(i)
    Next i
    For i = 1 To Me.ctlElementP01.Count - 1
        Unload Me.ctlElementP01(i)
    Next i
    For i = 1 To Me.ctlElementP02.Count - 1
        Unload Me.ctlElementP02(i)
    Next i
    For i = 1 To Me.ctlElementP03.Count - 1
        Unload Me.ctlElementP03(i)
    Next i
    For i = 1 To Me.ctlElementP04.Count - 1
        Unload Me.ctlElementP04(i)
    Next i
```

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```
For i = 2 To Me.tabPantalles.Tabs.Count
    Me.tabPantalles.Tabs.Remove 2
Next i
CarregarPantalles
CanviarPantallaActiva intTab
```

End Sub

```
Private Sub ctlElementP00_CanviarEstat(Index As Integer, strVariable As String, lngNouValor As Long)
    'Canvio el valor de la variable
    CanviarValorVariable strVariable, lngNouValor
End Sub
```

```
Private Sub ctlElementP00_ExecutarComanda(Index As Integer, strComanda As String)
    'Executo la comanda
    ExecutarComanda strComanda
End Sub
```

```
Private Sub ctlElementP00_Seleccionar(Index As Integer, strVariable As String)
    'Selecciono la variable a la llista
    SeleccionarVariableLlista strVariable
End Sub
```

```
Private Sub ctlElementP01_CanviarEstat(Index As Integer, strVariable As String, lngNouValor As Long)
    'Canvio el valor de la variable
    CanviarValorVariable strVariable, lngNouValor
End Sub
```

```
Private Sub ctlElementP01_ExecutarComanda(Index As Integer, strPanell As String)
    'Obro el panell
    ExecutarComanda strPanell
End Sub
```

```
Private Sub ctlElementP01_Seleccionar(Index As Integer, strVariable As String)
    'Selecciono la variable a la llista
    SeleccionarVariableLlista strVariable
End Sub
```

```
Private Sub ctlElementP02_CanviarEstat(Index As Integer, strVariable As String, lngNouValor As Long)
    'Canvio el valor de la variable
    CanviarValorVariable strVariable, lngNouValor
End Sub
```

```
Private Sub ctlElementP02_ExecutarComanda(Index As Integer, strPanell As String)
    'Obro el panell
    ExecutarComanda strPanell
End Sub
```

```
Private Sub ctlElementP02_Seleccionar(Index As Integer, strVariable As String)
    'Selecciono la variable a la llista
    SeleccionarVariableLlista strVariable
End Sub
```

```
Private Sub ctlElementP03_CanviarEstat(Index As Integer, strVariable As String, lngNouValor As Long)
    'Canvio el valor de la variable
    CanviarValorVariable strVariable, lngNouValor
End Sub
```

```
Private Sub ctlElementP03_ExecutarComanda(Index As Integer, strPanell As String)
    'Obro el panell
    ExecutarComanda strPanell
End Sub
```

```
Private Sub ctlElementP03_Seleccionar(Index As Integer, strVariable As String)
    'Selecciono la variable a la llista
    SeleccionarVariableLlista strVariable
End Sub
```

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```
Private Sub ctlElementP04_CanviarEstat(Index As Integer, strVariable As String, lngNouValor As Long)
    'Canvio el valor de la variable
    CanviarValorVariable strVariable, lngNouValor
End Sub
```

```
Private Sub ctlElementP04_ExecutarComanda(Index As Integer, strPanell As String)
    'Obro el panell
    ExecutarComanda strPanell
End Sub
```

```
Private Sub ctlElementP04_Seleccionar(Index As Integer, strVariable As String)
    'Selecciono la variable a la llista
    SeleccionarVariableLlista strVariable
End Sub
```

```
Private Sub ctlElementP04_Editar(Index As Integer, strVariable As String)
    'Canvio el valor de la variable
    CanviarValorVariable strVariable, -1
End Sub
```

```
*****
*****
'INICIALITZACIO I PRESENTACIO PER PANTALLA
*****
*****
```

```
Private Sub Form_Load()
    'Inicialitzo l'aplicacio
    Inicialitza
End Sub
```

```
Private Sub Inicialitza()
    Dim strTmp As String
    Dim ix As Integer
    Dim strCaptionPrincipal As String
    Dim intID As Integer
    Dim strID As String
    Dim strParametre As String
    Dim objParametre As clsParametre
    Dim strProduccio As String
    Dim strPlcIP As String
    Dim lngPlcPort As Long
    Dim strElement As String
    Dim strMaquina As String
    Dim strNomPantalla As String
```

```
    On Error GoTo TractaError
```

```
    '-- Nom de la maquina
    strMaquina = INI_Get("Maquina", "", "GENERAL", strFitxerConfig)
    Me.lblMaquina.Caption = strMaquina
    '-- Caption del formulari principal
    strCaptionPrincipal = INI_Get("Titol", " - ", "GENERAL", strFitxerConfig)
    '-- Titol del formulari principal
    Me.Caption = strCaptionPrincipal
    '-- Versio
    Me.lblVersio.Caption = strCaptionPrincipal & " - v" & App.Major & "." & App.Minor
    'Combobox panell de dades: Carregar
    CarregarComboBox Me.cboDadesCarregar(0), "BLAT MORO,BLAT,ORDI,FARINA"
    'Combobox panell de dades: Produir
    CarregarComboBox Me.cboDadesProduir(0), "PRODUCTE 1,PRODUCTE 2,PRODUCTE 3"
    'Combobox panell de dades: Carregar
    CarregarComboBox Me.cboDadesExpedir(0), "PRODUCTE 1,PRODUCTE 2,PRODUCTE 3"
    'Reset del flag
    bolComsPLC = False
    'Llegeixo l'adreça IP del PLC
    strPlcIP = INI_Get("PlcIP", "", "PLC", strFitxerConfig)
    'Llegeixo el Port TCP del PLC (per defecte 502 port Modbus)
    lngPlcPort = INI_Get("PlcPort", 502, "PLC", strFitxerConfig)
```

```

'Creacio de l'objecte per establir les comunicacions Modbus TCP/IP amb el PLC
Set objModbusTCP = New clsModbusTCP
objModbusTCP.Host = strPlcIP
objModbusTCP.Port = lngPlcPort
'Mostro el missatge per pantalla
Me.MostrarMissatge String(75, "=")
Me.MostrarMissatge "PLC IP ... " & strPlcIP
Me.MostrarMissatge "PLC PORT ... " & lngPlcPort
'Inicialitzo el comptador pel periode de lectura del PLC
intSegons = 0
'Llegeixo el periode de lectura de parametres del PLC a la configuracio
intPeriodePLC = INI_Get("PeriodeRefresc", 15, "PLC", strFitxerConfig)
'Mostro el missatge per pantalla
Me.MostrarMissatge "LECTURA PLC ... Cada " & intPeriodePLC & " segons"
'Creo la coleccio de parametres
Set colParametres = New Collection
'Bucle per llegir tots els parametres possibles definits a la configuracio (des de P00
1 fins a P999)
For intID = 1 To 999
    'Composo l'identificador sequencial
    strID = Format(intID, "000")
    'Llegeixo el parametre a la configuracio
    strParametre = INI_Get("P" & strID, "", "PLC", strFitxerConfig)
    'Si he llegit una cadena valida
    If strParametre <> "" Then
        'Creo un nou objecte parametre
        Set objParametre = New clsParametre
        'Si es valid el parametre
        If objParametre.Inicialitza(strParametre) Then
            'Afegeixo el parametre a la coleccio
            colParametres.Add objParametre, objParametre.Nom
        Else
            'Mostro el missatge per pantalla
            Me.MostrarMissatge "P" & strID & " ... ##ERROR##"
        End If
    End If
Next intID
'Mostro el missatge per pantalla
Me.MostrarMissatge "Nº DE PARÀMETRES ... " & colParametres.Count
'Tanco els missatges d'inicialitzacio
Me.MostrarMissatge String(75, "=")
'Carrego les alarmes
If Not CarregarAlarmes() Then
    'Mostro el missatge per pantalla
    Me.MostrarMissatge "ERROR: NO HA ESTAT POSSIBLE CARREGAR LES ALARMES"
End If
'Inicialitzo les pantalles
If CarregarPantalles() Then
    'Inicialitzo l'objecte clsModbusTCP, passant-li l'objecte socket i configuro el PLC
    If objModbusTCP.Inicialitzar(sckSocket) Then
        'Configuro el PLC
        If ConfigurarPLC() Then
            'Activo totes les opcions del simulador
            SimuladorSeleccionar 0
            'Reset de la llista
            Me.lstvMonitor.HideSelection = False
            Me.lstvMonitor.ListItems.Clear
            Me.lstvMonitor.ColumnHeaders(1).Width = 1000
            Me.lstvMonitor.ColumnHeaders(2).Width = 2000
            Me.lstvMonitor.ColumnHeaders(3).Width = 1000
            'Retorno true per indicar que ha finalitzat correctament
            bolComsPLC = True
            'Configuro el monitor
            RefrescarMonitor
        End If
    End If
Else
    'Mostro el missatge per pantalla
    Me.MostrarMissatge "ERROR: NO HA ESTAT POSSIBLE CARREGAR LES PANTALLES"
    'Carrego nomes la primera pantalla
    If CarregarPantalla(0, Me.ctrlElementP00, strNomPantalla) Then

```

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```
'Dono nom a la pestanya en el tabcontrol
Me.tabPantalles.Tabs(1).Caption = strNomPantalla
End If
End If

'Si hi ha hagut error al crear el
If Not bolComsPLC Then
    'Missatge d'error per pantalla
    Me.MostrarMissatge "ERROR: NO HA ESTAT POSSIBLE ESTABLIR COMUNICACIONS AMB EL PLC"
    Me.MostrarMissatge String(75, "=")
Else
    'Inicialitzo els controls
    Me.timTimer.Interval = 1000
    Me.timTimer.Enabled = True
End If

Exit Sub
TractaError:
    'Missatge d'error per pantalla
    MsgBox "ERROR DURANT LA INICIALITZACIÓ", vbCritical, App.EXENAME
    'Surto de l'aplicacio
    Sortir (1)
End Sub

Private Function CarregarPantalles() As Boolean
Dim strNomPantalla As String

    On Error GoTo TractaError
    'Inicialitzo la pantalla 0
    If CarregarPantalla(0, Me.ctlElementP00, strNomPantalla) Then
        'Dono nom a la pestanya en el tabcontrol
        Me.tabPantalles.Tabs(1).Caption = strNomPantalla
        'Inicialitzo la pantalla 1
        If CarregarPantalla(1, Me.ctlElementP01, strNomPantalla) Then
            'Creo una nova pestanya en el tabcontrol per controlar la pantalla
            Me.tabPantalles.Tabs.Add , , strNomPantalla
            'Inicialitzo la pantalla 2
            If CarregarPantalla(2, Me.ctlElementP02, strNomPantalla) Then
                'Creo una nova pestanya en el tabcontrol per controlar la pantalla
                Me.tabPantalles.Tabs.Add , , strNomPantalla
                'Inicialitzo la pantalla 3
                If CarregarPantalla(3, Me.ctlElementP03, strNomPantalla) Then
                    'Creo una nova pestanya en el tabcontrol per controlar la pantalla
                    Me.tabPantalles.Tabs.Add , , strNomPantalla
                    'Inicialitzo la pantalla 4
                    If CarregarPantalla(4, Me.ctlElementP04, strNomPantalla) Then
                        'Creo una nova pestanya en el tabcontrol per controlar la pantalla
                        Me.tabPantalles.Tabs.Add , , strNomPantalla
                        'Simulo clic sobre la pantalla principal
                        CanviarPantallaActiva 0
                        'Retorno true
                        CarregarPantalles = True
                    End If
                End If
            End If
        End If
    End If

Exit Function
TractaError:
    'Retorno false
    CarregarPantalles = False
End Function

Private Function CarregarPantalla(intNumPantalla As Integer, ctlElement As Object, strNom
Pantalla As String) As Boolean
Dim intID As Integer
Dim strID As String
Dim strElement As String
Dim strPantalla As String
Dim strImatge As String
```

```

On Error GoTo TractaError

'Llegeixo el nom de la pantalla
strPantalla = "PANTALLA" & Format(intNumPantalla, "00")
strNomPantalla = INI_Get("NomPantalla", strPantalla, strPantalla, strFitxerConfig)
'Imatge de fons de la pantalla
strImatge = INI_Get("Imatge", "", strPantalla, strFitxerConfig)
If strImatge <> "" Then
    'Carrego la imatge de fons de la pantalla
    Me.pctPantalla(intNumPantalla).Picture = LoadPicture(strImatge)
    'Faig visible la imatge de fons de la pantalla
    Me.pctPantalla(intNumPantalla).Visible = True
End If
'Bucle per llegir tots els elements possibles definits a la configuracio (des de E001
fins a E999)
For intID = 1 To 999
    'Composo l'identificador sequencial
    strID = Format(intID, "000")
    'Llegeixo l'element a la configuracio
    strElement = INI_Get("E" & strID, "", strPantalla, strFitxerConfig)
    'Si he llegit una cadena valida
    If strElement <> "" Then
        'Creo un nou control element
        Load ctlElement(intID)
        'Si no es valid l'element
        If Not ctlElement(intID).Inicialitza(strElement) Then
            'Mostro el missatge per pantalla
            Me.MostrarMissatge strPantalla & " E" & strID & " ... ##ERROR##"
        Else
            'Mostro element
            ctlElement(intID).Left = ctlElement(intID).PosX
            ctlElement(intID).Top = ctlElement(intID).PosY
            ctlElement(intID).Visible = True
        End If
    End If
Next intID
'Retorno true
CarregarPantalla = True

Exit Function
TractaError:
'Retorno false
CarregarPantalla = False
End Function

Private Sub RefrescarMonitor()
Dim ix As Integer
Dim itmX As ListItem
Dim tx As Integer
Dim bolIniciarLlista As Boolean
Dim intIx As Integer

On Error GoTo TractaError
'Miro si haig d'iniciar la llista
bolIniciarLlista = IIf(Me.lstvMonitor.ListItems.Count = 0, True, False)
'Bucle per tots els parametres configurats
For ix = 1 To colParametres.Count
    'Miro si es tracta d'una trama
    If colParametres(ix).EsUnaTrama Then
        'Bucle per totes les variables de la trama
        For tx = 1 To colParametres(ix).Variables.Count
            'Incremento l'index de l'element de la llista
            intIx = intIx + 1
            'Miro si haig d'iniciar la llista
            If bolIniciarLlista Then
                'Afegeixo el nom de la variable
                Set itmX = Me.lstvMonitor.ListItems.Add(, , colParametres(ix).Variables(tx)
).Adresa)
                'Afegeixo la descripcio de la variable
                itmX.SubItems(1) = CStr(colParametres(ix).Variables(tx).Nom)
            End If
        Next tx
    End If
Next ix

```

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```
Else
    'Capturo l'element de la llista
    Set itmX = Me.lstvMonitor.ListItems(intIx)
End If
'Afegeixo el valor de la variable
itmX.SubItems(2) = CStr(colParametres(ix).Variables(tx).Valor)
Next tx
'Miro si es tracta d'un conjunt de bits
ElseIf colParametres(ix).EsUnConjuntDeBits Then
    'Bucle per tots els bits
    For tx = 1 To colParametres(ix).Bits.Count
        'Miro si haig d'iniciar la llista
        If bolIniciarLlista Then
            'Afegeixo el nom de la variable
            Set itmX = Me.lstvMonitor.ListItems.Add(, , colParametres(ix).Bits(tx).Bit
        )

            'Afegeixo la descripcio de la variable
            itmX.SubItems(1) = CStr(colParametres(ix).Bits(tx).Nom)
        Else
            'Capturo l'element de la llista
            Set itmX = Me.lstvMonitor.ListItems(tx)
        End If
        'Afegeixo el valor de la variable
        itmX.SubItems(2) = CStr(colParametres(ix).Bits(tx).Valor)
    Next tx
'Si es tracta d'un word
Else
    'Miro si haig d'iniciar la llista
    If bolIniciarLlista Then
        'Afegeixo el nom de la variable
        Set itmX = Me.lstvMonitor.ListItems.Add(, , colParametres(ix).Adresa)
        'Afegeixo la descripcio de la variable
        itmX.SubItems(1) = CStr(colParametres(ix).Nom)
    Else
        'Capturo l'element de la llista
        Set itmX = Me.lstvMonitor.ListItems(tx)
    End If
    'Afegeixo el valor de la variable
    itmX.SubItems(2) = CStr(colParametres(ix).Valor)
End If
Next ix

Exit Sub
TractaError:
    'Mostro missatge per pantalla
    Me.MostrarMissatge "### ERROR AL REFRESCAR VARIABLES PER PANTALLA ###"
End Sub

Public Sub MostrarMissatge(strMissatge As String)
    Dim strTmp As String
    Dim intPos As Integer

    On Error Resume Next

    'Capturo el missatge actual
    strTmp = Me.txtErrors.Text & " " & Format(Now, "dd/mm/yyyy hh:mm:ss") & " - " & strMi
ssatge & vbCrLf
    'Si la longitud es excessiva
    If Len(strTmp) > 10000 Then
        'Retallo per sobre
        strTmp = Right(strTmp, 10000)
        intPos = InStr(1, strTmp, vbCrLf)
        strTmp = Mid(strTmp, intPos + 1)
    End If
    'Actualitzo el textbox
    Me.txtErrors.Text = strTmp
    Me.txtErrors.SelStart = Len(Me.txtErrors.Text)

End Sub

Private Sub Form_Resize()
```

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```
    RefrescarFinestres
End Sub
```

```
Private Sub RefrescarFinestres()
    On Error Resume Next
    Me.pctHeader.Width = Me.Width - Me.pctHeader.Left * 3
    Me.pctHeader.Top = 20
    Me.pctBotons.Top = 10
    Me.pctBotons.Left = Me.pctHeader.Width - Me.pctBotons.Width - 200
    Me.pctMonitor.Top = Me.pctHeader.Height + 20
    Me.pctMonitor.Width = Me.Width - Me.pctMonitor.Left * 3
    Me.pctMonitor.Height = Me.Height - Me.pctHeader.Top * 8 - Me.pctFooter.Height - 500 -
Me.pctHeader.Height
    Me.pctFooter.Width = Me.pctMonitor.Width
    Me.pctFooter.Top = Me.Height - Me.pctFooter.Height - Me.pctFooter.Left * 5
End Sub
```

```
Private Sub imgDadesCarregarTancar_Click()
    Me.pctDadesCarregar.Visible = False
End Sub
```

```
Private Sub imgDadesExpedirTancar_Click()
    Me.pctDadesExpedir.Visible = False
End Sub
```

```
Private Sub imgDadesProduirTancar_Click()
    Me.pctDadesProduir.Visible = False
End Sub
```

```
Private Sub imgDadesCarregar_MouseDown(Index As Integer, Button As Integer, Shift As Integer, X As Single, Y As Single)
    Me.imgDadesCarregar(Index).BorderStyle = 1
End Sub
```

```
Private Sub imgDadesCarregar_MouseUp(Index As Integer, Button As Integer, Shift As Integer, X As Single, Y As Single)
    Me.imgDadesCarregar(Index).BorderStyle = 0
    'Controlar carrega de materies primeres
    ControlarCarrega Index
End Sub
```

```
Private Sub imgAvisOK_Click()
    'Reset alarmes
    ResetAlarmes
End Sub
```

```
Private Sub imgImatgeSimulador_Click(Index As Integer)
    'Seleccionar Tots/Cap opcio del simulador
    SimuladorSeleccionar Index
End Sub
```

```
Private Sub imgImatgeSimulador_MouseDown(Index As Integer, Button As Integer, Shift As Integer, X As Single, Y As Single)
    Me.imgImatgeSimulador(Index).BorderStyle = 1
End Sub
```

```
Private Sub imgImatgeSimulador_MouseUp(Index As Integer, Button As Integer, Shift As Integer, X As Single, Y As Single)
    Me.imgImatgeSimulador(Index).BorderStyle = 0
End Sub
```

```
Private Sub imgSimulador_Click()
    'Amago els panells
    AmagarPanells
    'Mostro les opcions del simulador
    ExecutarComanda CTE_PANELL_SIMULADOR
End Sub
```

```
Private Sub imgSimulador_MouseDown(Button As Integer, Shift As Integer, X As Single, Y As Single)
    Me.imgSimulador.BorderStyle = 1
End Sub
```



```

Private Sub imgSimulador_MouseUp(Button As Integer, Shift As Integer, X As Single, Y As Single)
    Me.imgSimulador.BorderStyle = 0
End Sub

Private Sub imgSimuladorTancar_Click()
    Me.pctSimulador.Visible = False
End Sub

Private Sub lblAvisOK_Click()
    'Reset alarmes
    ResetAlarmes
End Sub

Private Sub lblImatgeDadesCarregar_MouseDown(Index As Integer, Button As Integer, Shift As Integer, X As Single, Y As Single)
    Me.imgDadesCarregar(Index).BorderStyle = 1
End Sub
Private Sub lblImatgeDadesCarregar_MouseUp(Index As Integer, Button As Integer, Shift As Integer, X As Single, Y As Single)
    Me.imgDadesCarregar(Index).BorderStyle = 0
    'Controlar carrega de materies primeres
    ControlarCarrega Index
End Sub

Private Sub imgDadesProduir_MouseDown(Index As Integer, Button As Integer, Shift As Integer, X As Single, Y As Single)
    Me.imgDadesProduir(Index).BorderStyle = 1
End Sub
Private Sub imgDadesProduir_MouseUp(Index As Integer, Button As Integer, Shift As Integer, X As Single, Y As Single)
    Me.imgDadesProduir(Index).BorderStyle = 0
    'Controlar produccio de productes
    ControlarProduccio Index
End Sub

Private Sub lblImatgeDadesProduir_MouseDown(Index As Integer, Button As Integer, Shift As Integer, X As Single, Y As Single)
    Me.imgDadesProduir(Index).BorderStyle = 1
End Sub
Private Sub lblImatgeDadesProduir_MouseUp(Index As Integer, Button As Integer, Shift As Integer, X As Single, Y As Single)
    Me.imgDadesProduir(Index).BorderStyle = 0
    'Controlar produccio de productes
    ControlarProduccio Index
End Sub

Private Sub imgDadesExpedir_MouseDown(Index As Integer, Button As Integer, Shift As Integer, X As Single, Y As Single)
    Me.imgDadesExpedir(Index).BorderStyle = 1
End Sub
Private Sub imgDadesExpedir_MouseUp(Index As Integer, Button As Integer, Shift As Integer, X As Single, Y As Single)
    Me.imgDadesExpedir(Index).BorderStyle = 0
    'Controlar expedicio de productes
    ControlarExpedicio Index
End Sub

Private Sub lblImatgeDadesExpedir_MouseDown(Index As Integer, Button As Integer, Shift As Integer, X As Single, Y As Single)
    Me.imgDadesExpedir(Index).BorderStyle = 1
End Sub
Private Sub lblImatgeDadesExpedir_MouseUp(Index As Integer, Button As Integer, Shift As Integer, X As Single, Y As Single)
    Me.imgDadesExpedir(Index).BorderStyle = 0
    'Controlar expedicio de productes
    ControlarExpedicio Index
End Sub

Private Sub lblErrors_DblClick()

```

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```
Me.txtErrors.Text = " "
MostrarMissatge "- - - NETEJA DE MISSATGES - - - "
End Sub

Private Sub lblImatgeSimulador_Click(Index As Integer)
'Seleccionar Tots/Cap opcio del simulador
SimuladorSeleccionar Index
End Sub

Private Sub lblImatgeSimulador_MouseDown(Index As Integer, Button As Integer, Shift As Integer, X As Single, Y As Single)
Me.imgImatgeSimulador(Index).BorderStyle = 1
End Sub

Private Sub lblImatgeSimulador_MouseUp(Index As Integer, Button As Integer, Shift As Integer, X As Single, Y As Single)
Me.imgImatgeSimulador(Index).BorderStyle = 0
End Sub

Private Sub lstvMonitor_DblClick()
Dim itmX As ListItem

'Miro si tinc algun element seleccionat
If Me.lstvMonitor.SelectedItem.Text <> "" Then
Set itmX = Me.lstvMonitor.SelectedItem
'Capturo l'element de la llista
CanviarValorVariable itmX.ListSubItems(1).Text, -1
End If
End Sub

Private Sub pctFooter_Resize()
On Error Resume Next
Me.lblErrors.Width = Me.pctFooter.Width
Me.txtErrors.Width = Me.pctFooter.Width - Me.txtErrors.Left * 2
End Sub

Private Sub pctMonitor_Resize()
Dim i As Integer
On Error Resume Next
Me.lblMonitor.Width = Me.pctMonitor.Width
Me.shpLedRun.Left = Me.pctMonitor.Width - 250
Me.lstvMonitor.Left = Me.pctMonitor.Width - Me.lstvMonitor.Width - Me.tabPantalles.Left
Me.lstvMonitor.Height = Me.pctMonitor.Height - 800
Me.tabPantalles.Width = Me.pctMonitor.Width - Me.lstvMonitor.Width - Me.tabPantalles.Left * 3
For i = 0 To Me.pctPantalla.Count
Me.pctPantalla(i).Left = Me.tabPantalles.Left
Me.pctPantalla(i).Top = 1080
Me.pctPantalla(i).Width = Me.tabPantalles.Width
Me.pctPantalla(i).Height = Me.lstvMonitor.Height - 500
Next
End Sub

'*****
'*****
'LLEGIR DADES DE PLC
'*****
'*****

Private Function LlegirParametresPLC() As Boolean
Dim ix As Integer
Dim lngRet As Long
Dim strVar As String
Dim lngLen As Long
Dim bolError As Boolean
Dim intReintents As Integer
Dim strValor As String

On Error GoTo TractaError
```

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```
'Bucle pels reintents
Do
  'Bucle per tots els parametres configurats
  For ix = 1 To colParametres.Count
    'Miro si el parametre te permis de lectura (R o RW)
    If colParametres(ix).ModeRead Then

      'Llegeixo el parametre al PLC
      strVar = colParametres(ix).Adresa
      lngLen = colParametres(ix).Longitud
      strValor = ""
      'Miro si no hi ha error
      If objModbusTCP.LlegirRegistrePLC(sckSocket, strVar, strValor, lngLen) Then

        '*****
        '** Lectura de Trama de variables **
        '*****
        'Miro si el parametre es una trama de variables
        If colParametres(ix).EsUnaTrama Then
          'Miro si el valor es valid
          If InStr(strValor, CTE_SEPARADOR) > 0 Then
            'Actualitzo el valor del parametre
            If colParametres(ix).ValorsTrama(strValor, CTE_SEPARADOR) Then
              'Mostro missatge per pantalla
              Me.MostrarMissatge "PARÀMETRE : " & colParametres(ix).Nom & "=" &
strValor
            Else
              'Mostro missatge per pantalla
              Me.MostrarMissatge "### ERROR AL GUARDAR VARIABLES DE LA TRAMA :
" & strVar & " ###"
            bolError = True
            End If
          End If

          '*****
          '** Lectura de Bits de Config **
          '*****
          'Miro si el parametre es un conjunt de bits
          ElseIf colParametres(ix).EsUnConjuntDeBits Then
            'Actualitzo el valor del parametre
            If colParametres(ix).ValorsBits(strValor) Then
              'Mostro missatge per pantalla
              Me.MostrarMissatge "PARÀMETRE : " & strVar & "=" & strValor
            Else
              'Mostro missatge per pantalla
              Me.MostrarMissatge "### ERROR AL GUARDAR BITS DE LA TRAMA : " & strV
ar & " ###"
            bolError = True
            End If

          '*****
          '** Lectura de parametre Word **
          '*****
          Else
            'Actualitzo el valor del parametre
            colParametres(ix).ValorWord = CDb1(strValor)
            'Mostro missatge per pantalla
            Me.MostrarMissatge "PARÀMETRE : " & strVar & "=" & strValor
            End If

          Else
            'Mostro missatge per pantalla
            Me.MostrarMissatge "### ERROR AL LLEGIR PARAMETRE : " & strVar & " ; Err_"
& lngRet & " ###"
            bolError = True
            End If

          End If
        End If

      End If
    Next ix

    'Miro si no hi ha hagut error
```

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```

    If Not bolError Then
        'Surto del bucle
        intReintents = CTE_REINTENTS
        'Retorno true
        LlegirParametresPLC = True
    Else
        'Incremento el comptador de reintents
        intReintents = intReintents + 1
        'Espero 2 segons
        Delay 2000
    End If
    DoEvents
    'Repeteix fins que s'esgotin els reintents o s'obtingui resposta correcta
    Loop While (intReintents < CTE_REINTENTS)

Exit Function
TractaError:
    'Retorno true si no hi ha error, false en cas contrari
    LlegirParametresPLC = False
End Function

Private Sub CanviarValorVariable(strNomVariable As String, lngNouValor As Long)
Dim strValor As String
Dim objVar As clsVariable
Dim lngValor(0) As Long

    On Error GoTo TractaError
    'Paro el timer
    Me.timTimer.Enabled = False
    'Busco la variable a la coleccio de parametres
    Set objVar = BuscarVarParametres(strNomVariable)
    'Miro si es valid
    If Not objVar Is Nothing Then
        'Miro si em passen un nou valor
        If lngNouValor >= 0 Then
            lngValor(0) = lngNouValor
        Else
            'Pregunto el nou valor
            strValor = InputBox("Nou valor variable: " & strNomVariable)
            lngValor(0) = Val(strValor)
        End If
        'Escriu el nou valor de la variable al PLC
        If Not objModbusTCP.EscriureRegistrePLC(sckSocket, objVar.Adresa, lngValor, 1) Then
            'Mostro missatge per pantalla
            Me.MostrarMissatge "### ERROR EN ENVIAR COMANDA AL PLC ###"
        Else
            'Guardo la variable la fitxer ini
            objVar.GuardarVariable lngValor(0)
        End If
    End If
    'Activo el timer
    Me.timTimer.Enabled = True

Exit Sub
TractaError:
    'Activo el timer
    Me.timTimer.Enabled = True
    'Mostro missatge per pantalla
    Me.MostrarMissatge "### ERROR AL CANVIAR VALOR VARIABLE ###"
End Sub

Public Function BuscarVarParametres(strNomVariable) As Object
Dim i As Integer
Dim j As Integer

    On Error GoTo TractaError
    'Bucle per tots els parametres
    For i = 1 To colParametres.Count
        'Miro si el parametre es una trama de variables
        If colParametres(i).EsUnaTrama Then
            'Bucle per totes les variables de la trama
```

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```

        For j = 1 To colParametres(i).Variables.Count
            'Miro si coincideix el nom
            If colParametres(i).Variables(j).Nom = strNomVariable Then
                'Retorno la variable
                Set BuscarVarParametres = colParametres(i).Variables(j)
                Exit For
            End If
        Next j
        'Miro si el parametre es un conjunt de bits
        ElseIf colParametres(i).EsUnConjuntDeBits Then
            'Miro si coincideix el nom
            If colParametres(i).Adresa = strNomVariable Then
                'Retorno el parametre
                Set BuscarVarParametres = colParametres(i)
                Exit For
            End If
        'Miro si es un word
        Else
            'Miro si coincideix el nom
            If colParametres(i).Adresa = strNomVariable Then
                'Retorno el parametre
                Set BuscarVarParametres = colParametres(i)
                Exit For
            End If
        End If
    Next i

Exit Function
TractaError:
    Set BuscarVarParametres = Nothing
End Function

'*****
'*****
'FUNCIONS PER SORTIR
'*****
'*****

Private Sub imgSortir_Click()
    Sortir (0)
End Sub

Private Sub imgSortir_MouseDown(Button As Integer, Shift As Integer, X As Single, Y As Single)
    Me.imgSortir.BorderStyle = 1
End Sub

Private Sub imgSortir_MouseUp(Button As Integer, Shift As Integer, X As Single, Y As Single)
    Me.imgSortir.BorderStyle = 0
End Sub

Private Sub Sortir(Tancar As Integer)
    Dim lngErr As Long
    Dim intResposta As Integer

    On Error Resume Next

    If Tancar = 0 Then
        'Pregunto si vol sortir del programa
        intResposta = MsgBox("VOLS SORTIR DEL PROGRAMA?", vbQuestion + vbYesNo, frmPrincipal.Caption)
        End If

        If intResposta = vbYes Or Tancar = 1 Then
            Me.imgSortir.Visible = False
            'Final de l'aplicacio
            End
        End If
    End Sub
```

```

Private Sub pctPantalla_MouseMove(Index As Integer, Button As Integer, Shift As Integer,
X As Single, Y As Single)
    Me.lblCoordenades.Caption = "(" & X & "," & Y & ")"
End Sub

```

```

Private Sub sckSocket_DataArrival(ByVal bytesTotal As Long)
Dim bytByte As Byte
Dim i As Integer
Dim bytArray(255) As Byte
Dim strResposta As String

```

```

    On Error GoTo TractaError
    'Bucle per tots els bytes rebuts
    For i = 1 To bytesTotal
        'Llegeixo els bytes del socket
        sckSocket.GetData bytByte
        'Guardo el byte a l'array
        bytArray(i) = bytByte
    Next i
    'Tracto la resposta Modbus TCP/IP
    objModbusTCP.TractarRespostaPLC bytArray

```

```

Exit Sub
TractaError:
    Err.Clear
End Sub

```

```

Private Sub sckSocket_Error(ByVal Number As Integer, Description As String, ByVal Scode As Long, ByVal Source As String, ByVal HelpFile As String, ByVal HelpContext As Long, CancelDisplay As Boolean)
    'Tanco el socket si hi ha un error
    sckSocket.Close
End Sub

```

```

Private Sub tabPantalles_Click()
    'Canvio la pantalla activa
    CanviarPantallaActiva Me.tabPantalles.SelectedItem.Index - 1
End Sub

```

```

' *****
' *****
' TIMER
' *****
' *****

```

```

Private Sub timTimer_Timer()
Dim dblComanda As Double
Dim lngRet As Long

```

```

    On Error GoTo TractaError

    'Paro el timer
    Me.timTimer.Enabled = False
    'Incremento el comptador de segons
    intSegons = intSegons + 1
    'Si he arribat al periode de lectura del PLC
    If intSegons >= intPeriodePLC Then
        'Resetejo el comptador
        intSegons = 0
        'led taronja comunicacions on
        shpLedRun.BackStyle = 1
        'Llegeixo els parametres del PLC
        If Not LlegirParametresPLC() Then
            'Mostro missatge per pantalla
            Me.MostrarMissatge "### ERROR AL LLEGIR PARAMETRES DEL PLC ###"
        End If
        'Refresco la llista de variables del monitor
        RefrescarMonitor
        'Miro si tinc alarmes
        RefrescarAlarmes
    End If

```

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```
'Envio les comandes al PLC
EnviarPLC
'led taronja comunicacions off
shpLedRun.BackStyle = 0
End If
'Activo el timer
Me.timTimer.Enabled = True

Exit Sub
TractaError:
'Activo el timer
Me.timTimer.Enabled = True
'Mostro missatge per pantalla
Me.MostrarMissatge "### ERROR AL REFRESCAR LES DADES ###"
'led taronja comunicacions off
shpLedRun.BackStyle = 0
End Sub

Private Sub CanviarPantallaActiva(intTab As Integer)
Dim i As Integer

On Error Resume Next
'Amago tots els panells de dades oberts
AmagarPanells
'Bucle per totes les pantalles
For i = 0 To Me.pctPantalla.Count
'Miro si coincideix la pantalla
If i = intTab Then
'Faig visible la pantalla
Me.pctPantalla(i).Visible = True
Else
'Amago la pantalla
Me.pctPantalla(i).Visible = False
End If
Next i
End Sub

Private Sub SeleccionarVariableLlista(strVariable As String)
Dim i As Integer
On Error Resume Next
'Bucle per tots els elements de la llista
For i = 1 To Me.lstvMonitor.ListItems.Count
'Miro si correspon a la variable que em passen
If strVariable = Me.lstvMonitor.ListItems(i).ListSubItems(1).Text Then
'Selecciono l'element
Set lstvMonitor.SelectedItem = Me.lstvMonitor.ListItems(i)
Exit For
End If
Next i
End Sub

Private Function ConfigurarPLC() As Boolean
Dim i As Integer
Dim j As Integer
Dim objVar As clsVariable
Dim lngValor(0) As Long

On Error GoTo TractaError
'Paro el timer
Me.timTimer.Enabled = False
'Bucle per tots els parametres
For i = 1 To colParametres.Count
'Miro si el parametre es una trama de variables
If colParametres(i).EsUnaTrama Then
'Bucle per totes les variables de la trama
For j = 1 To colParametres(i).Variables.Count
'Miro si es una variable de configuracio del PLC
If colParametres(i).Variables(j).ConfigurarPLC Then
'Capturo la variable
Set objVar = colParametres(i).Variables(j)
'Capturo el valor
```

```

        lngValor(0) = CLng(objVar.Valor)
        'Escrib el nou valor de la variable al PLC
        If Not objModbusTCP.EscriureRegistrePLC(sckSocket, objVar.Adresa, lngValor
, 1) Then
            'Mostro missatge per pantalla
            Me.MostrarMissatge "### ERROR EN ENVIAR COMANDA AL PLC ###"
        End If
    End If
    DoEvents
Next j
End If
Next i
'Activo el timer
Me.timTimer.Enabled = True
'Retorno true
ConfigurarPLC = True

Exit Function
TractaError:
    'Activo el timer
    Me.timTimer.Enabled = True
    ConfigurarPLC = False
End Function

Private Sub ExecutarComanda(strComanda As String)
Dim objPanell As PictureBox

    On Error GoTo TractaError
    'Selecciono en funcio de la comanda
    Select Case strComanda
        Case CTE_PANELL_CARREGA
            Set objPanell = Me.pctDadesCarregar
        Case CTE_PANELL_PRODUIR
            Set objPanell = Me.pctDadesProduir
        Case CTE_PANELL_EXPEDIR
            Set objPanell = Me.pctDadesExpedir
        Case CTE_PANELL_SIMULADOR
            Set objPanell = Me.pctSimulador
        Case CTE_CMD_INCR_VAR_M11
            'Incremento la velocitat del variador del motor M11 (en un 10%)
            ModificarPercentatgeVariable VARIABLE_VAR_M11, 10
        Case CTE_CMD_DECR_VAR_M11
            'Decremento la velocitat del variador del motor M11 (en un 10%)
            ModificarPercentatgeVariable VARIABLE_VAR_M11, -10
        Case CTE_CMD_INCR_VAR_M14
            'Incremento la velocitat del variador del motor M14 (en un 10%)
            ModificarPercentatgeVariable VARIABLE_VAR_M14, 10
        Case CTE_CMD_DECR_VAR_M14
            'Decremento la velocitat del variador del motor M11 (en un 10%)
            ModificarPercentatgeVariable VARIABLE_VAR_M14, -10
        Case Else
            'Mostro missatge per pantalla
            Me.MostrarMissatge "### ERROR EN EXECUTAR COMANDA: " & strComanda & "###"
    End Select
    'Si el panell es valid, el mostro al centre de la pantalla
    If Not objPanell Is Nothing Then
        objPanell.Top = Me.Height / 2 - objPanell.Height / 2
        objPanell.Left = Me.Width / 2 - objPanell.Width / 2
        objPanell.Visible = True
        objPanell.ZOrder 0
    End If

Exit Sub
TractaError:
    Err.Clear
End Sub

Private Sub AmagarPanells()
    'Amago tots els panells de dades
    Me.pctDadesCarregar.Visible = False
    Me.pctDadesProduir.Visible = False

```


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```
Me.pctDadesExpedir.Visible = False
End Sub
```

```
Private Function CarregarComboBox(cboCombo As ComboBox, strLlista As String) As Boolean
Dim varLlista As Variant
Dim i As Integer
```

```
On Error GoTo TractaError
'Elimino la llista
cboCombo.Clear
'Miro si es valida la cadena
If strLlista <> "" Then
'Miro si te mes d'un element
If InStr(1, strLlista, ",") Then
'Passo la llista a una matriu
varLlista = Split(strLlista, ",")
'Bucle per tots els elements
For i = LBound(varLlista) To UBound(varLlista)
'Afegeixo l'element a la llista
cboCombo.AddItem CStr(varLlista(i))
Next i
'Retorno true
CarregarComboBox = True
Else
'Afegeixo l'element a la llista
cboCombo.AddItem CStr(strLlista)
'Retorno true
CarregarComboBox = True
End If
End If
```

```
Exit Function
```

```
TractaError:
```

```
CarregarComboBox = False
End Function
```

```
Private Sub ControlarCarrega(intIndex As Integer)
Dim strProducte As String
Dim strQuantitat As String
Dim lngProducte As Long
Dim lngQuantitat As Long
```

```
On Error GoTo TractaError
'Miro si l'index es 0 ---> Iniciar
If intIndex = 0 Then
'Verifico els valors seleccionats
strProducte = Me.cboDadesCarregar(0).Text
strQuantitat = Me.txtDadesCarregar(0).Text
If strProducte <> "" And Val(strQuantitat) > 0 Then
'Capturo el valor que ha de tenir la variable del producte: 1=BLAT MORO, 2=BLAT,
3=ORDI, 4=FARINA
lngProducte = Me.cboDadesCarregar(0).ListIndex + 1
'Canvio el valor de la variable CONFIG_PROD_CARREGAR
CanviarValorVariable CONFIG_PROD_CARREGAR, lngProducte
'Capturo la quantitat de producte
lngQuantitat = Val(strQuantitat)
'Canvio el valor de la variable CONFIG_QUANT_CARREGAR
CanviarValorVariable CONFIG_QUANT_CARREGAR, lngQuantitat
'Canvio el valor de la variable CONFIG_CARREGAR_ONOFF
CanviarValorVariable CONFIG_CARREGAR_ONOFF, 1
'DEBUG
'CanviarValorVariable "MX100.52", 10000
'CanviarValorVariable "MX100.60", 10000
'CanviarValorVariable "MX100.68", 10000
'CanviarValorVariable "MX100.76", 10000
'FI DEBUG

End If
'Si l'index es 1 ---> Aturar
Else
'Canvio el valor de la variable CONFIG_CARREGAR_ONOFF
```

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```
CanviarValorVariable CONFIG_CARREGAR_ONOFF, 0
End If
```

Exit Sub

TractaError:

'Mostro missatge per pantalla

Me.MostrarMissatge "### ERROR EN CÀRREGA DE MATÈRIES PRIMERES ###"

End Sub

Private Sub ControlarProduccio(intIndex As Integer)

Dim strProducte As String

Dim strQuantitat As String

Dim lngProducte As Long

Dim lngQuantitat As Long

On Error GoTo TractaError

'Miro si l'index es 0 ---> Iniciar

If intIndex = 0 Then

'Verifico els valors seleccionats

strProducte = Me.cboDadesProduir(0).Text

strQuantitat = Me.txtDadesProduir(0).Text

If strProducte <> "" And Val(strQuantitat) > 0 Then

UCTE 2, 3=PRODUCTE 3

lngProducte = Me.cboDadesProduir(0).ListIndex + 1

'Canvio el valor de la variable CONFIG_PROD_FABRICAR

CanviarValorVariable CONFIG_PROD_FABRICAR, lngProducte

'Capturo la quantitat de producte

lngQuantitat = Val(strQuantitat)

'Canvio el valor de la variable CONFIG_QUANT_FABRICAR

CanviarValorVariable CONFIG_QUANT_FABRICAR, lngQuantitat

'Canvio el valor de la variable CONFIG_FABRICAR_ONOFF

CanviarValorVariable CONFIG_FABRICAR_ONOFF, 1

End If

'Si l'index es 1 ---> Aturar

Else

'Canvio el valor de la variable CONFIG_FABRICAR_ONOFF

CanviarValorVariable CONFIG_FABRICAR_ONOFF, 0

End If

Exit Sub

TractaError:

'Mostro missatge per pantalla

Me.MostrarMissatge "### ERROR EN FABRICACIÓ DE PRODUCTES ###"

End Sub

Private Sub ControlarExpedicio(intIndex As Integer)

Dim strProducte As String

Dim strQuantitat As String

Dim lngProducte As Long

Dim lngQuantitat As Long

On Error GoTo TractaError

'Miro si l'index es 0 ---> Iniciar

If intIndex = 0 Then

'Verifico els valors seleccionats

strProducte = Me.cboDadesExpedir(0).Text

strQuantitat = Me.txtDadesExpedir(0).Text

If strProducte <> "" And Val(strQuantitat) > 0 Then

UCTE 2, 3=PRODUCTE 3

lngProducte = Me.cboDadesExpedir(0).ListIndex + 1

'Canvio el valor de la variable CONFIG_PROD_EXPEDIR

CanviarValorVariable CONFIG_PROD_EXPEDIR, lngProducte

'Capturo la quantitat de producte

lngQuantitat = Val(strQuantitat)

'Canvio el valor de la variable CONFIG_QUANT_EXPEDIR

CanviarValorVariable CONFIG_QUANT_EXPEDIR, lngQuantitat

'Canvio el valor de la variable CONFIG_EXPEDIR_ONOFF

CanviarValorVariable CONFIG_EXPEDIR_ONOFF, 1

End If

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```
'Si l'index es 1 ---> Aturar
Else
    'Canvio el valor de la variable CONFIG_EXPEDIR_ONOFF
    CanviarValorVariable CONFIG_EXPEDIR_ONOFF, 0
End If
```

Exit Sub

TractaError:

```
'Mostro missatge per pantalla
Me.MostrarMissatge "### ERROR EN EXPEDICIÓ DE PRODUCTES ###"
```

End Sub

Private Sub RefrescarAlarmes()

Dim i As Integer

Dim strTextAlarmes As String

```
On Error GoTo TractaError
'Bucle per totes les alarmes definides
For i = 1 To colAlarmes.Count
    'Miro si l'alarma esta activada
    If colAlarmes(i).Activa Then
        'Composo el text de les alarmes
        strTextAlarmes = strTextAlarmes & colAlarmes(i).Descripcio & vbCrLf
    End If
Next i
```

```
'Mostro les alarmes per pantalla
Me.txtAvis.Text = strTextAlarmes
'Miro si tinc alguna alarma
If strTextAlarmes <> "" Then
    'Amago els panells
    AmagarPanells
    'Mostro el panell d'alarmes
    Me.pctAvis.Top = Me.Height / 2 - Me.pctAvis.Height / 2
    Me.pctAvis.Left = Me.Width / 2 - Me.pctAvis.Width / 2
    Me.pctAvis.Visible = True
    Me.pctAvis.ZOrder 0
Else
    'Amago el panell d'alarmes
    Me.pctAvis.Visible = False
End If
```

Exit Sub

TractaError:

```
'Amago el panell d'alarmes
Me.pctAvis.Visible = False
'Mostro missatge per pantalla
Me.MostrarMissatge "### ERROR A LES ALARMES ###"
```

End Sub

Private Function CarregarAlarmes() As Boolean

Dim intID As Integer

Dim strID As String

Dim objAlarma As clsAlarma

Dim strAlarma As String

```
On Error GoTo TractaError
'Llegeixo la llista de variables que contenen les alarmes del sistema
strVariablesAlarmes = INI_Get("Variables", "", "ALARMES", strFitxerConfig)
'Creo la coleccio
Set colAlarmes = New Collection
'Bucle per llegir tots els parametres possibles definits a la configuracio (des de P00
1 fins a P999)
For intID = 1 To 999
    'Composo l'identificador sequencial
    strID = Format(intID, "000")
    'Llegeixo l'alarma a la configuracio
    strAlarma = INI_Get("A" & strID, "", "ALARMES", strFitxerConfig)
    'Si he llegit una cadena valida
    If strAlarma <> "" Then
        'Creo un nou objecte parametre
        Set objAlarma = New clsAlarma
```

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```
        'Inicialitzo
        If objAlarma.Inicialitza(strAlarma) Then
            'Guardo l'alarma a la coleccio
            colAlarmes.Add objAlarma
        End If
    End If
Next intID
'Retorno true
CarregarAlarmes = True

Exit Function
TractaError:
    CarregarAlarmes = False
End Function

Private Sub ResetAlarmes()
Dim varVars As Variant
Dim i As Integer
Dim strVar As String

    On Error Resume Next
    'Passo les variables d'alarma a una matriu
    varVars = Split(strVariablesAlarmes, ",")
    'Bucle per totes les variables
    For i = LBound(varVars) To UBound(varVars)
        'Capturo la variable
        strVar = CStr(varVars(i))
        'Resetejo el valor de la variable
        CanviarValorVariable strVar, 0
    Next i

End Sub

Private Sub SimuladorSeleccionar(Index As Integer)
Dim i As Integer

    'Bucle per totes les opcions
    For i = 0 To Me.chkOpcions.Count - 1
        'Miro si els haig de seleccionar Tots
        Me.chkOpcions(i).Value = IIf(Index = 0, 1, 0)
    Next i

End Sub

Private Sub EnviarPLC()
Dim lngValor(3) As Long

    'CONFIRMACIO MOTOR M1
    dblComandal = BitEstatSet(dblComandal, 0, Me.chkOpcions(0).Value)
    'CONFIRMACIO MOTOR M2
    dblComandal = BitEstatSet(dblComandal, 1, Me.chkOpcions(1).Value)
    'CONFIRMACIO MOTOR M3
    dblComandal = BitEstatSet(dblComandal, 2, Me.chkOpcions(2).Value)
    'CONFIRMACIO MOTOR M4
    dblComandal = BitEstatSet(dblComandal, 3, Me.chkOpcions(3).Value)
    'CONFIRMACIO MOTOR M5
    dblComandal = BitEstatSet(dblComandal, 4, Me.chkOpcions(4).Value)
    'CONFIRMACIO MOTOR M6
    dblComandal = BitEstatSet(dblComandal, 5, Me.chkOpcions(5).Value)
    'CONFIRMACIO MOTOR M7
    dblComandal = BitEstatSet(dblComandal, 6, Me.chkOpcions(6).Value)
    'CONFIRMACIO MOTOR M8
    dblComandal = BitEstatSet(dblComandal, 7, Me.chkOpcions(7).Value)
    'CONFIRMACIO MOTOR M9
    dblComandal = BitEstatSet(dblComandal, 8, Me.chkOpcions(8).Value)
    'CONFIRMACIO MOTOR M10
    dblComandal = BitEstatSet(dblComandal, 9, Me.chkOpcions(9).Value)
    'CONFIRMACIO MOTOR M11
    dblComandal = BitEstatSet(dblComandal, 10, Me.chkOpcions(10).Value)
    'CONFIRMACIO MOTOR M12
    dblComandal = BitEstatSet(dblComandal, 11, Me.chkOpcions(11).Value)
```

```

'CONFIRMACIO MOTOR M13
dblComanda1 = BitEstatSet(dblComanda1, 12, Me.chkOptions(12).Value)
'CONFIRMACIO MOTOR M14
dblComanda1 = BitEstatSet(dblComanda1, 13, Me.chkOptions(13).Value)
'CONFIRMACIO MOTOR M15
dblComanda1 = BitEstatSet(dblComanda1, 14, Me.chkOptions(14).Value)
'CONFIRMACIO MOTOR REVOLVER
dblComanda1 = BitEstatSet(dblComanda1, 15, Me.chkOptions(15).Value)

'CONFIRMACIO MOTOR M16
dblComanda2 = BitEstatSet(dblComanda2, 0, Me.chkOptions(16).Value)
'CONFIRMACIO MOTOR M17
dblComanda2 = BitEstatSet(dblComanda2, 1, Me.chkOptions(17).Value)
'CONFIRMACIO MOTOR M18
dblComanda2 = BitEstatSet(dblComanda2, 2, Me.chkOptions(18).Value)
'CONFIRMACIO MOTOR M19
dblComanda2 = BitEstatSet(dblComanda2, 3, Me.chkOptions(19).Value)
'ACTIVAR FC1..FC4 AMB REVOLVER
dblComanda2 = BitEstatSet(dblComanda2, 4, Me.chkOptions(20).Value)
'ACTIVAR S1 A 5 SEGONS DE M2
dblComanda2 = BitEstatSet(dblComanda2, 5, Me.chkOptions(21).Value)
'OMPLIR SITJA S1 SI M4 & FC1
dblComanda2 = BitEstatSet(dblComanda2, 6, Me.chkOptions(22).Value)
'OMPLIR SITJA S2 SI M4 & FC2
dblComanda2 = BitEstatSet(dblComanda2, 7, Me.chkOptions(23).Value)
'OMPLIR SITJA S3 SI M4 & FC3
dblComanda2 = BitEstatSet(dblComanda2, 8, Me.chkOptions(24).Value)
'OMPLIR SITJA S4 SI M4 & FC4
dblComanda2 = BitEstatSet(dblComanda2, 9, Me.chkOptions(25).Value)
'ACTIVAR SS1 SI M7
dblComanda2 = BitEstatSet(dblComanda2, 10, Me.chkOptions(26).Value)
'ACTIVAR SS2 SI M8
dblComanda2 = BitEstatSet(dblComanda2, 11, Me.chkOptions(27).Value)
'ACTIVAR SS3 SI M9
dblComanda2 = BitEstatSet(dblComanda2, 12, Me.chkOptions(28).Value)
'ACTIVAR SS4 SI M10
dblComanda2 = BitEstatSet(dblComanda2, 13, Me.chkOptions(29).Value)
'BUIDAR SITJA S1 SI M7
dblComanda2 = BitEstatSet(dblComanda2, 14, Me.chkOptions(30).Value)
'BUIDAR SITJA S2 SI M8
dblComanda2 = BitEstatSet(dblComanda2, 15, Me.chkOptions(31).Value)

'BUIDAR SITJA S3 SI M9
dblComanda3 = BitEstatSet(dblComanda3, 0, Me.chkOptions(32).Value)
'BUIDAR SITJA S4 SI M10
dblComanda3 = BitEstatSet(dblComanda3, 1, Me.chkOptions(33).Value)
'OMPLIR BASCULA SI M7
dblComanda3 = BitEstatSet(dblComanda3, 2, Me.chkOptions(34).Value)
'OMPLIR BASCULA SI M8
dblComanda3 = BitEstatSet(dblComanda3, 3, Me.chkOptions(35).Value)
'OMPLIR BASCULA SI M9
dblComanda3 = BitEstatSet(dblComanda3, 4, Me.chkOptions(36).Value)
'OMPLIR BASCULA SI M10
dblComanda3 = BitEstatSet(dblComanda3, 5, Me.chkOptions(37).Value)
'ACTIVAR S2 A 5 SEGONS DE EV3
dblComanda3 = BitEstatSet(dblComanda3, 6, Me.chkOptions(38).Value)
'ACTIVAR S3 A 5 SEGONS DE EV2
dblComanda3 = BitEstatSet(dblComanda3, 7, Me.chkOptions(39).Value)
'ACTIVAR S4 A 5 SEGONS DE EV6
dblComanda3 = BitEstatSet(dblComanda3, 8, Me.chkOptions(40).Value)
'ACTIVAR FC5 SI M19 & SITJA S5
dblComanda3 = BitEstatSet(dblComanda3, 9, Me.chkOptions(41).Value)
'ACTIVAR FC6 SI M19 & SITJA S6
dblComanda3 = BitEstatSet(dblComanda3, 10, Me.chkOptions(42).Value)
'ACTIVAR FC7 SI M19 & SITJA S7
dblComanda3 = BitEstatSet(dblComanda3, 11, Me.chkOptions(43).Value)
'OMPLIR SITJA S5 SI EV7
dblComanda3 = BitEstatSet(dblComanda3, 12, Me.chkOptions(44).Value)
'OMPLIR SITJA S6 SI EV8
dblComanda3 = BitEstatSet(dblComanda3, 13, Me.chkOptions(45).Value)
'OMPLIR SITJA S7 SI EV9

```

```

    dblComanda3 = BitEstatSet(dblComanda3, 14, Me.chkOpcions(46).Value)
    'ACTIVAR SS5 SI EV10
    dblComanda3 = BitEstatSet(dblComanda3, 15, Me.chkOpcions(47).Value)

    'ACTIVAR SS6 SI EV11
    dblComanda4 = BitEstatSet(dblComanda4, 0, Me.chkOpcions(48).Value)
    'ACTIVAR SS7 SI EV12
    dblComanda4 = BitEstatSet(dblComanda4, 1, Me.chkOpcions(49).Value)
    'BUIDAR SITJA S5 SI EV10
    dblComanda4 = BitEstatSet(dblComanda4, 2, Me.chkOpcions(50).Value)
    'BUIDAR SITJA S6 SI EV11
    dblComanda4 = BitEstatSet(dblComanda4, 3, Me.chkOpcions(51).Value)
    'BUIDAR SITJA S7 SI EV12
    dblComanda4 = BitEstatSet(dblComanda4, 4, Me.chkOpcions(52).Value)
    'ACTIVAR IM1 SI M3
    dblComanda4 = BitEstatSet(dblComanda4, 5, Me.chkOpcions(53).Value)
    'ACTIVAR IM2 SI M15
    dblComanda4 = BitEstatSet(dblComanda4, 6, Me.chkOpcions(54).Value)
    'ACTIVAR IM3 SI M18
    dblComanda4 = BitEstatSet(dblComanda4, 7, Me.chkOpcions(55).Value)
    'ACTIVAR IM4 SI M12
    dblComanda4 = BitEstatSet(dblComanda4, 8, Me.chkOpcions(56).Value)

    'Miro si ha canviat alguna comanda
    If dblComanda1 <> dblComandaAnterior1 Or dblComanda2 <> dblComandaAnterior2 Or dblComanda3 <> dblComandaAnterior3 Or dblComanda4 <> dblComandaAnterior4 Then
        'Passo les variables a una matriu de longs
        lngValor(0) = dblComanda1
        lngValor(1) = dblComanda2
        lngValor(2) = dblComanda3
        lngValor(3) = dblComanda4
        'Escriu la trama al PLC
        If Not objModbusTCP.EscriureRegistrePLC(sckSocket, PC_COMANDES_ADR, lngValor, PC_COMANDES_NUM) Then
            'Mostro missatge per pantalla
            Me.MostrarMissatge "### ERROR EN ENVIAR COMANDA AL PLC ###"
        End If
        'Em guardo les ultimes comandes
        dblComandaAnterior1 = dblComanda1
        dblComandaAnterior2 = dblComanda2
        dblComandaAnterior3 = dblComanda3
        dblComandaAnterior4 = dblComanda4
    End If

Exit Sub
TractaError:
    'Mostro missatge per pantalla
    Me.MostrarMissatge "### ERROR EN ENVIAR COMANDA AL PLC ###"
End Sub

Private Sub ModificarPercentatgeVariable(strNomVariable As String, lngPRC As Long)
Dim strValor As String
Dim objVar As clsVariable
Dim lngValor(0) As Long
Dim dblValorActual As Double

On Error GoTo TractaError
'Paro el timer
Me.timTimer.Enabled = False
'Busco la variable a la coleccio de parametres
Set objVar = BuscarVarParametres(strNomVariable)
'Miro si es valid
If Not objVar Is Nothing Then
    'Capturo el valor actual
    dblValorActual = objVar.Valor
    'Miro l'operacio que haig d'efectuar
    Select Case lngPRC
        'Incrementar percentatge
        Case Is > 0
            'Miro si he arribat al maxim: (100%)
            If dblValorActual + lngPRC >= 100 Then

```

```

        'Assigno el nou valor
        lngValor(0) = 100
    Else
        'Assigno el nou valor
        lngValor(0) = CLng(dblValorActual) + lngPRC
    End If
    'Decrementar percentatge
    Case Is < 0
        'Miro si he arribat al minim: (0%)
        If dblValorActual + lngPRC <= 0 Then
            'Assigno el nou valor
            lngValor(0) = 0
        Else
            'Assigno el nou valor
            lngValor(0) = CLng(dblValorActual) + lngPRC
        End If
    'Reset percentatge
    Case 0
        'Assigno el nou valor
        lngValor(0) = 0
    End Select
    'Escriu el nou valor de la variable al PLC
    If Not objModbusTCP.EscriureRegistrePLC(sckSocket, objVar.Adresa, lngValor, 1) Then
        'Mostro missatge per pantalla
        Me.MostrarMissatge "### ERROR EN ENVIAR COMANDA AL PLC ###"
    Else
        'Guardo la variable la fitxer ini
        objVar.GuardarVariable lngValor(0)
    End If
End If
'Activo el timer
Me.timTimer.Enabled = True

Exit Sub
TractaError:
    'Activo el timer
    Me.timTimer.Enabled = True
    'Mostro missatge per pantalla
    Me.MostrarMissatge "### ERROR AL CANVIAR VALOR VARIABLE ###"
End Sub

```

frmPrincipal - 1

VERSION 5.00

Object = "{831FDD16-0C5C-11D2-A9FC-0000F8754DA1}#2.0#0"; "MSCOMCTL.OCX"

Object = "{248DD890-BB45-11CF-9ABC-0080C7E7B78D}#1.0#0"; "mswinsck.ocx"

Begin VB.Form frmPrincipal

Appearance = 0 'Flat
BackColor = &H80000005&
Caption = "frmPrincipal"
ClientHeight = 11775
ClientLeft = 375
ClientTop = 3585
ClientWidth = 16620
Icon = (Icono)
LinkTopic = "Form1"
LockControls = -1 'True
ScaleHeight = 11775
ScaleWidth = 16620
WindowState = 2 'Maximized

Begin VB.PictureBox pctDadesExpedir

Appearance = 0 'Flat
BackColor = &H00E0E0E0&
BorderStyle = 0 'None
Height = 3300
Left = 9480
ScaleHeight = 3300
ScaleWidth = 6255
TabIndex = 46
Top = 8280
Visible = 0 'False
Width = 6255

Begin VB.PictureBox pctDadesExpedirCanvas

BackColor = &H00FFFFFF&
BorderStyle = 0 'None
Height = 2655
Left = 120
ScaleHeight = 2655
ScaleWidth = 6015
TabIndex = 47
Top = 480
Width = 6015

Begin VB.TextBox txtDadesExpedir

BeginProperty Font

Name = "Tahoma"
Size = 15.75
Charset = 0
Weight = 700
Underline = 0 'False
Italic = 0 'False
Strikethrough = 0 'False

EndProperty

ForeColor = &H00000000&
Height = 435
Index = 0
Left = 2760
TabIndex = 49
Tag = "operari"
Top = 960
Width = 2895

End

Begin VB.ComboBox cboDadesExpedir

BeginProperty Font

Name = "Tahoma"
Size = 14.25
Charset = 0
Weight = 700
Underline = 0 'False
Italic = 0 'False
Strikethrough = 0 'False

EndProperty

Height = 465
Index = 0
Left = 2760


```

        Style           = 2 'Dropdown List
        TabIndex        = 48
        Top             = 360
        Width           = 2895
    End
    Begin VB.Label lblImatgeDadesExpedir
        Alignment        = 2 'Center
        AutoSize         = -1 'True
        BackStyle        = 0 'Transparent
        Caption          = "ATURAR"
        BeginProperty Font
            Name          = "Tahoma"
            Size          = 18
            Charset       = 0
            Weight        = 700
            Underline     = 0 'False
            Italic        = 0 'False
            Strikethrough  = 0 'False
        EndProperty
        ForeColor        = &H00FFFFFF&
        Height           = 435
        Index            = 1
        Left             = 3600
        TabIndex         = 53
        Top             = 1800
        Width           = 1515
    End
    Begin VB.Label lblImatgeDadesExpedir
        Alignment        = 2 'Center
        AutoSize         = -1 'True
        BackStyle        = 0 'Transparent
        Caption          = "INICIAR"
        BeginProperty Font
            Name          = "Tahoma"
            Size          = 18
            Charset       = 0
            Weight        = 700
            Underline     = 0 'False
            Italic        = 0 'False
            Strikethrough  = 0 'False
        EndProperty
        ForeColor        = &H00FFFFFF&
        Height           = 435
        Index            = 0
        Left             = 810
        TabIndex         = 52
        Top             = 1800
        Width           = 1575
    End
    Begin VB.Label lblDadesExpedirLabel
        Caption          = "QUANTITAT:"
        BeginProperty Font
            Name          = "Tahoma"
            Size          = 15.75
            Charset       = 0
            Weight        = 400
            Underline     = 0 'False
            Italic        = 0 'False
            Strikethrough  = 0 'False
        EndProperty
        Height           = 375
        Index            = 1
        Left             = 360
        TabIndex         = 51
        Top             = 960
        Width           = 2295
    End
    Begin VB.Label lblDadesExpedirLabel
        Caption          = "PRODUCTE:"
        BeginProperty Font
            Name          = "Tahoma"

```

```

        Size           = 15.75
        Charset        = 0
        Weight         = 400
        Underline      = 0   'False
        Italic         = 0   'False
        Strikethrough  = 0   'False
    EndProperty
    Height             = 375
    Index              = 0
    Left               = 360
    TabIndex           = 50
    Top                = 360
    Width              = 2295
End
Begin VB.Image imgDadesExpedir
    Height             = 735
    Index              = 0
    Left               = 360
    Picture             = (Mapa de bits)
    Stretch             = -1 'True
    Top                = 1680
    Width              = 2460
End
Begin VB.Image imgDadesExpedir
    Height             = 735
    Index              = 1
    Left               = 3120
    Picture             = (Mapa de bits)
    Stretch             = -1 'True
    Top                = 1680
    Width              = 2460
End
End
Begin VB.Image imgDadesExpedirTancar
    Height             = 285
    Left               = 5880
    Picture             = (Mapa de bits)
    Top                = 45
    Width              = 315
End
Begin VB.Label lblDadesExpedir
    Alignment          = 2   'Center
    BackColor          = &H00808080&
    Caption             = "EXPEDIR PRODUCTE"
    BeginProperty Font
        Name             = "Arial"
        Size             = 14.25
        Charset          = 0
        Weight           = 700
        Underline        = 0   'False
        Italic           = 0   'False
        Strikethrough    = 0   'False
    EndProperty
    ForeColor          = &H00FFFFFF&
    Height             = 375
    Left               = 0
    TabIndex           = 54
    Top                = 0
    Width              = 6255
End
End
Begin VB.PictureBox pctDadesProduir
    Appearance         = 0   'Flat
    BackColor          = &H00E0E0E0&
    BorderStyle        = 0   'None
    Height             = 3300
    Left               = 9480
    ScaleHeight        = 3300
    ScaleWidth         = 6255
    TabIndex           = 37
    Top                = 4920

```

```

Visible          = 0    'False
Width            = 6255
Begin VB.PictureBox pctDadesProduirCanvas
    BackColor      = &H00FFFFFF&
    BorderStyle    = 0    'None
    Height         = 2655
    Left           = 120
    ScaleHeight    = 2655
    ScaleWidth     = 6015
    TabIndex       = 38
    Top            = 480
    Width          = 6015
Begin VB.ComboBox cboDadesProduir
    BeginProperty Font
        Name          = "Tahoma"
        Size          = 14.25
        Charset       = 0
        Weight        = 700
        Underline     = 0    'False
        Italic        = 0    'False
        Strikethrough = 0    'False
    EndProperty
    Height          = 465
    Index           = 0
    Left            = 2760
    Style           = 2    'Dropdown List
    TabIndex        = 40
    Top             = 360
    Width           = 2895
End
Begin VB.TextBox txtDadesProduir
    BeginProperty Font
        Name          = "Tahoma"
        Size          = 15.75
        Charset       = 0
        Weight        = 700
        Underline     = 0    'False
        Italic        = 0    'False
        Strikethrough = 0    'False
    EndProperty
    ForeColor       = &H00000000&
    Height          = 435
    Index           = 0
    Left            = 2760
    TabIndex        = 39
    Tag             = "operari"
    Top             = 960
    Width           = 2895
End
Begin VB.Label lblDadesProduirLabel
    Caption         = "PRODUCTE:"
    BeginProperty Font
        Name          = "Tahoma"
        Size          = 15.75
        Charset       = 0
        Weight        = 400
        Underline     = 0    'False
        Italic        = 0    'False
        Strikethrough = 0    'False
    EndProperty
    Height          = 375
    Index           = 0
    Left            = 360
    TabIndex        = 44
    Top             = 360
    Width           = 2295
End
Begin VB.Label lblDadesProduirLabel
    Caption         = "QUANTITAT:"
    BeginProperty Font
        Name          = "Tahoma"

```

```

        Size           = 15.75
        Charset        = 0
        Weight         = 400
        Underline      = 0   'False
        Italic         = 0   'False
        Strikethrough  = 0   'False
    EndProperty
    Height             = 375
    Index              = 1
    Left               = 360
    TabIndex           = 43
    Top                = 960
    Width              = 2295
End
Begin VB.Label lblImatgeDadesProduir
    Alignment          = 2   'Center
    AutoSize           = -1   'True
    BackStyle          = 0   'Transparent
    Caption             = "INICIAR"
    BeginProperty Font
        Name            = "Tahoma"
        Size            = 18
        Charset         = 0
        Weight          = 700
        Underline       = 0   'False
        Italic          = 0   'False
        Strikethrough   = 0   'False
    EndProperty
    ForeColor          = &H00FFFFFF&
    Height             = 435
    Index              = 0
    Left               = 810
    TabIndex           = 42
    Top                = 1800
    Width              = 1575
End
Begin VB.Label lblImatgeDadesProduir
    Alignment          = 2   'Center
    AutoSize           = -1   'True
    BackStyle          = 0   'Transparent
    Caption             = "ATURAR"
    BeginProperty Font
        Name            = "Tahoma"
        Size            = 18
        Charset         = 0
        Weight          = 700
        Underline       = 0   'False
        Italic          = 0   'False
        Strikethrough   = 0   'False
    EndProperty
    ForeColor          = &H00FFFFFF&
    Height             = 435
    Index              = 1
    Left               = 3600
    TabIndex           = 41
    Top                = 1800
    Width              = 1515
End
Begin VB.Image imgDadesProduir
    Height             = 735
    Index              = 0
    Left               = 360
    Picture            = (Mapa de bits)
    Stretch            = -1   'True
    Top                = 1680
    Width              = 2460
End
Begin VB.Image imgDadesProduir
    Height             = 735
    Index              = 1
    Left               = 3120

```

```

        Picture          = (Mapa de bits)
        Stretch          = -1 'True
        Top              = 1680
        Width            = 2460
    End
End
Begin VB.Image imgDadesProduirTancar
    Height              = 285
    Left                = 5880
    Picture              = (Mapa de bits)
    Top                 = 45
    Width               = 315
End
Begin VB.Label lblDadesProduir
    Alignment           = 2 'Center
    BackColor           = &H00808080&
    Caption              = "FABRICAR PRODUCTE"
    BeginProperty Font
        Name              = "Arial"
        Size              = 14.25
        Charset           = 0
        Weight            = 700
        Underline         = 0 'False
        Italic            = 0 'False
        Strikethrough     = 0 'False
    EndProperty
    ForeColor           = &H00FFFFFF&
    Height              = 375
    Left                = 0
    TabIndex            = 45
    Top                 = 0
    Width               = 6255
End
End
Begin VB.PictureBox pctDadesCarregar
    Appearance          = 0 'Flat
    BackColor           = &H00E0E0E0&
    BorderStyle         = 0 'None
    Height              = 3300
    Left                = 9480
    ScaleHeight         = 3300
    ScaleWidth          = 6255
    TabIndex            = 21
    Top                 = 1560
    Visible             = 0 'False
    Width               = 6255
End
Begin VB.PictureBox pctDadesCarregarCanvas
    BackColor           = &H00FFFFFF&
    BorderStyle         = 0 'None
    Height              = 2655
    Left                = 120
    ScaleHeight         = 2655
    ScaleWidth          = 6015
    TabIndex            = 23
    Top                 = 480
    Width               = 6015
End
Begin VB.TextBox txtDadesCarregar
    BeginProperty Font
        Name              = "Tahoma"
        Size              = 15.75
        Charset           = 0
        Weight            = 700
        Underline         = 0 'False
        Italic            = 0 'False
        Strikethrough     = 0 'False
    EndProperty
    ForeColor           = &H00000000&
    Height              = 435
    Index               = 0
    Left                = 2760
    TabIndex            = 32

```

```

        Tag          =    "operari"
        Top           =    960
        Width         =    2895
    End
    Begin VB.ComboBox cboDadesCarregar
        BeginProperty Font
            Name        =    "Tahoma"
            Size        =    14.25
            Charset     =    0
            Weight      =    700
            Underline   =    0    'False
            Italic      =    0    'False
            Strikethrough =    0    'False
        EndProperty
        Height         =    465
        Index          =    0
        Left           =    2760
        Style          =    2    'Dropdown List
        TabIndex       =    30
        Top            =    360
        Width          =    2895
    End
    Begin VB.Label lblImatgeDadesCarregar
        Alignment      =    2    'Center
        AutoSize       =    -1    'True
        BackStyle      =    0    'Transparent
        Caption        =    "ATURAR"
        BeginProperty Font
            Name        =    "Tahoma"
            Size        =    18
            Charset     =    0
            Weight      =    700
            Underline   =    0    'False
            Italic      =    0    'False
            Strikethrough =    0    'False
        EndProperty
        ForeColor      =    &H00FFFFFF&
        Height         =    435
        Index          =    1
        Left           =    3600
        TabIndex       =    36
        Top            =    1800
        Width          =    1515
    End
    Begin VB.Label lblImatgeDadesCarregar
        Alignment      =    2    'Center
        AutoSize       =    -1    'True
        BackStyle      =    0    'Transparent
        Caption        =    "INICIAR"
        BeginProperty Font
            Name        =    "Tahoma"
            Size        =    18
            Charset     =    0
            Weight      =    700
            Underline   =    0    'False
            Italic      =    0    'False
            Strikethrough =    0    'False
        EndProperty
        ForeColor      =    &H00FFFFFF&
        Height         =    435
        Index          =    0
        Left           =    810
        TabIndex       =    33
        Top            =    1800
        Width          =    1575
    End
    Begin VB.Label lblDadesCarregarLabel
        Caption        =    "QUANTITAT:"
        BeginProperty Font
            Name        =    "Tahoma"
            Size        =    15.75

```

```

        Charset          = 0
        Weight           = 400
        Underline        = 0   'False
        Italic           = 0   'False
        Strikethrough    = 0   'False
    EndProperty
    Height              = 375
    Index               = 1
    Left                = 360
    TabIndex            = 31
    Top                 = 960
    Width               = 2295
End
Begin VB.Label lblDadesCarregarLabel
    Caption             = "PRODUCTE:"
    BeginProperty Font
        Name             = "Tahoma"
        Size             = 15.75
        Charset          = 0
        Weight           = 400
        Underline        = 0   'False
        Italic           = 0   'False
        Strikethrough    = 0   'False
    EndProperty
    Height              = 375
    Index               = 0
    Left                = 360
    TabIndex            = 29
    Top                 = 360
    Width               = 2295
End
Begin VB.Image imgDadesCarregar
    Height              = 735
    Index               = 0
    Left                = 360
    Picture             = (Mapa de bits)
    Stretch             = -1   'True
    Top                 = 1680
    Width               = 2460
End
Begin VB.Image imgDadesCarregar
    Height              = 735
    Index               = 1
    Left                = 3120
    Picture             = (Mapa de bits)
    Stretch             = -1   'True
    Top                 = 1680
    Width               = 2460
End
End
Begin VB.Image imgDadesCarregarTancar
    Height              = 285
    Left                = 5880
    Picture             = (Mapa de bits)
    Top                 = 45
    Width               = 315
End
Begin VB.Label lblDadesCarregar
    Alignment           = 2   'Center
    BackColor           = &H00808080&
    Caption             = "CARREGAR MATÈRIA PRIMERA"
    BeginProperty Font
        Name             = "Arial"
        Size             = 14.25
        Charset          = 0
        Weight           = 700
        Underline        = 0   'False
        Italic           = 0   'False
        Strikethrough    = 0   'False
    EndProperty
    ForeColor           = &H00FFFFFF&

```

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```
        Height          = 375
        Left             = 0
        TabIndex         = 22
        Top              = 0
        Width            = 6255
    End
End
Begin MSWinsockLib.Winsock sockSocket
    Left                = 10080
    Top                 = 1080
    _ExtentX            = 741
    _ExtentY            = 741
    _Version             = 393216
End
Begin VB.Timer timTimer
    Left                = 9600
    Top                 = 1080
End
Begin VB.PictureBox pctFooter
    Appearance          = 0 'Flat
    BackColor           = &H00E0E0E0&
    BorderStyle         = 0 'None
    Height              = 2820
    Left                = 120
    ScaleHeight         = 2820
    ScaleWidth          = 9255
    TabIndex            = 1
    Top                 = 4320
    Width               = 9255
    Begin VB.TextBox txtErrors
        Appearance       = 0 'Flat
        Height           = 2265
        Left             = 120
        Locked           = -1 'True
        MultiLine        = -1 'True
        ScrollBars       = 2 'Vertical
        TabIndex         = 3
        TabStop          = 0 'False
        Top              = 480
        Width             = 9015
    End
    Begin VB.Label lblErrors
        Alignment         = 2 'Center
        BackColor         = &H00808080&
        Caption           = "MISSATGES"
        BeginProperty Font
            Name           = "Arial"
            Size           = 14.25
            Charset        = 0
            Weight         = 700
            Underline      = 0 'False
            Italic         = 0 'False
            Strikethrough   = 0 'False
        EndProperty
        ForeColor          = &H00FFFFFF&
        Height             = 375
        Left               = 0
        TabIndex           = 2
        Top                = 0
        Width              = 9255
    End
End
Begin VB.PictureBox pctHeader
    Appearance          = 0 'Flat
    BackColor           = &H00FFFFFF&
    BorderStyle         = 0 'None
    ForeColor           = &H80000008&
    Height              = 900
    Left                = 0
    ScaleHeight         = 900
    ScaleWidth          = 18735
```



```

TabIndex      = 0
Top           = 0
Width         = 18735
Begin VB.PictureBox pctBotons
    BackColor      = &H00FFFFFF&
    BorderStyle    = 0 'None
    Height         = 975
    Left           = 8520
    ScaleHeight    = 975
    ScaleWidth     = 3855
    TabIndex       = 7
    Top            = 0
    Width          = 3855
    Begin VB.Image imgSimulador
        Height      = 855
        Left        = 2040
        Picture      = (Mapa de bits)
        ToolTipText = "Simulador"
        Top         = 0
        Width       = 855
    End
    Begin VB.Image imgSortir
        Height      = 855
        Left        = 3000
        Picture      = (Mapa de bits)
        ToolTipText = "Sortir"
        Top         = 0
        Width       = 855
    End
End
Begin VB.Label lblMaquina
    AutoSize      = -1 'True
    BackColor     = &H00FFFFFF&
    Caption       = "Nom de la màquina"
    BeginProperty Font
        Name        = "Arial"
        Size        = 20.25
        Charset     = 0
        Weight      = 700
        Underline   = 0 'False
        Italic      = 0 'False
        Strikethrough = 0 'False
    EndProperty
    Height        = 480
    Left          = 4680
    TabIndex      = 13
    Top           = 240
    Width         = 3855
End
Begin VB.Image imgLogo
    Height      = 615
    Left        = 120
    Picture      = (Mapa de bits)
    Top         = 120
    Width       = 4410
End
End
Begin VB.PictureBox pctMonitor
    Appearance     = 0 'Flat
    BackColor      = &H00E0E0E0&
    BorderStyle    = 0 'None
    Height         = 3060
    Left           = 120
    ScaleHeight    = 3060
    ScaleWidth     = 9255
    TabIndex       = 4
    Top            = 1200
    Width          = 9255
    Begin VB.PictureBox pctPantalla
        BackColor      = &H00FFFFFF&
        Height          = 1215
    End
End

```

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```

    Index          = 4
    Left           = 7320
    ScaleHeight    = 1155
    ScaleWidth     = 1755
    TabIndex       = 34
    Top            = 1440
    Visible        = 0 'False
    Width          = 1815
Begin SCADA_Pinsos.ctlElement ctlElementP04
    Height         = 375
    Index          = 0
    Left           = 120
    TabIndex       = 35
    Top            = 120
    Visible        = 0 'False
    Width          = 1215
    _ExtentX       = 2355
    _ExtentY       = 661
End
End
Begin VB.CommandButton cmdRecarregar
    Caption        = "Recarregar"
    Height         = 255
    Left           = 1320
    TabIndex       = 20
    Top            = 360
    Visible        = 0 'False
    Width          = 1455
End
Begin VB.PictureBox pctPantalla
    BackColor      = &H00FFFFFF&
    Height         = 1215
    Index          = 3
    Left           = 5520
    ScaleHeight    = 1155
    ScaleWidth     = 1755
    TabIndex       = 18
    Top            = 1440
    Visible        = 0 'False
    Width          = 1815
Begin SCADA_Pinsos.ctlElement ctlElementP03
    Height         = 375
    Index          = 0
    Left           = 120
    TabIndex       = 16
    Top            = 120
    Visible        = 0 'False
    Width          = 1215
    _ExtentX       = 1931
    _ExtentY       = 661
End
End
Begin VB.PictureBox pctPantalla
    BackColor      = &H00FFFFFF&
    Height         = 1215
    Index          = 2
    Left           = 3720
    ScaleHeight    = 1155
    ScaleWidth     = 1755
    TabIndex       = 15
    Top            = 1440
    Visible        = 0 'False
    Width          = 1815
Begin SCADA_Pinsos.ctlElement ctlElementP02
    Height         = 375
    Index          = 0
    Left           = 120
    TabIndex       = 17
    Top            = 120
    Visible        = 0 'False
    Width          = 1215

```

```

        _ExtentX      = 1931
        _ExtentY      = 661
    End
End
Begin VB.PictureBox pctPantalla
    BackColor      = &H00FFFFFF&
    Height         = 1215
    Index          = 1
    Left           = 1920
    ScaleHeight    = 1155
    ScaleWidth     = 1755
    TabIndex       = 10
    Top            = 1440
    Visible        = 0 'False
    Width          = 1815
    Begin SCADA_Pinsos.ctlElement ctlElementP01
        Height      = 375
        Index        = 0
        Left         = 120
        TabIndex     = 11
        Top          = 120
        Visible      = 0 'False
        Width        = 1215
        _ExtentX     = 2143
        _ExtentY     = 661
    End
End
Begin MSComctlLib.ListView lstvMonitor
    Height         = 615
    Left           = 4200
    TabIndex       = 8
    Top            = 600
    Width          = 4695
    _ExtentX       = 8281
    _ExtentY       = 1085
    View           = 3
    LabelEdit      = 1
    LabelWrap      = -1 'True
    HideSelection  = -1 'True
    FullRowSelect  = -1 'True
    _Version       = 393217
    ForeColor      = -2147483640
    BackColor      = -2147483643
    BorderStyle    = 1
    Appearance     = 1
    NumItems       = 3
    BeginProperty ColumnHeader(1) {BDD1F052-858B-11D1-B16A-00C0F0283628}
        Text          = "Variable"
        Object.Width   = 2540
    EndProperty
    BeginProperty ColumnHeader(2) {BDD1F052-858B-11D1-B16A-00C0F0283628}
        SubItemIndex  = 1
        Text          = "Descripció"
        Object.Width   = 2540
    EndProperty
    BeginProperty ColumnHeader(3) {BDD1F052-858B-11D1-B16A-00C0F0283628}
        SubItemIndex  = 2
        Text          = "Valor"
        Object.Width   = 2540
    EndProperty
End
Begin VB.PictureBox pctPantalla
    BackColor      = &H00FFFFFF&
    Height         = 1215
    Index          = 0
    Left           = 120
    ScaleHeight    = 1155
    ScaleWidth     = 1755
    TabIndex       = 12
    Top            = 1440
    Width          = 1815

```

```

Begin SCADA_PinsosctlElement ctlElementP00
    Height      = 375
    Index       = 0
    Left        = 120
    TabIndex    = 14
    Top         = 120
    Visible     = 0 'False
    Width       = 1215
    _ExtentX    = 1720
    _ExtentY    = 661
End
End
Begin MSComctlLib.TabStrip tabPantallles
    Height      = 495
    Left        = 240
    TabIndex    = 9
    Top         = 600
    Width       = 3615
    _ExtentX    = 6376
    _ExtentY    = 873
    MultiRow    = -1 'True
    Style       = 1
    _Version    = 393216
    BeginProperty Tabs {1EFB6598-857C-11D1-B16A-00C0F0283628}
        NumTabs = 1
        BeginProperty Tab1 {1EFB659A-857C-11D1-B16A-00C0F0283628}
            ImageVarType = 2
        EndProperty
    EndProperty
    BeginProperty Font {0BE35203-8F91-11CE-9DE3-00AA004BB851}
        Name      = "Arial"
        Size      = 12
        Charset    = 0
        Weight    = 700
        Underline  = 0 'False
        Italic     = 0 'False
        Strikethrough = 0 'False
    EndProperty
End
Begin VB.Label lblCoordenades
    AutoSize      = -1 'True
    BackStyle     = 0 'Transparent
    Caption       = "(0,0)"
    Height        = 195
    Left         = 240
    TabIndex      = 19
    Top          = 405
    Visible       = 0 'False
    Width        = 315
End
Begin VB.Shape shpLedRun
    BackColor     = &H000080FF&
    Height        = 135
    Left         = 8640
    Shape         = 3 'Circle
    Top          = 135
    Width        = 135
End
Begin VB.Label lblVersio
    AutoSize      = -1 'True
    BackStyle     = 0 'Transparent
    Caption       = "Versi :"
    BeginProperty Font
        Name      = "Tahoma"
        Size      = 8.25
        Charset    = 0
        Weight    = 700
        Underline  = 0 'False
        Italic     = 0 'False
        Strikethrough = 0 'False
    EndProperty
End

```

```

        ForeColor      =    &H00C0C0C0&
        Height         =    195
        Left            =    120
        TabIndex        =    6
        Top             =    120
        Width           =    570
    End
    Begin VB.Label lblMonitor
        Alignment        =    2    'Center
        BackColor        =    &H00808080&
        Caption          =    "MONITOR"
        BeginProperty Font
            Name          =    "Arial"
            Size          =    14.25
            Charset       =    0
            Weight        =    700
            Underline     =    0    'False
            Italic        =    0    'False
            Strikethrough  =    0    'False
        EndProperty
        ForeColor        =    &H00FFFFFF&
        Height           =    375
        Left             =    0
        TabIndex         =    5
        Top              =    0
        Width            =    9255
    End
End
Begin VB.PictureBox pctAvis
    Appearance          =    0    'Flat
    BackColor           =    &H00C0C0C0&
    BorderStyle         =    0    'None
    ForeColor           =    &H80000008&
    Height              =    3975
    Left                =    120
    ScaleHeight         =    3975
    ScaleWidth          =    8535
    TabIndex            =    24
    Top                 =    7200
    Visible             =    0    'False
    Width               =    8535
    Begin VB.PictureBox pctAvisCanvas
        BackColor        =    &H00FFFFFF&
        BorderStyle      =    0    'None
        Height           =    3375
        Left             =    120
        ScaleHeight      =    3375
        ScaleWidth       =    8295
        TabIndex         =    25
        Top              =    480
        Width            =    8295
    End
    Begin VB.TextBox txtAvis
        BackColor        =    &H000000FF&
        BeginProperty Font
            Name          =    "Tahoma"
            Size          =    12
            Charset       =    0
            Weight        =    700
            Underline     =    0    'False
            Italic        =    0    'False
            Strikethrough  =    0    'False
        EndProperty
        Height            =    2055
        Left             =    480
        Locked            =    -1    'True
        MultiLine         =    -1    'True
        ScrollBars        =    2    'Vertical
        TabIndex         =    26
        Top              =    360
        Width            =    7335
    End
End

```

```

Begin VB.Label lblAvisOK
    Alignment      = 2    'Center
    AutoSize       = -1   'True
    BackStyle      = 0    'Transparent
    Caption        = "OK"
    BeginProperty Font
        Name        = "Tahoma"
        Size        = 18
        CharSet     = 0
        Weight      = 700
        Underline    = 0    'False
        Italic      = 0    'False
        Strikethrough = 0    'False
    EndProperty
    ForeColor      = &H00FFFFFF&
    Height         = 435
    Left           = 3825
    TabIndex       = 27
    Top            = 2640
    Width          = 555
End
Begin VB.Image imgAvisOK
    Height         = 735
    Left           = 3000
    Picture        = (Mapa de bits)
    Stretch        = -1   'True
    Top            = 2520
    Width          = 2220
End
End
Begin VB.Label lblAvisTitol
    Alignment      = 2    'Center
    BackColor      = &H00808080&
    Caption        = "ALARMES"
    BeginProperty Font
        Name        = "Tahoma"
        Size        = 14.25
        CharSet     = 0
        Weight      = 700
        Underline    = 0    'False
        Italic      = 0    'False
        Strikethrough = 0    'False
    EndProperty
    ForeColor      = &H00FFFFFF&
    Height         = 375
    Left           = 0
    TabIndex       = 28
    Top            = 0
    Width          = 8535
End
Begin VB.Image imgTancarAvis
    Height         = 285
    Left           = 8160
    Picture        = (Mapa de bits)
    ToolTipText    = "Tancar"
    Top            = 45
    Width          = 315
End
End
Begin VB.PictureBox pctSimulador
    Appearance     = 0    'Flat
    BackColor      = &H00E0E0E0&
    BorderStyle    = 0    'None
    Height         = 9420
    Left           = 5520
    ScaleHeight    = 9420
    ScaleWidth     = 14415
    TabIndex       = 55
    Top            = 3600
    Visible        = 0    'False
    Width          = 14415

```

```

Begin VB.PictureBox pctSimuladorCanvas
  BackColor      = &H00FFFFFF&
  BorderStyle    = 0 'None
  Height         = 8775
  Left          = 120
  ScaleHeight    = 8775
  ScaleWidth     = 14175
  TabIndex       = 56
  Top           = 480
  Width         = 14175
Begin VB.CheckBox chkOptions
  Caption        = "ACTIVAR IM4 SI M12"
  BeginProperty Font
    Name          = "MS Sans Serif"
    Size          = 9.75
    Charset       = 0
    Weight        = 700
    Underline     = 0 'False
    Italic        = 0 'False
    Strikethrough = 0 'False
  EndProperty
  Height         = 255
  Index          = 56
  Left          = 9240
  TabIndex       = 116
  Top           = 6120
  Width         = 4815
End
Begin VB.CheckBox chkOptions
  Caption        = "ACTIVAR IM3 SI M18"
  BeginProperty Font
    Name          = "MS Sans Serif"
    Size          = 9.75
    Charset       = 0
    Weight        = 700
    Underline     = 0 'False
    Italic        = 0 'False
    Strikethrough = 0 'False
  EndProperty
  Height         = 255
  Index          = 55
  Left          = 9240
  TabIndex       = 115
  Top           = 5760
  Width         = 4815
End
Begin VB.CheckBox chkOptions
  Caption        = "ACTIVAR IM2 SI M15"
  BeginProperty Font
    Name          = "MS Sans Serif"
    Size          = 9.75
    Charset       = 0
    Weight        = 700
    Underline     = 0 'False
    Italic        = 0 'False
    Strikethrough = 0 'False
  EndProperty
  Height         = 255
  Index          = 54
  Left          = 9240
  TabIndex       = 114
  Top           = 5400
  Width         = 4815
End
Begin VB.CheckBox chkOptions
  Caption        = "ACTIVAR IM1 SI M3"
  BeginProperty Font
    Name          = "MS Sans Serif"
    Size          = 9.75
    Charset       = 0
    Weight        = 700

```

```

        Underline      = 0    'False
        Italic         = 0    'False
        Strikethrough  = 0    'False
    EndProperty
    Height             = 255
    Index              = 53
    Left               = 9240
    TabIndex           = 113
    Top                = 5040
    Width              = 4815
End
Begin VB.CheckBox chkOptions
    Caption            = "BUIDAR SITJA S7 SI EV12"
    BeginProperty Font
        Name            = "MS Sans Serif"
        Size             = 9.75
        Charset          = 0
        Weight           = 700
        Underline        = 0    'False
        Italic           = 0    'False
        Strikethrough    = 0    'False
    EndProperty
    Height             = 255
    Index              = 52
    Left               = 9240
    TabIndex           = 112
    Top                = 4680
    Width              = 4815
End
Begin VB.CheckBox chkOptions
    Caption            = "BUIDAR SITJA S6 SI EV11"
    BeginProperty Font
        Name            = "MS Sans Serif"
        Size             = 9.75
        Charset          = 0
        Weight           = 700
        Underline        = 0    'False
        Italic           = 0    'False
        Strikethrough    = 0    'False
    EndProperty
    Height             = 255
    Index              = 51
    Left               = 9240
    TabIndex           = 111
    Top                = 4320
    Width              = 4815
End
Begin VB.CheckBox chkOptions
    Caption            = "BUIDAR SITJA S5 SI EV10"
    BeginProperty Font
        Name            = "MS Sans Serif"
        Size             = 9.75
        Charset          = 0
        Weight           = 700
        Underline        = 0    'False
        Italic           = 0    'False
        Strikethrough    = 0    'False
    EndProperty
    Height             = 255
    Index              = 50
    Left               = 9240
    TabIndex           = 110
    Top                = 3960
    Width              = 4815
End
Begin VB.CheckBox chkOptions
    Caption            = "ACTIVAR SS7 SI EV12"
    BeginProperty Font
        Name            = "MS Sans Serif"
        Size             = 9.75
        Charset          = 0

```



```

        Weight          = 700
        Underline        = 0    'False
        Italic           = 0    'False
        Strikethrough     = 0    'False
    EndProperty
    Height              = 255
    Index               = 49
    Left                = 9240
    TabIndex            = 109
    Top                 = 3600
    Width               = 4815
End
Begin VB.CheckBox chkOptions
    Caption              = "ACTIVAR SS6 SI EV11"
    BeginProperty Font
        Name              = "MS Sans Serif"
        Size              = 9.75
        Charset           = 0
        Weight            = 700
        Underline         = 0    'False
        Italic            = 0    'False
        Strikethrough     = 0    'False
    EndProperty
    Height              = 255
    Index               = 48
    Left                = 9240
    TabIndex            = 108
    Top                 = 3240
    Width               = 4815
End
Begin VB.CheckBox chkOptions
    Caption              = "ACTIVAR SS5 SI EV10"
    BeginProperty Font
        Name              = "MS Sans Serif"
        Size              = 9.75
        Charset           = 0
        Weight            = 700
        Underline         = 0    'False
        Italic            = 0    'False
        Strikethrough     = 0    'False
    EndProperty
    Height              = 255
    Index               = 47
    Left                = 9240
    TabIndex            = 107
    Top                 = 2880
    Width               = 4815
End
Begin VB.CheckBox chkOptions
    Caption              = "OMPLIR SITJA S7 SI EV9"
    BeginProperty Font
        Name              = "MS Sans Serif"
        Size              = 9.75
        Charset           = 0
        Weight            = 700
        Underline         = 0    'False
        Italic            = 0    'False
        Strikethrough     = 0    'False
    EndProperty
    Height              = 255
    Index               = 46
    Left                = 9240
    TabIndex            = 106
    Top                 = 2520
    Width               = 4815
End
Begin VB.CheckBox chkOptions
    Caption              = "OMPLIR SITJA S6 SI EV8"
    BeginProperty Font
        Name              = "MS Sans Serif"
        Size              = 9.75

```

```

        Charset          = 0
        Weight           = 700
        Underline        = 0   'False
        Italic           = 0   'False
        Strikethrough    = 0   'False
    EndProperty
    Height               = 255
    Index                = 45
    Left                 = 9240
    TabIndex             = 105
    Top                  = 2160
    Width                = 4815
End
Begin VB.CheckBox chkOptions
    Caption              = "OMPLIR SITJA S5 SI EV7"
    BeginProperty Font
        Name              = "MS Sans Serif"
        Size               = 9.75
        Charset            = 0
        Weight             = 700
        Underline          = 0   'False
        Italic             = 0   'False
        Strikethrough      = 0   'False
    EndProperty
    Height               = 255
    Index                = 44
    Left                 = 9240
    TabIndex             = 104
    Top                  = 1800
    Width                = 4815
End
Begin VB.CheckBox chkOptions
    Caption              = "ACTIVAR FC7 SI M19 I SITJA S7"
    BeginProperty Font
        Name              = "MS Sans Serif"
        Size               = 9.75
        Charset            = 0
        Weight             = 700
        Underline          = 0   'False
        Italic             = 0   'False
        Strikethrough      = 0   'False
    EndProperty
    Height               = 255
    Index                = 43
    Left                 = 9240
    TabIndex             = 103
    Top                  = 1440
    Width                = 4815
End
Begin VB.CheckBox chkOptions
    Caption              = "ACTIVAR FC6 SI M19 I SITJA S6"
    BeginProperty Font
        Name              = "MS Sans Serif"
        Size               = 9.75
        Charset            = 0
        Weight             = 700
        Underline          = 0   'False
        Italic             = 0   'False
        Strikethrough      = 0   'False
    EndProperty
    Height               = 255
    Index                = 42
    Left                 = 9240
    TabIndex             = 102
    Top                  = 1080
    Width                = 4815
End
Begin VB.CheckBox chkOptions
    Caption              = "ACTIVAR FC5 SI M19 I SITJA S5"
    BeginProperty Font
        Name              = "MS Sans Serif"

```

```

        Size          = 9.75
        Charset        = 0
        Weight         = 700
        Underline      = 0   'False
        Italic         = 0   'False
        Strikethrough  = 0   'False
    EndProperty
    Height            = 255
    Index             = 41
    Left              = 9240
    TabIndex          = 101
    Top               = 720
    Width             = 4815
End
Begin VB.CheckBox chkOptions
    Caption           = "ACTIVAR S4 A 5 SEGONS DE EV6"
    BeginProperty Font
        Name           = "MS Sans Serif"
        Size           = 9.75
        Charset        = 0
        Weight         = 700
        Underline      = 0   'False
        Italic         = 0   'False
        Strikethrough  = 0   'False
    EndProperty
    Height            = 255
    Index             = 40
    Left              = 9240
    TabIndex          = 100
    Top               = 360
    Width             = 4815
End
Begin VB.CheckBox chkOptions
    Caption           = "ACTIVAR S3 A 5 SEGONS DE EV2"
    BeginProperty Font
        Name           = "MS Sans Serif"
        Size           = 9.75
        Charset        = 0
        Weight         = 700
        Underline      = 0   'False
        Italic         = 0   'False
        Strikethrough  = 0   'False
    EndProperty
    Height            = 255
    Index             = 39
    Left              = 4200
    TabIndex          = 99
    Top               = 7200
    Width             = 4815
End
Begin VB.CheckBox chkOptions
    Caption           = "ACTIVAR S2 A 5 SEGONS DE EV3"
    BeginProperty Font
        Name           = "MS Sans Serif"
        Size           = 9.75
        Charset        = 0
        Weight         = 700
        Underline      = 0   'False
        Italic         = 0   'False
        Strikethrough  = 0   'False
    EndProperty
    Height            = 255
    Index             = 38
    Left              = 4200
    TabIndex          = 98
    Top               = 6840
    Width             = 4815
End
Begin VB.CheckBox chkOptions
    Caption           = "OMPLIR BASCULA SI M10"
    BeginProperty Font

```

```

        Name           = "MS Sans Serif"
        Size           = 9.75
        Charset        = 0
        Weight         = 700
        Underline      = 0 'False
        Italic         = 0 'False
        Strikethrough  = 0 'False
    EndProperty
    Height            = 255
    Index             = 37
    Left              = 4200
    TabIndex          = 97
    Top               = 6480
    Width             = 4815
End
Begin VB.CheckBox chkOptions
    Caption           = "OMPLIR BASCULA SI M9"
    BeginProperty Font
        Name           = "MS Sans Serif"
        Size           = 9.75
        Charset        = 0
        Weight         = 700
        Underline      = 0 'False
        Italic         = 0 'False
        Strikethrough  = 0 'False
    EndProperty
    Height            = 255
    Index             = 36
    Left              = 4200
    TabIndex          = 96
    Top               = 6120
    Width             = 4815
End
Begin VB.CheckBox chkOptions
    Caption           = "OMPLIR BASCULA SI M8"
    BeginProperty Font
        Name           = "MS Sans Serif"
        Size           = 9.75
        Charset        = 0
        Weight         = 700
        Underline      = 0 'False
        Italic         = 0 'False
        Strikethrough  = 0 'False
    EndProperty
    Height            = 255
    Index             = 35
    Left              = 4200
    TabIndex          = 95
    Top               = 5760
    Width             = 4815
End
Begin VB.CheckBox chkOptions
    Caption           = "OMPLIR BASCULA SI M7"
    BeginProperty Font
        Name           = "MS Sans Serif"
        Size           = 9.75
        Charset        = 0
        Weight         = 700
        Underline      = 0 'False
        Italic         = 0 'False
        Strikethrough  = 0 'False
    EndProperty
    Height            = 255
    Index             = 34
    Left              = 4200
    TabIndex          = 94
    Top               = 5400
    Width             = 4815
End
Begin VB.CheckBox chkOptions
    Caption           = "BUIDAR SITJA S4 SI M10"

```

```

BeginProperty Font
    Name           = "MS Sans Serif"
    Size           = 9.75
    Charset        = 0
    Weight         = 700
    Underline      = 0 'False
    Italic         = 0 'False
    Strikethrough  = 0 'False
EndProperty
Height           = 255
Index           = 33
Left            = 4200
TabIndex        = 93
Top             = 5040
Width           = 4815
End
Begin VB.CheckBox chkOptions
    Caption       = "BUIDAR SITJA S3 SI M9"
    BeginProperty Font
        Name           = "MS Sans Serif"
        Size           = 9.75
        Charset        = 0
        Weight         = 700
        Underline      = 0 'False
        Italic         = 0 'False
        Strikethrough  = 0 'False
    EndProperty
    Height        = 255
    Index         = 32
    Left          = 4200
    TabIndex      = 92
    Top           = 4680
    Width         = 4815
End
Begin VB.CheckBox chkOptions
    Caption       = "BUIDAR SITJA S2 SI M8"
    BeginProperty Font
        Name           = "MS Sans Serif"
        Size           = 9.75
        Charset        = 0
        Weight         = 700
        Underline      = 0 'False
        Italic         = 0 'False
        Strikethrough  = 0 'False
    EndProperty
    Height        = 255
    Index         = 31
    Left          = 4200
    TabIndex      = 91
    Top           = 4320
    Width         = 4815
End
Begin VB.CheckBox chkOptions
    Caption       = "BUIDAR SITJA S1 SI M7"
    BeginProperty Font
        Name           = "MS Sans Serif"
        Size           = 9.75
        Charset        = 0
        Weight         = 700
        Underline      = 0 'False
        Italic         = 0 'False
        Strikethrough  = 0 'False
    EndProperty
    Height        = 255
    Index         = 30
    Left          = 4200
    TabIndex      = 90
    Top           = 3960
    Width         = 4815
End
Begin VB.CheckBox chkOptions

```

```

Caption          = "ACTIVAR SS4 SI M10"
BeginProperty Font
    Name          = "MS Sans Serif"
    Size          = 9.75
    Charset       = 0
    Weight        = 700
    Underline     = 0    'False
    Italic        = 0    'False
    Strikethrough = 0    'False
EndProperty
Height          = 255
Index          = 29
Left           = 4200
TabIndex       = 89
Top            = 3600
Width          = 4815
End
Begin VB.CheckBox chkOptions
Caption          = "ACTIVAR SS3 SI M9"
BeginProperty Font
    Name          = "MS Sans Serif"
    Size          = 9.75
    Charset       = 0
    Weight        = 700
    Underline     = 0    'False
    Italic        = 0    'False
    Strikethrough = 0    'False
EndProperty
Height          = 255
Index          = 28
Left           = 4200
TabIndex       = 88
Top            = 3240
Width          = 4815
End
Begin VB.CheckBox chkOptions
Caption          = "ACTIVAR SS2 SI M8"
BeginProperty Font
    Name          = "MS Sans Serif"
    Size          = 9.75
    Charset       = 0
    Weight        = 700
    Underline     = 0    'False
    Italic        = 0    'False
    Strikethrough = 0    'False
EndProperty
Height          = 255
Index          = 27
Left           = 4200
TabIndex       = 87
Top            = 2880
Width          = 4815
End
Begin VB.CheckBox chkOptions
Caption          = "ACTIVAR SS1 SI M7"
BeginProperty Font
    Name          = "MS Sans Serif"
    Size          = 9.75
    Charset       = 0
    Weight        = 700
    Underline     = 0    'False
    Italic        = 0    'False
    Strikethrough = 0    'False
EndProperty
Height          = 255
Index          = 26
Left           = 4200
TabIndex       = 86
Top            = 2520
Width          = 4815
End

```

```

Begin VB.CheckBox chkOptions
  Caption      = "OMPLIR SITJA S3 SI M4 I FC3"
  BeginProperty Font
    Name        = "MS Sans Serif"
    Size        = 9.75
    Charset     = 0
    Weight      = 700
    Underline   = 0   'False
    Italic      = 0   'False
    Strikethrough = 0   'False
  EndProperty
  Height       = 255
  Index        = 25
  Left         = 4200
  TabIndex     = 85
  Top          = 2160
  Width        = 4815
End
Begin VB.CheckBox chkOptions
  Caption      = "OMPLIR SITJA S3 SI M4 I FC3"
  BeginProperty Font
    Name        = "MS Sans Serif"
    Size        = 9.75
    Charset     = 0
    Weight      = 700
    Underline   = 0   'False
    Italic      = 0   'False
    Strikethrough = 0   'False
  EndProperty
  Height       = 255
  Index        = 24
  Left         = 4200
  TabIndex     = 84
  Top          = 1800
  Width        = 4815
End
Begin VB.CheckBox chkOptions
  Caption      = "OMPLIR SITJA S2 SI M4 I FC2"
  BeginProperty Font
    Name        = "MS Sans Serif"
    Size        = 9.75
    Charset     = 0
    Weight      = 700
    Underline   = 0   'False
    Italic      = 0   'False
    Strikethrough = 0   'False
  EndProperty
  Height       = 255
  Index        = 23
  Left         = 4200
  TabIndex     = 83
  Top          = 1440
  Width        = 4815
End
Begin VB.CheckBox chkOptions
  Caption      = "OMPLIR SITJA S1 SI M4 I FC1"
  BeginProperty Font
    Name        = "MS Sans Serif"
    Size        = 9.75
    Charset     = 0
    Weight      = 700
    Underline   = 0   'False
    Italic      = 0   'False
    Strikethrough = 0   'False
  EndProperty
  Height       = 255
  Index        = 22
  Left         = 4200
  TabIndex     = 82
  Top          = 1080
  Width        = 4815

```

```

End
Begin VB.CheckBox chkOptions
    Caption           = "ACTIVAR S1 A 5 SEGONS DE M2"
    BeginProperty Font
        Name           = "MS Sans Serif"
        Size           = 9.75
        Charset        = 0
        Weight         = 700
        Underline      = 0   'False
        Italic         = 0   'False
        Strikethrough  = 0   'False
    EndProperty
    Height            = 255
    Index            = 21
    Left             = 4200
    TabIndex         = 81
    Top              = 720
    Width            = 4815
End
Begin VB.CheckBox chkOptions
    Caption           = "ACTIVAR FC1..FC4 AMB REVOLVER"
    BeginProperty Font
        Name           = "MS Sans Serif"
        Size           = 9.75
        Charset        = 0
        Weight         = 700
        Underline      = 0   'False
        Italic         = 0   'False
        Strikethrough  = 0   'False
    EndProperty
    Height            = 255
    Index            = 20
    Left             = 4200
    TabIndex         = 80
    Top              = 360
    Width            = 4815
End
Begin VB.CheckBox chkOptions
    Caption           = "CONFIRMACIÓ MOTOR M1"
    BeginProperty Font
        Name           = "MS Sans Serif"
        Size           = 9.75
        Charset        = 0
        Weight         = 700
        Underline      = 0   'False
        Italic         = 0   'False
        Strikethrough  = 0   'False
    EndProperty
    Height            = 255
    Index            = 0
    Left             = 120
    TabIndex         = 79
    Top              = 360
    Width            = 3855
End
Begin VB.CheckBox chkOptions
    Caption           = "CONFIRMACIÓ MOTOR M2"
    BeginProperty Font
        Name           = "MS Sans Serif"
        Size           = 9.75
        Charset        = 0
        Weight         = 700
        Underline      = 0   'False
        Italic         = 0   'False
        Strikethrough  = 0   'False
    EndProperty
    Height            = 255
    Index            = 1
    Left             = 120
    TabIndex         = 78
    Top              = 720

```



```

        Width          = 3855
    End
    Begin VB.CheckBox chkOptions
        Caption          = "CONFIRMACIÓ MOTOR M3"
        BeginProperty Font
            Name           = "MS Sans Serif"
            Size           = 9.75
            Charset         = 0
            Weight          = 700
            Underline       = 0      'False
            Italic          = 0      'False
            Strikethrough    = 0      'False
        EndProperty
        Height            = 255
        Index             = 2
        Left              = 120
        TabIndex          = 77
        Top               = 1080
        Width             = 3855
    End
    Begin VB.CheckBox chkOptions
        Caption          = "CONFIRMACIÓ MOTOR M4"
        BeginProperty Font
            Name           = "MS Sans Serif"
            Size           = 9.75
            Charset         = 0
            Weight          = 700
            Underline       = 0      'False
            Italic          = 0      'False
            Strikethrough    = 0      'False
        EndProperty
        Height            = 255
        Index             = 3
        Left              = 120
        TabIndex          = 76
        Top               = 1440
        Width             = 3855
    End
    Begin VB.CheckBox chkOptions
        Caption          = "CONFIRMACIÓ REVOLVER"
        BeginProperty Font
            Name           = "MS Sans Serif"
            Size           = 9.75
            Charset         = 0
            Weight          = 700
            Underline       = 0      'False
            Italic          = 0      'False
            Strikethrough    = 0      'False
        EndProperty
        Height            = 255
        Index             = 4
        Left              = 120
        TabIndex          = 75
        Top               = 1800
        Width             = 3855
    End
    Begin VB.CheckBox chkOptions
        Caption          = "CONFIRMACIÓ MOTOR M5"
        BeginProperty Font
            Name           = "MS Sans Serif"
            Size           = 9.75
            Charset         = 0
            Weight          = 700
            Underline       = 0      'False
            Italic          = 0      'False
            Strikethrough    = 0      'False
        EndProperty
        Height            = 255
        Index             = 5
        Left              = 120
        TabIndex          = 74
    End

```

```

        Top          = 2160
        Width        = 3855
    End
    Begin VB.CheckBox chkOptions
        Caption       = "CONFIRMACIÓ MOTOR M6"
        BeginProperty Font
            Name        = "MS Sans Serif"
            Size        = 9.75
            Charset     = 0
            Weight      = 700
            Underline   = 0      'False
            Italic      = 0      'False
            Strikethrough = 0      'False
        EndProperty
        Height        = 255
        Index         = 6
        Left          = 120
        TabIndex      = 73
        Top           = 2520
        Width         = 3855
    End
    Begin VB.CheckBox chkOptions
        Caption       = "CONFIRMACIÓ MOTOR M7"
        BeginProperty Font
            Name        = "MS Sans Serif"
            Size        = 9.75
            Charset     = 0
            Weight      = 700
            Underline   = 0      'False
            Italic      = 0      'False
            Strikethrough = 0      'False
        EndProperty
        Height        = 255
        Index         = 7
        Left          = 120
        TabIndex      = 72
        Top           = 2880
        Width         = 3855
    End
    Begin VB.CheckBox chkOptions
        Caption       = "CONFIRMACIÓ MOTOR M8"
        BeginProperty Font
            Name        = "MS Sans Serif"
            Size        = 9.75
            Charset     = 0
            Weight      = 700
            Underline   = 0      'False
            Italic      = 0      'False
            Strikethrough = 0      'False
        EndProperty
        Height        = 255
        Index         = 8
        Left          = 120
        TabIndex      = 71
        Top           = 3240
        Width         = 3855
    End
    Begin VB.CheckBox chkOptions
        Caption       = "CONFIRMACIÓ MOTOR M9"
        BeginProperty Font
            Name        = "MS Sans Serif"
            Size        = 9.75
            Charset     = 0
            Weight      = 700
            Underline   = 0      'False
            Italic      = 0      'False
            Strikethrough = 0      'False
        EndProperty
        Height        = 255
        Index         = 9
        Left          = 120
    
```

```

        TabIndex      = 70
        Top            = 3600
        Width          = 3855
    End
    Begin VB.CheckBox chkOptions
        Caption        = "CONFIRMACIÓ MOTOR M10"
        BeginProperty Font
            Name        = "MS Sans Serif"
            Size        = 9.75
            Charset     = 0
            Weight      = 700
            Underline   = 0      'False
            Italic      = 0      'False
            Strikethrough = 0      'False
        EndProperty
        Height          = 255
        Index           = 10
        Left            = 120
        TabIndex        = 69
        Top             = 3960
        Width           = 3855
    End
    Begin VB.CheckBox chkOptions
        Caption        = "CONFIRMACIÓ MOTOR M11"
        BeginProperty Font
            Name        = "MS Sans Serif"
            Size        = 9.75
            Charset     = 0
            Weight      = 700
            Underline   = 0      'False
            Italic      = 0      'False
            Strikethrough = 0      'False
        EndProperty
        Height          = 255
        Index           = 11
        Left            = 120
        TabIndex        = 68
        Top             = 4320
        Width           = 3855
    End
    Begin VB.CheckBox chkOptions
        Caption        = "CONFIRMACIÓ MOTOR M12"
        BeginProperty Font
            Name        = "MS Sans Serif"
            Size        = 9.75
            Charset     = 0
            Weight      = 700
            Underline   = 0      'False
            Italic      = 0      'False
            Strikethrough = 0      'False
        EndProperty
        Height          = 255
        Index           = 12
        Left            = 120
        TabIndex        = 67
        Top             = 4680
        Width           = 3855
    End
    Begin VB.CheckBox chkOptions
        Caption        = "CONFIRMACIÓ MOTOR M13"
        BeginProperty Font
            Name        = "MS Sans Serif"
            Size        = 9.75
            Charset     = 0
            Weight      = 700
            Underline   = 0      'False
            Italic      = 0      'False
            Strikethrough = 0      'False
        EndProperty
        Height          = 255
        Index           = 13
    
```

```

        Left          = 120
        TabIndex      = 66
        Top           = 5040
        Width         = 3855
    End
    Begin VB.CheckBox chkOptions
        Caption        = "CONFIRMACIÓ MOTOR M14"
        BeginProperty Font
            Name        = "MS Sans Serif"
            Size        = 9.75
            Charset     = 0
            Weight      = 700
            Underline   = 0 'False
            Italic      = 0 'False
            Strikethrough = 0 'False
        EndProperty
        Height          = 255
        Index           = 14
        Left            = 120
        TabIndex        = 65
        Top             = 5400
        Width           = 3855
    End
    Begin VB.CheckBox chkOptions
        Caption        = "CONFIRMACIÓ MOTOR M15"
        BeginProperty Font
            Name        = "MS Sans Serif"
            Size        = 9.75
            Charset     = 0
            Weight      = 700
            Underline   = 0 'False
            Italic      = 0 'False
            Strikethrough = 0 'False
        EndProperty
        Height          = 255
        Index           = 15
        Left            = 120
        TabIndex        = 64
        Top             = 5760
        Width           = 3855
    End
    Begin VB.CheckBox chkOptions
        Caption        = "CONFIRMACIÓ MOTOR M16"
        BeginProperty Font
            Name        = "MS Sans Serif"
            Size        = 9.75
            Charset     = 0
            Weight      = 700
            Underline   = 0 'False
            Italic      = 0 'False
            Strikethrough = 0 'False
        EndProperty
        Height          = 255
        Index           = 16
        Left            = 120
        TabIndex        = 63
        Top             = 6120
        Width           = 3855
    End
    Begin VB.CheckBox chkOptions
        Caption        = "CONFIRMACIÓ MOTOR M17"
        BeginProperty Font
            Name        = "MS Sans Serif"
            Size        = 9.75
            Charset     = 0
            Weight      = 700
            Underline   = 0 'False
            Italic      = 0 'False
            Strikethrough = 0 'False
        EndProperty
        Height          = 255
    End

```

```

        Index          = 17
        Left           = 120
        TabIndex       = 62
        Top            = 6480
        Width          = 3855
    End
    Begin VB.CheckBox chkOptions
        Caption         = "CONFIRMACIÓ MOTOR M18"
        BeginProperty Font
            Name          = "MS Sans Serif"
            Size          = 9.75
            Charset       = 0
            Weight        = 700
            Underline     = 0 'False
            Italic        = 0 'False
            Strikethrough = 0 'False
        EndProperty
        Height           = 255
        Index            = 18
        Left             = 120
        TabIndex        = 61
        Top              = 6840
        Width            = 3855
    End
    Begin VB.CheckBox chkOptions
        Caption         = "CONFIRMACIÓ MOTOR M19"
        BeginProperty Font
            Name          = "MS Sans Serif"
            Size          = 9.75
            Charset       = 0
            Weight        = 700
            Underline     = 0 'False
            Italic        = 0 'False
            Strikethrough = 0 'False
        EndProperty
        Height           = 255
        Index            = 19
        Left             = 120
        TabIndex        = 60
        Top              = 7200
        Width            = 3855
    End
    Begin VB.Label lblImatgeSimulador
        Alignment        = 2 'Center
        AutoSize         = -1 'True
        BackStyle        = 0 'Transparent
        Caption          = "TOTS"
        BeginProperty Font
            Name          = "Tahoma"
            Size          = 18
            Charset       = 0
            Weight        = 700
            Underline     = 0 'False
            Italic        = 0 'False
            Strikethrough = 0 'False
        EndProperty
        ForeColor        = &H00FFFFFF&
        Height           = 435
        Index            = 0
        Left             = 870
        TabIndex        = 58
        Top              = 7920
        Width            = 975
    End
    Begin VB.Label lblImatgeSimulador
        Alignment        = 2 'Center
        AutoSize         = -1 'True
        BackStyle        = 0 'Transparent
        Caption          = "CAP"
        BeginProperty Font
            Name          = "Tahoma"

```

```

        Size           = 18
        Charset        = 0
        Weight         = 700
        Underline      = 0   'False
        Italic         = 0   'False
        Strikethrough  = 0   'False
    EndProperty
    ForeColor          = &H00FFFFFF&
    Height             = 435
    Index              = 1
    Left               = 3750
    TabIndex           = 57
    Top                = 7920
    Width              = 735
End
Begin VB.Image imgImatgeSimulador
    Height             = 735
    Index              = 0
    Left               = 120
    Picture             = (Mapa de bits)
    Stretch             = -1   'True
    Top                = 7800
    Width              = 2460
End
Begin VB.Image imgImatgeSimulador
    Height             = 735
    Index              = 1
    Left               = 2880
    Picture             = (Mapa de bits)
    Stretch             = -1   'True
    Top                = 7800
    Width              = 2460
End
End
Begin VB.Image imgSimuladorTancar
    Height             = 285
    Left               = 14040
    Picture             = (Mapa de bits)
    Top                = 45
    Width              = 315
End
Begin VB.Label lblSimuladorTitol
    Alignment          = 2   'Center
    BackColor          = &H00808080&
    Caption             = "SIMULADOR"
    BeginProperty Font
        Name            = "Arial"
        Size            = 14.25
        Charset         = 0
        Weight          = 700
        Underline       = 0   'False
        Italic          = 0   'False
        Strikethrough    = 0   'False
    EndProperty
    ForeColor          = &H00FFFFFF&
    Height             = 375
    Left               = 0
    TabIndex           = 59
    Top                = 0
    Width              = 14415
End
End
End

```



Versió:
(0,0)

Recarregar

MONITOR

IstvMonitor

MISSATGES

ALARMES

OK

☐ CONFIRMACIÓ MOTOR M19

CA

PROD

QUAN

IN

PROD

QUAN

IN

PROD

QUAN

IN

modAPI - 1

Option Explicit

' -- Declaracio
Private Declare
stringA" (ByVal
ring, ByVal lpf
As Long

Private Declare
ileStringA" (By
Any, ByVal lpf


```

' Permet llegir un fitxer de configuracio
'-----
Public Function INI_Get(ByVal strParametre As String, ByVal varDefecte As Variant, Optional
al Grup As Variant, Optional Fitxer As Variant, Optional BooleaTrue As Variant, Optional
BooleaFalse As Variant) As Variant
Static strGrup As String
Static strFitxer As String
Dim intNumCar As Integer
Dim strBuffer As String

'-- miro els parametres per defecte de booleans
If IsMissing(BooleaTrue) Then BooleaTrue = "ON,SI"
If IsMissing(BooleaFalse) Then BooleaFalse = "OFF,NO"
'-- miro els parametres per defecte de grup i fitxer
If Not IsMissing(Grup) Then strGrup = Grup
If Not IsMissing(Fitxer) Then strFitxer = Fitxer

'----inicialitzem el buffer
strBuffer = String(1200, Chr$(0))

'---- obrim INI i capturem valor
intNumCar = GetPrivateProfileString(strGrup, strParametre, "", strBuffer, Len(strBuffer)
), strFitxer)

'-- mirem si no trobat, retorna valor per defecte
If intNumCar = 0 Then

'-- retorno el valor per defecte
INI_Get = varDefecte

Else

'-- Trec els characters nuls de la cadena de characters
strBuffer = Mid$(strBuffer, 1, intNumCar)

Select Case VarType(varDefecte)

Case 2 'Integer
'-- contrueixo una cadena de characters on hi han les possibles
'-- combinacions de valors en INI que indiquen Valor Booleà.
'-- buscarè el que ha retornat dins la cadena, si hi es vol dir
'-- que es un booleà i miraré si es un valor de true o false
If InStr(BooleaTrue & "," & BooleaFalse, UCase(Trim$(strBuffer))) Then
'-- retorno True o False segons el que hàgim llegit
INI_Get = IIf(InStr(BooleaTrue, UCase(Trim$(strBuffer))), True, False)
Else
'-- retorno el valor enter
INI_Get = Val(Trim$(strBuffer))
End If

Case 3 'Long
INI_Get = CLng(strBuffer)
Case 4 'Single
INI_Get = CSng(strBuffer)
Case 5 'Double
INI_Get = CDbl(strBuffer)
Case 6 'Currency
INI_Get = CCur(strBuffer)
Case 8 'String
INI_Get = Trim$(strBuffer)
Case 7 'Date
INI_Get = CDate(strBuffer)
Case 11
'-- retorno True o False segons el que hagim llegit
INI_Get = InStr(UCase(BooleaTrue), UCase(Trim$(strBuffer))) <> 0
Case Else
INI_Get = 0
End Select

End If

```

modAPI - 3

End Function

```
'-----
'-- INI_Put()
'-----
' Permet escriure un fitxer de configuracio
'-----
Public Sub INI_Put(Identificador As String, ByVal Cadena As Variant, Optional Grup As Variant, Optional Fitxer As Variant)
Static CopiaGrup As String
Static CopiaFitxer As String
Dim a As Integer
```

```
    If Not IsMissing(Grup) Then CopiaGrup = Grup
    If Not IsMissing(Fitxer) Then CopiaFitxer = Fitxer
```

```
    a = WritePrivateProfileString(CopiaGrup, Identificador, CStr(Cadena), CopiaFitxer)
```

End Sub

```
'-----
'-- CopiarFitxer()
'-----
' Permet copiar un fitxer origen a un fitxer desti
'-----
Public Function CopiarFitxer(strOrigen As String, strDesti As String) As Boolean
Dim lngRet As Long
Dim lngErr As Long
```

```
    On Error GoTo TractaError
    '-- Copio el fitxer origen en el desti
    lngRet = CopyFile(strOrigen, strDesti, lngErr)
    CopiarFitxer = Not lngErr
```

Exit Function

TractaError:

```
    CopiarFitxer = False
    Exit Function
```

End Function

```
Public Function Base10BaseN(lngValor As Long, intBase As Integer) As String
Dim lngTmp As Long
Dim strTmp As String
```

```
    '-- Comprovem la precondicio d'entrada
    If lngValor >= 0 And intBase > 1 And intBase <= 37 Then
        '-- em deso el valor
        lngTmp = lngValor
        strTmp = ""
        '-- bucle per anar dividint
        Do
            '-- poso el carcter que correspon a la resta de la divisio
            strTmp = CaracterBase10BaseN(lngTmp Mod intBase) & strTmp
            '-- faig la divisio entera
            lngTmp = lngTmp \ intBase
        Loop Until lngTmp < intBase
        '-- poso el carcter que correspon al valor enter de la divisio
        If lngTmp > 0 Then strTmp = CaracterBase10BaseN(CInt(lngTmp)) & strTmp
        '-- retorno la cadena convertida
        Base10BaseN = strTmp
    End If
```

End Function

```
Public Function BaseNBase10(strValor As String, intBase As Integer) As Long
Dim Index As Integer
Dim strTmp As String
Dim lngTmp As Long
Dim intDigit As Integer
Dim strDigit As String * 1
```

```

'-- Faig una copia interna del valor, sense espais
strTmp = Trim$(strValor)
'-- Comprovo la precondicio d'entrada
If strTmp <> "" Then
    '-- Inicialitzo el valor
    lngTmp = 0
    '-- Bucle per calcular el valor de cada digit
    For Index = 0 To Len(strTmp) - 1
        '-- Miro el digit
        strDigit = Mid$(strTmp, Len(strTmp) - Index, 1)
        '-- Miro el valor del digit
        intDigit = CaracterBaseNBase10(strDigit)
        '-- Miro el que val aquest digit
        lngTmp = lngTmp + ((intBase ^ Index) * intDigit)
    Next Index
    '-- Retorno el valor
    BaseNBase10 = lngTmp
End If

```

End Function

```

Public Function BaseNBaseN(strValor As String, intBaseOrigen As Integer, intBaseDesti As Integer) As String

```

```

    '-- Per fer la conversio utilitzo les funcions passant per base 10
    BaseNBaseN = Base10BaseN(BaseNBase10(strValor, intBaseOrigen), intBaseDesti)

```

End Function

```

'-----
' BitEstatGet()
'-----
' Retorna l'estat d'un dels bits d'un word '
'-----

```

```

Public Function BitEstatGet(Word As Double, Bit As Integer) As Integer
Dim bolEstat As Boolean

```

```

    If Word >= 0 Then
        'True si esta activat, False en cas contrari
        bolEstat = (Word And 2 ^ Bit) = 2 ^ Bit
        'Retorno 1 si esta activat, 0 en cas contrari
        BitEstatGet = IIf(bolEstat, 1, 0)
    Else
        BitEstatGet = 0
    End If
End Function

```

End Function

```

'-----
' BitEstatSet()
'-----
' Aquesta funcio serveix per activar o desactivar '
' un bit d'un word. '
' Segons el valor boolea d'estat activara o '
' desactivara el bit que li passem al parametre '
' Bit del word que li passem a Word. '
' Si volem activar un bit que esta activat, '
' el bit retorna activat. Si volem desactivar '
' un bit que esta desactivat el retorna desactivat '
' La funcio no conmutara l'estat del bit. '
'-----

```

```

Public Function BitEstatSet(Word As Double, Bit As Integer, Estat As Integer) As Double

```

```

    '-- Miro si volem activar el bit
    If Estat = 1 Then
        '-- Miro si el bit esta Desactivat
        If (Word And 2 ^ Bit) <> 2 ^ Bit Then
            '-- L'activo
            Word = Word Xor 2 ^ Bit
        End If
    Else
        '-- Miro si el bit esta activat

```

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```
If (Word And 2 ^ Bit) = 2 ^ Bit Then
    '-- El desactivo
    Word = Word Xor 2 ^ Bit
End If
End If
'-- Retorno el resultat
BitEstatSet = Word
```

End Function

Private Function CaracterBase10BaseN(Valor As Integer) As String

```
Select Case Valor
    Case 0 To 9
        CaracterBase10BaseN = CStr(Valor)
    Case 10 To 36
        CaracterBase10BaseN = Chr$(Valor + 87)
    Case Else
        CaracterBase10BaseN = ""
End Select
```

End Function

Private Function CaracterBaseNBase10(strValor As String) As Integer

Dim strTmp As String * 1

```
strTmp = LCase(strValor)
Select Case Asc(strTmp)
    '-- Numeros
    Case 48 To 57
        CaracterBaseNBase10 = Asc(strTmp) - 48
    '-- Lletres
    Case 97 To 122
        CaracterBaseNBase10 = Asc(strTmp) - 87
    Case Else
        CaracterBaseNBase10 = -1
End Select
```

End Function

Public Sub APAGAR_W2K(reiniciar)

Dim hdlProcessHandle As Long

Dim hdlTokenHandle As Long

Dim tmpLuid As LUID

Dim tkp As TOKEN_PRIVILEGES

Dim tkpNewButIgnored As TOKEN_PRIVILEGES

Dim lBufferNeeded As Long

Dim lRetVal As Long

On Error GoTo suberror

hdlProcessHandle = GetCurrentProcess()

OpenProcessToken hdlProcessHandle, (TOKEN_ADJUST_PRIVILEGES Or TOKEN_QUERY), hdlTokenHandle

' Get the LUID for shutdown privilege.

LookupPrivilegeValue "", "SeShutdownPrivilege", tmpLuid

tkp.PrivilegeCount = 1 ' One privilege to set

tkp.TheLuid = tmpLuid

tkp.Attributes = SE_PRIVILEGE_ENABLED

' Enable the shutdown privilege in the access token of this process.

AdjustTokenPrivileges hdlTokenHandle, False, _

tkp, Len(tkpNewButIgnored), tkpNewButIgnored, lBufferNeeded

If reiniciar = 1 Then

lRetVal = ExitWindowsEx(EWX_REBOOT Or EWX_FORCE, &HFFFF)

Else

lRetVal = ExitWindowsEx(EWX_SHUTDOWN Or EWX_FORCE, &HFFFF)

End If

modAPI - 6

```
Exit Sub
suberror:
    End
End Sub
```

```
Public Function MiraSiAppEstaFuncionant(strApp As String) As Boolean
Dim lhwnd As Long
```

```
    lhwnd = FindWindow(vbNullString, strApp)
    If lhwnd > 0 Then
        MiraSiAppEstaFuncionant = True
    End If
```

```
End Function
```

```
Public Sub Delay(lngMilisegons As Long)
    Sleep lngMilisegons
End Sub
```

modSISTEMA - 1

Option Explicit

```
'-- Declaro les variables globals
Public strFitxerRegistre As String
Public strFitxerConfig As String
Public strDelimitador As String
```

```
'-- Declaro les constants
Public Const CTE_FITXER_REGISTRE = "Registre.log"
Public Const CTE_PROJECTE = "SVAOmronTamarite"
Public Const CTE_SEPARADOR = " "
'Defineixo els possibles estats dels bits
Public Const BIT_ON = 1
Public Const BIT_OFF = 0
```

```
Private Declare Sub Sleep Lib "Kernel32" (ByVal dwMilliseconds As Long)
```

```
'-----
'-- Main()
'-----
' Rutina principal d'inicialitzacio del programa
'-----
```

```
Public Sub Main()
```

```
    On Error GoTo TractaError
```

```
    '-- Si hi ha una altra instancia de l'aplicacio en funcionament, surto
    If App.PrevInstance Then
        End
    End If
    '-- Carrega les configuracions
    If Configura() Then
        '-- Mostro el formulari frmPrincipal
        frmPrincipal.Show vbModal
    Else
        '-- Surto del programa
        End
    End If
```

```
Exit Sub
```

```
TractaError:
```

```
    RegistraError "Main() - Error: " & Err.Number & ", " & Err.Description, True
    End
```

```
End Sub
```

```
'-----
'-- RegistraError()
'-----
' Rutina per registrar l'error en el log i per mostrar
' el missatge per pantalla, en funcio del flag que em passen
'-----
```

```
Public Sub RegistraError(strMissatge As String, bolMostrar As Boolean)
```

```
Dim f As Integer
```

```
    On Error GoTo TractaError
```

```
    If Len(strMissatge) > 0 Then
        '-- Obro el fitxer de registre
        f = FreeFile
        Open strFitxerRegistre For Append As #f
        '-- Guardo l'error en el log
        Print #f, Format(Now, "dd/mm/yyyy hh:mm:ss") & " - " & CTE_PROJECTE & ": " & strMissatge
        Close #f
        If bolMostrar Then
            '-- Mostro el missatge per pantalla
            frmPrincipal.MostrarMissatge Format(Now, "dd/mm/yyyy _ hh:mm:ss") & " - " & CTE_PROJECTE & ": " & strMissatge
        End If
    End If
```

modSISTEMA - 2

```
Exit Sub
TractaError:
    If bolMostrar Then
        frmPrincipal.MostrarMissatge CTE_PROJECTE & ": RegistraError() - Error: " & Err.Number & ", " & Err.Description
    End If
End Sub

'-----
'-- Configura()
'-----
' Rutina per llegir les configuracions del fitxer ini
'-----
Public Function Configura() As Boolean

    On Error GoTo TractaError

    '-- Nom del fitxer de configuracio
    strFitxerConfig = App.Path & "\" & App.EXEName & ".ini"
    '-- Nom del fitxer de registre
    strFitxerRegistre = App.Path & "\" & CTE_FITXER_REGISTRE
    '-- Si existeix el fitxer de configuracio
    If Dir(strFitxerConfig) <> "" Then
        '-- Retorno True
        Configura = True
    Else
        RegistraError "NO SE HA ENCONTRADO EL FICHERO DE CONFIGURACIÓN", True
    End If

Exit Function
TractaError:
    RegistraError "Configura() - Error: " & Err.Number & ", " & Err.Description, True
End Function

'-----
'-- LlegirFitxer()
'-----
' Rutina per llegir TOT el contingut d'un fitxer
'-----
Public Function LlegirFitxer(strNomFitxer As String) As String
    Dim f As Long
    Dim buf() As Byte

    On Error GoTo TractaError

    '-- Obro el fitxer
    f = FreeFile
    Open strNomFitxer For Binary Access Read As #f
    If LOF(f) > 0 Then
        '-- Redimensiono la matriu de bytes
        ReDim buf(1 To LOF(f)) As Byte
        '-- Llegeixo els bytes del fitxer
        Get #f, , buf
        '-- Tanco el fitxer
        Close #f
        '-- Retorno el fitxer
        LlegirFitxer = StrConv(buf, vbUnicode)
    End If
    DoEvents

Exit Function
TractaError:
    RegistraError "LlegirFitxer() - Error: " & Err.Number & ", " & Err.Description, True
End Function

Public Sub Espera(lngMilis As Long)
    Sleep lngMilis
End Sub
```

clsAlarma - 1

Option Explicit

```
Private strVariable As String
Private intBit As Integer
Private strDescripcio As String
Private bolActiva As Boolean
Private WithEvents objVariable As clsVariable
```

```
Public Function Inicialitza(strCadena As String) As Boolean
Dim varA As Variant
```

```
On Error GoTo TractaError
'Miro si tinc alguna coma a la cadena que em passen
If InStr(1, strCadena, ",") > 1 Then
    'Passo la cadena a una matriu
    varA = Split(strCadena, ",")
    'Miro si la matriu es valida
    If UBound(varA) = 2 Then
        'Capturo les dades del parametre
        strVariable = varA(0)
        intBit = Val(varA(1))
        strDescripcio = varA(2)
        bolActiva = False
        'Miro si te una variable relacionada
        If strVariable <> "" Then
            'Busco la variable dintre dels parametres
            Set objVariable = frmPrincipal.BuscarVarParametres(strVariable)
            'Retorno true
            Inicialitza = True
        End If
    End If
End If
```

```
Exit Function
TractaError:
    Inicialitza = False
End Function
```

```
Public Property Get Variable() As String
    'Retorno la propietat
    Variable = strVariable
End Property
```

```
Public Property Get Bit() As Integer
    'Retorno la propietat
    Bit = intBit
End Property
```

```
Public Property Get Descripcio() As String
    'Retorno la propietat
    Descripcio = strDescripcio
End Property
```

```
Public Property Get Activa() As Boolean
    'Retorno la propietat
    Activa = bolActiva
End Property
```

```
Private Sub objVariable_Actualitza()
Dim dblValor As Double
```

```
On Error GoTo TractaError
'Desactivo el flag per indicar que l'alarma no esta activa
bolActiva = False
'Capturo el valor de la variable
dblValor = objVariable.Valor
If dblValor > 0 Then
    'Miro si el bit d'alarma dintre la variable esta activat
    If BitEstatGet(dblValor, intBit - 1) > 0 Then
        'Activo el flag per indicar que l'alarma esta activa
        bolActiva = True
    End If
End If
```



```
clsAlarma - 2
```

```
    End If  
End If
```

```
Exit Sub  
TractaError:  
    bolActiva = False  
End Sub
```

```
clsBit - 1
```

```
Option Explicit
```

```
Private strBit As String
Private strNom As String
Private intPosicio As Integer
Private intEstat As Integer
```

```
Public Function Inicialitza(strCadena As String) As Boolean
Dim varP As Variant
```

```
On Error GoTo TractaError
```

```
'Miro si tinc alguna coma a la cadena que em passen
```

```
If InStr(1, strCadena, ",") > 1 Then
```

```
    'Passo la cadena a una matriu
```

```
    varP = Split(strCadena, ",")
```

```
    'Miro si la matriu es valida
```

```
    If UBound(varP) = 2 Then
```

```
        'Capturo les dades del parametre
```

```
        strBit = varP(0)                'Nom = nom de la variable bit
```

```
        strNom = varP(1)                'Nom = nom de la variable per pantalla
```

```
        intPosicio = CInt(varP(2))      'Posicio = posicio del bit dintre la variable Conf
```

```
ig
```

```
        intEstat = 0
```

```
        'Retorno true
```

```
        Inicialitza = True
```

```
    End If
```

```
End If
```

```
Exit Function
```

```
TractaError:
```

```
    Inicialitza = False
```

```
End Function
```

```
Public Property Get Bit() As String
```

```
    'Retorno el nom de la variable bit
```

```
    Bit = strBit
```

```
End Property
```

```
Public Property Get Nom() As String
```

```
    'Retorno el nom de la variable per pantalla
```

```
    Nom = strNom
```

```
End Property
```

```
Public Property Get Posicio() As Integer
```

```
    'Retorno la posicio del bit dintre de la variable Config
```

```
    Posicio = intPosicio
```

```
End Property
```

```
Public Property Get Estat() As Integer
```

```
    'Retorno l'estat del bit
```

```
    Estat = intEstat
```

```
End Property
```

```
Public Property Let Estat(v As Integer)
```

```
    'Assigno l'estat del bit
```

```
    intEstat = v
```

```
End Property
```

```
Public Property Get Valor() As String
```

```
Dim strTemp As String
```

```
Dim varEstats As Variant
```

```
On Error GoTo TractaError
```

```
'Consulto el fitxer de configuracio per veure si l'estat del bit esta definit
```

```
strTemp = INI_Get(strBit, "", "BITS", strFitxerConfig)
```

```
'Miro si esta definit
```

```
If strTemp <> "" Then
```

```
    'Passo la cadena a una matriu
```

```
    varEstats = Split(strTemp, ",")
```

```
    'Retorno la descripcio que correspongui en funcio de l'estat actual del bit
```

clsBit - 2

```
        Valor = CStr(varEstats(intEstat))
Else
    'Retorno la descripcio que correspongui en funcio de l'estat actual del bit
    Valor = IIf(intEstat = BIT_ON, "ON", "OFF")
End If

Exit Property
TractaError:
    Valor = ""
End Property

Public Function SetValor(strValor As String) As Boolean
Dim dblValor As Double

    On Error GoTo TractaError
    'Si el valor que em passen es valid
    If strValor <> "" Then
        'Passo la cadena a un numero
        dblValor = CDbl(strValor)
        'Capturo l'estat del bit a la paraula que em passen
        intEstat = IIf(BitEstatGet(dblValor, intPosicio) = BIT_ON, BIT_ON, BIT_OFF)
        'Retorno true
        SetValor = True
    End If

Exit Function
TractaError:
    SetValor = False
End Function
```

clsModbusTCP - 1

Option Explicit

```
Private intComanda As Integer
Private strResposta As String
Private strHost As String
Private lngPort As Long
```

```
Private Const CMD_READ = 1
Private Const CMD_WRITE = 2
```

```
Public Property Get Host() As String
    Host = strHost
End Property
Public Property Let Host(Valor As String)
    strHost = Valor
End Property
```

```
Public Property Get Port() As Long
    Port = lngPort
End Property
Public Property Let Port(Valor As Long)
    lngPort = Valor
End Property
```

```
Public Function Inicialitzar(sckSocket As Winsock) As Boolean
Dim dblTemps As Double
```

```
    On Error GoTo TractaError
    'Miro si no esta tancat el socket
    If (sckSocket.State <> sckClosed) Then
        'Tanco el socket
        sckSocket.Close
    End If
    'Configuro el socket
    sckSocket.RemoteHost = strHost
    sckSocket.RemotePort = lngPort
    'Connecto el socket
    sckSocket.Connect
    'Timeout de 2 segons per establir connexio amb el PLC
    dblTemps = Timer
    Do While ((Timer < dblTemps + 2) And (sckSocket.State <> sckConnected))
        DoEvents
    Loop
    'Retorno true si he pogut connectar amb el PLC
    Inicialitzar = IIf(sckSocket.State = sckConnected, True, False)
```

```
Exit Function
TractaError:
    'Retorno false
    Inicialitzar = False
End Function
```

```
Public Function LlegirRegistrePLC(sckSocket As Winsock, strAdrRegistre As String, strRetorn As String, lngTamany As Long) As Boolean
Dim strComanda As String
Dim dblTemps As Double
Dim lngAdr As Long
```

```
    On Error GoTo TractaError
    'Miro si el socket esta connectat
    If sckSocket.State = sckConnected Then
        'Calculo l'adreça
        lngAdr = Val(strAdrRegistre)
        'Composo la comanda Modbus TCP/IP
        strComanda = Chr(0) + Chr(0) + Chr(0) + Chr(0) + Chr(0)
        strComanda = strComanda + Chr(6)
        strComanda = strComanda + Chr(1)
        strComanda = strComanda + Chr(3)
        strComanda = strComanda + Chr(lngAdr \ 256)
        strComanda = strComanda + Chr(lngAdr Mod 256)
        strComanda = strComanda + Chr(lngTamany \ 256)
```

```

    strComanda = strComanda + Chr(lngTamany Mod 256)
    'Em guardo la comanda per poder identificar la resposta
    intComanda = CMD_READ
    'Reset de la resposta
    strResposta = ""
    dblTemps = Timer
    'Envio la comanda
    sckSocket.SendData strComanda
    'Espero la resposta del PLC
    Do
        DoEvents
    Loop While strResposta = "" And Timer - dblTemps < 3
    'Miro si tinc resposta
    If strResposta <> "" Then
        'Capturo els valors de retorn
        strRetorn = Trim(strResposta)
        'Retorno true
        LlegirRegistrePLC = True
    End If
Else
    'Reinicialitzo el socket
    If Inicialitzar(sckSocket) Then
        'Retorno true
        LlegirRegistrePLC = True
    End If
End If

Exit Function
TractaError:
    'Retorno false
    LlegirRegistrePLC = False
End Function

Public Function EscriureRegistrePLC(sckSocket As Winsock, strAdrRegistre As String, lngValors() As Long, lngTamany As Long) As Boolean
Dim strComanda As String
Dim i As Integer
Dim lngAdr As Long
Dim dblTemps As Double

On Error GoTo TractaError
'Miro si el socket esta connectat
If sckSocket.State = sckConnected Then
    'Calculo l'adreça
    lngAdr = Val(strAdrRegistre)
    'Composo la comanda Modbus TCP/IP
    strComanda = Chr(0) + Chr(0) + Chr(0) + Chr(0) + Chr(0)
    strComanda = strComanda + Chr((7 + 2 * lngTamany) Mod 256)
    strComanda = strComanda + Chr(1)
    strComanda = strComanda + Chr(16)
    strComanda = strComanda + Chr(lngAdr \ 256)
    strComanda = strComanda + Chr(lngAdr Mod 256)
    strComanda = strComanda + Chr(0)
    strComanda = strComanda + Chr(lngTamany)
    strComanda = strComanda + Chr(2 * lngTamany)
    For i = 0 To UBound(lngValors)
        strComanda = strComanda + Chr(lngValors(i) \ 256)
        strComanda = strComanda + Chr(lngValors(i) Mod 256)
    Next i
    'Em guardo la comanda per poder identificar la resposta
    intComanda = CMD_WRITE
    'Reset de la resposta
    strResposta = ""
    dblTemps = Timer
    'Envio la comanda
    sckSocket.SendData strComanda
    'Espero la resposta del PLC
    Do
        DoEvents
    Loop While strResposta = "" And Timer - dblTemps < 3
    'Retorno true

```

clsModbusTCP - 3

```
    EscriureRegistrePLC = True
Else
    'Reinicialitzo el socket
    Inicialitzar sckSocket
End If
```

Exit Function

TractaError:

```
    'Retorno false
    EscriureRegistrePLC = False
End Function
```

```
Public Function EscriureBitPLC(sckSocket As Winsock, strAdrRegistre As String, bolEstat As Boolean) As Boolean
Dim strComanda As String
Dim i As Integer
Dim lngAdr As Long
```

```
On Error GoTo TractaError
'Miro si el socket esta connectat
If sckSocket.State = sckConnected Then
    'Calculo l'adreça
    lngAdr = Val(strAdrRegistre)
    'Composo la comanda Modbus TCP/IP
    strComanda = Chr(0) + Chr(0) + Chr(0) + Chr(0) + Chr(0)
    strComanda = strComanda + Chr(6)
    strComanda = strComanda + Chr(1)
    strComanda = strComanda + Chr(5)
    strComanda = strComanda + Chr(lngAdr \ 256)
    strComanda = strComanda + Chr(lngAdr Mod 256)
    If bolEstat Then
        strComanda = strComanda + Chr(255) + Chr(0)
    Else
        strComanda = strComanda + Chr(0) + Chr(0)
    End If
    'Em guardo la comanda per poder identificar la resposta
    intComanda = CMD_WRITE
    'Envio la comanda
    sckSocket.SendData strComanda
    'Retorno true
    EscriureBitPLC = True
Else
    'Reinicialitzo el socket
    Inicialitzar sckSocket
End If
```

Exit Function

TractaError:

```
    'Retorno false
    EscriureBitPLC = False
End Function
```

```
Public Sub TractarRespostaPLC(bytArray() As Byte)
Dim intLen As Integer
Dim i As Integer
Dim lngVal As Long
```

```
On Error GoTo TractaError
'Miro la ultima comanda realitzada
Select Case intComanda

    'Lectura
    Case CMD_READ
        'Capturo el numero de valors que he rebut del PLC
        intLen = bytArray(9) + 9
        'Bucle per tots els valors
        For i = 10 To intLen Step 2
            'Capturo els valors
            lngVal = CLng(bytArray(i)) * 256
            lngVal = lngVal + bytArray(i + 1)
            strResposta = strResposta & Str(lngVal)
        Next i
    End Select
```

```
clsModbusTCP - 4
```

```
    Next i
```

```
    'Escriptura
```

```
    Case CMD_WRITE
```

```
        'Ignoro qualsevol resposta
```

```
        strResposta = "-"
```

```
    End Select
```

```
Exit Sub
```

```
TractaError:
```

```
    'Resposta erronea
```

```
    strResposta = ""
```

```
End Sub
```

clsParametre - 1

Option Explicit

```
Private strAdr As String
Private strNom As String
Private strTipus As String
Private strLongitud As String
Private strRW As String
Private lngMaximValor As Long
Private dblValor As Double
Private dblValorUltim As Double
Private bolValid As Boolean
Private colVariables As Collection
Private colBits As Collection
```

```
Public Function Inicialitza(strCadena As String) As Boolean
Dim varP As Variant
```

```
On Error GoTo TractaError
```

```
'Creo la coleccio de variables (noms em serveix pels parametres tipus TRAMA)
Set colVariables = New Collection
'Creo la coleccio de conjunts de bits (noms em serveix pels parametres tipus BITS)
Set colBits = New Collection
'Miro si tinc alguna coma a la cadena que em passen
If InStr(1, strCadena, ",") > 1 Then
    'Passo la cadena a una matriu
    varP = Split(strCadena, ",")
    'Miro si la matriu es valida
    If UBound(varP) = 6 Then
        'Capturo les dades del parametre
        strAdr = varP(0)          'Adr = Adreça de la variable del PLC
        strNom = varP(1)          'Nom = nom de la variable per pantalla
        strTipus = UCase(varP(2)) 'BITS | WORD | TRAMAxX
        strLongitud = UCase(varP(3)) 'Longitud = numero de variables que vull llegir/es
criure de cop
        strRW = UCase(varP(4))    'R = Read, W = Write, RW = Read/Write
        lngMaximValor = Val(varP(5)) 'Maxim valor permes, si es 0 vol dir que no te lim
it maxim
        dblValor = CDbl(varP(6)) 'Valor = ultim valor enviat al PLC
        'Miro si el parametre es d'escriptura
        If strRW = "W" Or strRW = "RW" Then
            'Indico que el valor del parametre s'ha de validar abans d'enviar
            bolValid = False
        Else
            'Els parametres de lectura no s'han de validar
            bolValid = True
        End If
        'Valido el tipus [BITS|WORD|TRAMAxX] i els permisos [R|W|RW]
        If (strTipus = "WORD" Or Left(strTipus, 4) = "BITS" Or Left(strTipus, 5) = "TRAM
A") And (strRW = "R" Or strRW = "W" Or strRW = "RW") Then
            'Selecciono en funcio del tipus de variable
            Select Case Left(strTipus, 1)
                'Miro si es tracta d'una trama de variables
                Case "T"
                    'Carrego les variables de la trama
                    If CarregarVariablesTrama() Then
                        'Retorno true
                        Inicialitza = True
                    End If
                'Miro si es tracta d'una variable que funciona a nivell de bits
                Case "B"
                    'Carrego els bits de la variable Config
                    If CarregarBitsConfig() Then
                        'Retorno true
                        Inicialitza = True
                    End If
                'Miro si es tracta d'una variable Word
                Case "W"
                    'Retorno true
                    Inicialitza = True
            End Select
            'Si no conec el tipus de variable
```


clsParametre - 2

```
        Case Else
            'Retorno true
            Inicialitza = False
        End Select
    End If
End If
End If

Exit Function
TractaError:
    Inicialitza = False
End Function

Public Property Get Adresa() As String
    'Retorno l'adreça de la variable
    Adresa = strAdr
End Property

Public Property Get Nom() As String
    'Retorno el nom del parametre
    Nom = strNom
End Property

Public Property Get Tipus() As String
    'Retorno el tipus del parametre
    Tipus = strTipus
End Property

Public Property Get Longitud() As Long
    'Retorno el numero de variables que vull llegir/escriure de cop
    Longitud = Val(strLongitud)
End Property

Public Property Get ModeWrite() As Boolean
    'Retorno true si te permis d'escriptura: W o RW
    If strRW = "W" Or strRW = "RW" Then
        ModeWrite = True
    End If
End Property

Public Property Get ModeRead() As Boolean
    'Retorno true si te permis de lectura: R o RW
    If strRW = "R" Or strRW = "RW" Then
        ModeRead = True
    End If
End Property

Public Property Get MaximValor() As Long
    'Retorno el limit maxim del valor
    MaximValor = lngMaximValor
End Property

Public Property Get Valid() As Boolean
    'Retorno el flag
    Valid = bolValid
End Property

Public Property Let Valid(v As Boolean)
    'Assigno el flag
    bolValid = v
End Property

Public Property Get Valor() As Double
    'Retorno el valor del parametre
    Valor = dblValor
End Property

Public Property Let ValorWord(v As Double)

    On Error GoTo TractaError
    'Assigno el valor del parametre
```

clsParametre - 3

```
        dblValor = CDbl(Int(v))

Exit Property
TractaError:
    dblValor = -1
End Property
Public Property Let Valor(v As Double)

    On Error GoTo TractaError
    'Assigno el valor del parametre
    dblValor = CDbl(Int(v))

Exit Property
TractaError:
    dblValor = -1
End Property

Public Function ValorsTrama(strValors As String, strDelimitador As String) As Boolean
Dim ix As Integer
Dim bolError As Boolean

    On Error GoTo TractaError
    'Bucle per totes les variables de la trama
    For ix = 1 To colVariables.Count
        'Actualitzo el valor de cada variable individual
        If Not colVariables(ix).SetValor(strValors, strDelimitador) Then
            'Activo el flag per indicar error
            bolError = True
        End If
    Next ix
    'Retorno true si no hi ha error, false en cas contrari
    ValorsTrama = Not bolError

Exit Function
TractaError:
    ValorsTrama = False
End Function

Public Function ValorsBits(strValor As String) As Boolean
Dim ix As Integer
Dim bolError As Boolean

    On Error GoTo TractaError
    'Bucle per tots els bits
    For ix = 1 To colBits.Count
        'Actualitzo el valor de cada bit individual
        If Not colBits(ix).SetValor(strValor) Then
            'Activo el flag per indicar error
            bolError = True
        End If
    Next ix
    'Retorno true si no hi ha error, false en cas contrari
    ValorsBits = Not bolError

Exit Function
TractaError:
    ValorsBits = False
End Function

Public Function GetParametre() As String
    'Retorno tota la cadena que descriu el parametre, per guardar-lo en el fitxer de confi
guracio
    GetParametre = strAdr & "," & strNom & "," & strTipus & "," & strRW & "," & lngMaximVa
lor & "," & dblValor
End Function

Public Function EsUnaTrama() As Boolean
    'Retorno true si el parametre es una trama de variables
    If colVariables.Count > 0 Then
        EsUnaTrama = True
    End If
```

clsParametre - 4

End Function

```
Public Function EsUnConjuntDeBits() As Boolean
    'Retorno true si el parametre es un conjunt de bits
    If Left(strTipus, 4) = "BITS" Then
        EsUnConjuntDeBits = True
    End If
End Function
```

```
Public Function Variables() As Collection
    'Retorno tota la coleccio de variables
    Set Variables = colVariables
End Function
```

```
Private Function CarregarVariablesTrama() As Boolean
    Dim intID As Integer
    Dim strID As String
    Dim strCadena As String
    Dim objVariable As clsVariable
```

```
    On Error GoTo TractaError
    'Bucle per totes les variables possibles
    For intID = 1 To 999
        'Llegeixo la variable del fitxer de configuracio, a l'apartat indicat pel tipus (TR
        AMAxX)
        strID = Format(intID, "000")
        strCadena = INI_Get("V" & strID, "", strTipus, strFitxerConfig)
        'Si he llegit una cadena valida
        If strCadena <> "" Then
            'Creo un nou objecte variable
            Set objVariable = New clsVariable
            'Si es valida
            If objVariable.Inicialitza(strTipus, "V" & strID, strCadena) Then
                'Afegeixo la variable a la coleccio
                colVariables.Add objVariable, objVariable.Nom
                'Retorno true
                CarregarVariablesTrama = True
            Else
                'Retorno false
                CarregarVariablesTrama = False
            End If
        End If
    Next intID
```

Exit Function

```
TractaError:
    CarregarVariablesTrama = False
End Function
```

```
Public Function Bits() As Collection
    'Retorno tota la coleccio de bits
    Set Bits = colBits
End Function
```

```
Private Function CarregarBitsConfig() As Boolean
    Dim intID As Integer
    Dim strID As String
    Dim strCadena As String
    Dim objBit As clsBit
```

```
    On Error GoTo TractaError
    'Bucle per totes les variables possibles
    For intID = 1 To 16
        'Llegeixo la variable del fitxer de configuracio, a l'apartat indicat pel tipus (BI
        TS)
        strID = Format(intID, "00")
        strCadena = INI_Get("B" & strID, "", strTipus, strFitxerConfig)
        'Si he llegit una cadena valida
        If strCadena <> "" Then
            'Creo un nou objecte bit
```

clsParametre - 5

```
        Set objBit = New clsBit
        'Inicialitzo l'objecte bit
        If objBit.Inicialitza(strCadena) Then
            'Afegeixo el nou bit a la coleccio
            colBits.Add objBit, objBit.Nom
            'Retorno true
            CarregarBitsConfig = True
        Else
            'Retorno false
            CarregarBitsConfig = False
            Exit For
        End If
    End If
Next intID

Exit Function
TractaError:
    CarregarBitsConfig = False
End Function
```

clsVariable - 1

Option Explicit

Public Event Actualitza()

```
Private strTramaID As String
Private strID As String
Private strAdr As String
Private strNom As String
Private strTipus As String
Private intPosicio As Integer
Private dblValor As Double
Private dblFactorConversio As Double
Private bolConfigurarPLC As Boolean
```

```
Public Function Inicialitza(strIdentTrama As String, strIdent As String, strCadena As String) As Boolean
Dim varP As Variant
```

```
On Error GoTo TractaError
```

```
'Em guardo l'identificador de la trama
strTramaID = strIdentTrama
'Em guardo l'identificador de la variable
strID = strIdent
'Miro si tinc alguna coma a la cadena que em passen
If InStr(1, strCadena, ",") > 1 Then
    'Passo la cadena a una matriu
    varP = Split(strCadena, ",")
    'Miro si la matriu es valida
    If UBound(varP) = 6 Then
        'Capturo les dades del parametre
        strAdr = varP(0)          'Adr = Adreça de la variable del PLC
        strNom = varP(1)          'Nom = nom de la variable per pantalla
        strTipus = UCase(varP(2)) 'WORD = word simple, DWORD = word doble
        intPosicio = CInt(varP(3)) 'Posicio = posicio de la variable dintre la trama
        dblFactorConversio = ConvertirADecimal(CStr(varP(4))) 'dblFactorConversio = factor de conversio per mostrar la variable per pantalla
        dblValor = (Val(varP(5))) 'Ultim valor = ultim valor de la variable
        bolConfigurarPLC = IIf(varP(6) = "SI", True, False) 'Configurar_PLC = SI indica que es una variable que s'ha d'enviar al PLC quan inicio Scada
        'Valido el tipus [WORD|DWORD]
        If (strTipus = "WORD" Or strTipus = "DWORD") Then
            'Retorno true
            Inicialitza = True
        End If
    End If
End If
```

```
Exit Function
```

```
TractaError:
    Inicialitza = False
End Function
```

```
Public Property Get Adresa() As String
    'Retorno l'adreça de la variable
    Adresa = strAdr
End Property
```

```
Public Property Get Nom() As String
    'Retorno el nom del parametre
    Nom = strNom
End Property
```

```
Public Property Get Tipus() As String
    'Retorno el tipus del parametre
    Tipus = strTipus
End Property
```

```
Public Property Get Posicio() As Integer
    'Retorno la posicio de la variable dintre de la trama
    Posicio = intPosicio
```

clsVariable - 2

End Property

Public Property Get Valor() As Double

'Retorno el valor del parametre, corregit amb el factor de conversio [1, 0.1, 0.01, 0.001, ...]

Valor = dblValor * dblFactorConversio

End Property

Public Function SetValor(strValors As String, strDelimitador As String) As Boolean

Dim varValors As Variant

Dim strValorL As String

Dim strValorH As String

Dim dblValorL As Double

Dim dblValorH As Double

On Error GoTo TractaError

'Si els valors que em passen son valids

If strValors <> "" Then

'Passo la cadena a una matriu

varValors = Split(strValors, strDelimitador)

'Comprovo que la posicio sigui valida en referencia al total de valors

If UBound(varValors) >= intPosicio Then

'Selecciono en funcio del tipus

Select Case strTipus

'WORD

Case "WORD"

'Capturo el valor LOW de la variable en funcio de la posicio

strValorL = varValors(intPosicio)

'Miro si ha canviat el valor

If dblValor <> CDb1(strValorL) Then

'Passo el valor a un double

dblValor = CDb1(strValorL)

'Guardo la variable al fitxer ini

GuardarVariable -1

End If

'Retorno true

SetValor = True

'DWORD, o sigui una Double Word

Case "DWORD"

'Capturo el valor LOW de la variable en funcio de la posicio

strValorL = varValors(intPosicio)

'Passo el valor a un double

dblValorL = CDb1(strValorL)

'Capturo el valor HIGH de la variable en funcio de la posicio

strValorH = varValors(intPosicio + 1)

'Passo el valor a un double i multiplico per 2^16

dblValorH = CDb1(strValorH) * 65536

'Miro si ha canviat el valor

If dblValor <> dblValorL + dblValorH Then

'Em guardo el valor total

dblValor = dblValorL + dblValorH

'Guardo la variable al fitxer ini

GuardarVariable -1

End If

'Retorno true

SetValor = True

Case Else

'Retorno false

SetValor = False

End Select

End If

End If

'Activo l'event per actualitzar els elements relacionats amb la variable

RaiseEvent Actualitza

Exit Function

clsVariable - 3

TractaError:

SetValor = False

End Function

Private Function ConvertirADecimal(strNumero As String) As Double

Dim p As Integer

Dim strN1 As String

Dim strN2 As String

On Error GoTo TractaError

'Busco la posicio del punt

p = InStr(1, strNumero, ".")

If p > 0 Then

'Capturo la part entera del numero

strN1 = Left(strNumero, p - 1)

'Capturo la part decimal del numero

strN2 = Mid(strNumero, p + 1)

'Converteixo a decimal

ConvertirADecimal = CDbl(strN1 & "," & strN2)

Else

'Retorno 1

ConvertirADecimal = 1

End If

Exit Function

TractaError:

'Retorno 1

ConvertirADecimal = 1

End Function

Public Sub GuardarVariable(lngValor As Long)

Dim strCadena As String

On Error Resume Next

'Miro que no sigui una variable de configuracio del PLC, o em forcen un valor

If Not bolConfigurarPLC Or lngValor > -1 Then

'Miro si em forcen un valor

If lngValor > -1 Then

'Genero la cadena que descriu l'estat actual de la variable per guardar-la al fi

txer ini

strCadena = strAdr & "," & strNom & "," & strTipus & "," & intPosicio & "," & db

lFactorConversio & "," & lngValor & "," & IIf(bolConfigurarPLC, "SI", "NO")

Else

'Genero la cadena que descriu l'estat actual de la variable per guardar-la al fi

txer ini

strCadena = strAdr & "," & strNom & "," & strTipus & "," & intPosicio & "," & db

lFactorConversio & "," & CLng(dblValor) & "," & IIf(bolConfigurarPLC, "SI", "NO")

End If

'Guardo la variable en el fitxer ini

INI_Put strID, strCadena, strTramaID, strFitxerConfig

End If

End Sub

Public Property Get ConfigurarPLC() As Boolean

'Retorno true o false

ConfigurarPLC = bolConfigurarPLC

End Property

ctlElement - 1

Option Explicit

```
Public Event CanviarEstat(strVariable As String, lngNouValor As Long)
Public Event Seleccionar(strVariable As String)
Public Event Editar(strVariable As String)
Public Event ExecutarComanda(strComanda As String)
```

```
Private strVariable As String
Private strTipus As String
Private sngLeft As Single
Private sngTop As Single
Private sngWidth As Single
Private sngHeight As Single
Private lngBackColor As Long
Private lngColorON As Long
Private lngColorOFF As Long
Private lngValorMaxim As Long
Private strFormat As String
Private strComandaBoto As String
Private WithEvents objVariable As clsVariable
```

```
Private Sub cmdBoto_Click()
    On Error Resume Next
    'Miro si tinc un boto
    If strTipus = "C" Then
        'Genero un event per executar comanda
        RaiseEvent ExecutarComanda(strComandaBoto)
    End If
End Sub
```

```
Private Sub objVariable_Actualitza()
    'Actualitzo el control
    RefrescarElement
End Sub
```

```
Private Sub pctBarra_Click()
    On Error Resume Next
    'Miro si tinc una variable associada
    If Not objVariable Is Nothing Then
        'Genero un event per identificar la variable a la llista
        RaiseEvent Seleccionar(strVariable)
    End If
End Sub
```

```
Private Sub pctValor_Click()
    On Error Resume Next
    'Miro si tinc una variable associada
    If Not objVariable Is Nothing Then
        'Genero un event per identificar la variable a la llista
        RaiseEvent Seleccionar(strVariable)
    End If
End Sub
```

```
Private Sub txtValor_Click()
    On Error Resume Next
    'Miro si tinc una variable associada
    If Not objVariable Is Nothing Then
        'Genero un event per identificar la variable a la llista
        RaiseEvent Seleccionar(strVariable)
    End If
End Sub
```

```
Private Sub txtValor_DblClick()
    On Error Resume Next
    'Miro si tinc una variable associada i es editable
    If Not objVariable Is Nothing And strTipus = "E" Then
        'Genero un event per identificar la variable a la llista
        RaiseEvent Editar(strVariable)
    End If
End Sub
```


ctlElement - 2

```
Private Sub UserControl_Click()  
    On Error Resume Next  
    'Miro si tinc una variable associada  
    If Not objVariable Is Nothing Then  
        'Genero un event per identificar la variable a la llista  
        RaiseEvent Seleccionar(strVariable)  
    End If  
End Sub
```

```
Private Sub UserControl_DblClick()  
    Dim lngV As Long  
  
    On Error Resume Next  
    'Miro si es tracta d'una I/O digital  
    If strTipus = "D" And Not objVariable Is Nothing Then  
        'Genero el nou valor  
        lngV = IIf(objVariable.Valor = 0, 1, 0)  
        'Genero un event per canviar l'estat de la variable  
        RaiseEvent CanviarEstat(strVariable, lngV)  
    End If  
End Sub
```

```
Private Sub UserControl_Initialize()  
    'Posiciono controls  
    lblEtiqueta.Top = 0  
    lblEtiqueta.Left = 0  
    shpValor.Top = 0  
    shpValor.Left = 0  
    txtValor.Top = 0  
    txtValor.Left = 0  
    pctBarra.Top = 0  
    pctBarra.Left = 0  
    cmdBoto.Top = 0  
    cmdBoto.Left = 0  
    'Amago controls  
    MostrarControlsElement  
End Sub
```

```
Private Sub UserControl_Resize()  
    'Redimensiono els controls  
    RedimensionarControls  
End Sub
```

```
Public Function Inicialitza(strCadena As String) As Boolean  
    Dim varE As Variant
```

```
    On Error GoTo TractaError  
  
    'Miro si tinc alguna coma a la cadena que em passen  
    If InStr(1, strCadena, ",") > 1 Then  
        'Passo la cadena a una matriu  
        varE = Split(strCadena, ",")  
        'Miro si la matriu es valida  
        If UBound(varE) >= 9 Then  
            'Capturo les dades de l'element  
            strVariable = varE(0)                                'Variable = variable del PLC relacionada amb  
l'element  
            strTipus = UCase(varE(1))                            'D=I/O digital ON/OFF | A=I/O analogica | V=  
Barra de progres vertical | H=Barra de progres horitzontal | T=Text | E=Editable  
            sngLeft = Val(varE(2))                              'Posicio esquerra element sobre pantalla  
            sngTop = Val(varE(3))                               'Posicio top element sobre pantalla  
            sngWidth = Val(varE(4))                             'Width element sobre pantalla  
            sngHeight = Val(varE(5))                            'Height element sobre pantalla  
            lngBackColor = Val(varE(6))                         'Color de fons de l'element  
            lngColorON = Val(varE(7))                           'Color element quan esta ON  
            lngColorOFF = Val(varE(8))                          'Color element quan esta OFF  
            'Miro si no es un boto  
            If strTipus <> "C" Then  
                'Capturo el valor maxim permes per la variable  
                lngValorMaxim = Val(varE(9))  
            Else
```

ctlElement - 3

```
        'Capturo la comanda que crida el boto
        strComandaBoto = varE(9)
    End If
    'Miro si tinc un format definit
    If UBound(varE) > 9 Then
        strFormat = varE(10)          'Permet definir un format per mostrar un tex
t en funcio del valor de la variable
    End If
    'Miro si te una variable relacionada
    If strVariable <> "" And strTipus <> "T" Then
        'Busco la variable dintre dels parametres
        Set objVariable = frmPrincipal.BuscarVarParametres(strVariable)
    End If
    'Retorno true
    Inicialitza = True
End If
Else
    strVariable = ""
    strTipus = "T"
    sngLeft = 0
    sngTop = 0
    sngWidth = 1320
    sngHeight = 375
    lngColorON = &HC000&
    lngColorOFF = &HFF&
    lngValorMaxim = 0
    strComandaBoto = ""
End If
'Refresco la presentacio per pantalla
RefrescarElement

Exit Function
TractaError:
    'Retorno false
    Inicialitza = False
End Function

Private Sub RefrescarElement()

    On Error GoTo TractaError
    'Selecciono en funcio del tipus de variable
    Select Case strTipus
        'Element I/O digital (ON/OFF)
        Case "D"
            'Dibuixo un element digital
            DibuirElementD
        'Element I/O analogic (mostro el valor)
        Case "A"
            'Dibuixo un element analogic
            DibuirElementA
        'Element I/O analogic (mostro barra de progres vertical)
        Case "V"
            'Dibuixo un element analogic en forma de barra vertical
            DibuirElementV
        'Element I/O analogic (mostro barra de progres horitzontal)
        Case "H"
            'Dibuixo un element analogic en forma de barra horitzontal
            DibuirElementH
        'Element etiqueta
        Case "T"
            'Dibuixo una etiqueta de text
            DibuirElementT
        'Element I/O analogic editable
        Case "E"
            'Dibuixo un element analogic editable
            DibuirElementE
        'Boto que crida un panell de dades
        Case "C"
            'Dibuixo un boto
            DibuirElementC
    End Select
```

```
Exit Sub
TractaError:
    Err.Clear
End Sub
```

```
Private Sub DibuixarElementD()
    On Error Resume Next
    'Miro si tinc una variable relacionada
    If Not objVariable Is Nothing Then
        'Assigno el color en funcio del valor de la variable
        shpValor.FillColor = IIf(objVariable.Valor = 0, lngColorOFF, lngColorON)
    Else
        shpValor.FillColor = lngColorOFF
    End If
    'Mostro nomes els controls de l'element
    MostrarControlsElement
End Sub
```

```
Private Sub DibuixarElementA()
    On Error Resume Next
    'Miro si tinc una variable relacionada
    If Not objVariable Is Nothing Then
        'Valor i color del text
        txtValor.Text = FormatejarValor(objVariable.Valor)
        txtValor.ForeColor = IIf(objVariable.Valor < lngValorMaxim, lngColorOFF, lngColorON)
    )
    Else
        txtValor.Text = "???"
        txtValor.ForeColor = lngColorOFF
    End If
    'Mostro nomes els controls de l'element
    MostrarControlsElement
End Sub
```

```
Private Sub DibuixarElementE()
    On Error Resume Next
    'Miro si tinc una variable relacionada
    If Not objVariable Is Nothing Then
        'Valor i color del text
        txtValor.Text = FormatejarValor(objVariable.Valor)
        txtValor.ForeColor = IIf(objVariable.Valor < lngValorMaxim, lngColorOFF, lngColorON)
    )
    Else
        txtValor.Text = "???"
        txtValor.ForeColor = lngColorOFF
    End If
    'Mostro nomes els controls de l'element
    MostrarControlsElement
End Sub
```

```
Private Sub DibuixarElementC()
    On Error Resume Next
    'Miro si tinc una variable relacionada
    If strComandaBoto <> "" Then
        'Text i color del boto
        cmdBoto.Caption = strVariable
        cmdBoto.BackColor = lngColorOFF
    Else
        cmdBoto.Caption = "???"
        cmdBoto.BackColor = lngColorOFF
    End If
    'Mostro nomes els controls de l'element
    MostrarControlsElement
End Sub
```

```
Private Sub DibuixarElementV()
    Dim lngValor As Long
    Dim dblPercent As Double
```

```
    On Error Resume Next
```

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```
'Miro si tinc una variable relacionada
If Not objVariable Is Nothing Then
    lngValor = objVariable.Valor
    'Calculo el percentatge
    dblPercent = lngValor / lngValorMaxim
    'Dibuixo la barra vertical
    pctValor.Left = pctBarra.Left
    pctValor.Top = sngHeight - sngHeight * dblPercent
    pctValor.Height = sngHeight * dblPercent
    pctValor.Width = sngWidth
    pctValor.BackColor = IIf(objVariable.Valor < lngValorMaxim, lngColorOFF, lngColorON
)
    pctValor.Visible = True
Else
    pctValor.Visible = False
End If
'Mostro nomes els controls de l'element
MostrarControlsElement
End Sub

Private Sub DibuixarElementH()
Dim lngValor As Long
Dim dblPercent As Double

On Error Resume Next
'Miro si tinc una variable relacionada
If Not objVariable Is Nothing Then
    lngValor = objVariable.Valor
    'Calculo el percentatge
    dblPercent = lngValor / lngValorMaxim
    'Dibuixo la barra horitzontal
    pctValor.Left = pctBarra.Left
    pctValor.Top = pctBarra.Top
    pctValor.Height = sngHeight
    pctValor.Width = sngWidth * dblPercent
    pctValor.BackColor = IIf(objVariable.Valor < lngValorMaxim, lngColorOFF, lngColorON
)
    pctValor.Visible = True
Else
    pctValor.Visible = False
End If
'Mostro nomes els controls de l'element
MostrarControlsElement
End Sub

Private Sub DibuixarElementT()
On Error Resume Next
'Etiqueta
lblEtiqueta.Caption = strVariable
'Colors
lblEtiqueta.BackColor = lngBackcolor
lblEtiqueta.ForeColor = lngColorOFF
'Mostro nomes els controls de l'element
MostrarControlsElement
End Sub

Private Sub MostrarControlsElement()
On Error Resume Next
'Modifico el usercontrol
UserControl.Width = sngWidth
UserControl.Height = sngHeight
UserControl.BackColor = lngBackcolor
'Mostro/amago els controls
lblEtiqueta.Visible = IIf(strTipus = "T", True, False)
shpValor.Visible = IIf(strTipus = "D", True, False)
txtValor.Visible = IIf(strTipus = "A" Or strTipus = "E", True, False)
pctBarra.Visible = IIf(strTipus = "V" Or strTipus = "H", True, False)
cmdBoto.Visible = IIf(strTipus = "C", True, False)
End Sub

Private Sub RedimensionarControls()
```

```

On Error Resume Next
'Redimensiono els controls
lblEtiqueta.Width = sngWidth
lblEtiqueta.Height = sngHeight
shpValor.Width = sngWidth
shpValor.Height = sngHeight
txtValor.Width = sngWidth
txtValor.Height = sngHeight
pctBarra.Width = sngWidth
pctBarra.Height = sngHeight
cmdBoto.Width = sngWidth
cmdBoto.Height = sngHeight
End Sub

Private Function FormatejarValor(dblValor As Double) As String
Dim varFormats As Variant
Dim i As Integer
Dim varParts As Variant
Dim intVal As Integer
Dim strText As String

On Error GoTo TractaError
'Miro si tinc un format especificat (p.ex.: 0=MAIZ|1=TRIGO|2=CEBADA|3=HARINA)
If strFormat <> "" Then
'Passo la cadena a matriu
varFormats = Split(strFormat, "|")
'Bucle per trobar el valor
For i = LBound(varFormats) To UBound(varFormats)
'Capturo el valor i el text associat
varParts = Split(CStr(varFormats(i)), "=")
intVal = Val(varParts(0))
'Miro si el valor coincideix
If intVal = CInt(dblValor) Then
'Retorno el text associat
FormatejarValor = CStr(varParts(1))
Exit For
End If
Next i
Else
'Retorno el valor sense formatejar
FormatejarValor = CStr(dblValor)
End If

Exit Function
TractaError:
FormatejarValor = CStr(dblValor)
End Function

Public Property Get Tipus() As String
'Retorno el tipus de l'element
Tipus = strTipus
End Property

Public Property Get Variable() As Object
'Retorno la variable
Set Variable = objVariable
End Property

Public Property Get PosX() As Single
'Retorno la posicio Left del control
PosX = sngLeft
End Property

Public Property Get PosY() As Single
'Retorno la posicio Top del control
PosY = sngTop
End Property

```

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Begin VB.UserControl ctlElement

ClientHeight = 2520
ClientLeft = 0
ClientTop = 0
ClientWidth = 2055
ScaleHeight = 2520
ScaleWidth = 2055

Begin VB.CommandButton cmdBoto

Caption = "cmdBoto"
BeginProperty Font
Name = "Arial"
Size = 9.75
Charset = 0
Weight = 700
Underline = 0 'False
Italic = 0 'False
Strikethrough = 0 'False

EndProperty

Height = 375
Left = 120
TabIndex = 4
Top = 1920
Width = 1815

End

Begin VB.PictureBox pctBarra

Height = 375
Left = 120
ScaleHeight = 315
ScaleWidth = 1755
TabIndex = 1
Top = 1440
Width = 1815

Begin VB.PictureBox pctValor

Appearance = 0 'Flat
BackColor = &H000000FF&
BorderStyle = 0 'None
FillColor = &H000000FF&
FillStyle = 0 'Solid
ForeColor = &H80000008&
Height = 375
Left = 0
ScaleHeight = 375
ScaleWidth = 855
TabIndex = 2
Top = 0
Width = 855

End

End

Begin VB.TextBox txtValor

Alignment = 2 'Center
BeginProperty Font
Name = "MS Sans Serif"
Size = 9.75
Charset = 0
Weight = 700
Underline = 0 'False
Italic = 0 'False
Strikethrough = 0 'False

EndProperty

Height = 360
Left = 120
Locked = -1 'True
TabIndex = 0
Text = "0"
Top = 960
Width = 1815

End

Begin VB.Label lblEtiqueta

AutoSize = -1 'True
Caption = "XXXX"

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```
BeginProperty Font
  Name      = "Arial"
  Size      = 9.75
  Charset   = 0
  Weight    = 700
  Underline = 0   'False
  Italic    = 0   'False
  Strikethrough = 0 'False
EndProperty
Height      = 240
Left        = 120
TabIndex    = 3
Top         = 120
Width       = 540
End
Begin VB.Shape shpValor
  FillColor   = &H000000FF&
  FillStyle   = 0   'Solid
  Height      = 255
  Left        = 120
  Shape       = 2   'Oval
  Top         = 540
  Width       = 255
End
End
```

XXXX

