0 S3_Fault_Reset
─┤ ├─

COP
Copy File
Source   StationFaults[0]
Dest   StationFaults[3]
Length   1

1 Fault Check for lift to go from bottom to top
StationFaults[3].Fault_Check.LiftBtmToTop
─┤ ├─

Timer for lift to go from bottom to top
TON
Timer On Delay
Timer   StationFaults[3].Fault_Timers.LiftBtmToTop — (EN)
Preset   5000
Accum   0 — (DN)

2 Fault Check for cylinder to go from retracted to extended
StationFaults[3].Fault_Check.LiftCylRetToExt
─┤ ├─

Timer for cylinder to go from retracted to extended
TON
Timer On Delay
Timer   StationFaults[3].Fault_Timers.LiftCylRetToExt — (EN)
Preset   5000
Accum   0 — (DN)

3 Fault Check for cylinder to go from extended to retracted
StationFaults[3].Fault_Check.LiftCylExtToRet
─┤ ├─

Timer for cylinder to go from extended to retracted
TON
Timer On Delay
Timer   StationFaults[3].Fault_Timers.LiftCylExtToRet — (EN)
Preset   3000
Accum   0 — (DN)

4 Fault Check for lift to go from top to bottom
StationFaults[3].Fault_Check.LiftTopToBtm
─┤ ├─

Timer for lift to go from top to bottom
TON
Timer On Delay
Timer   StationFaults[3].Fault_Timers.LiftTopToBtm — (EN)
Preset   5000
Accum   0 — (DN)

5 Fault Check for conveyor motor ON
StationFaults[3].Fault_Check.ConveyorMtr
─┤ ├─

Timer for conveyor motor ON
TON
Timer On Delay
Timer   StationFaults[3].Fault_Timers.ConveyorMtr — (EN)
Preset   10000
Accum   0 — (DN)

6 Fault Check for object to leave lift until it reaches pickup spot
StationFaults[3].Fault_Check.LiftToPickup
─┤ ├─

Timer object to leave lift until it reaches pickup spot
TON
Timer On Delay
Timer   StationFaults[3].Fault_Timers.LiftToPickup — (EN)
Preset   10000
Accum   0 — (DN)

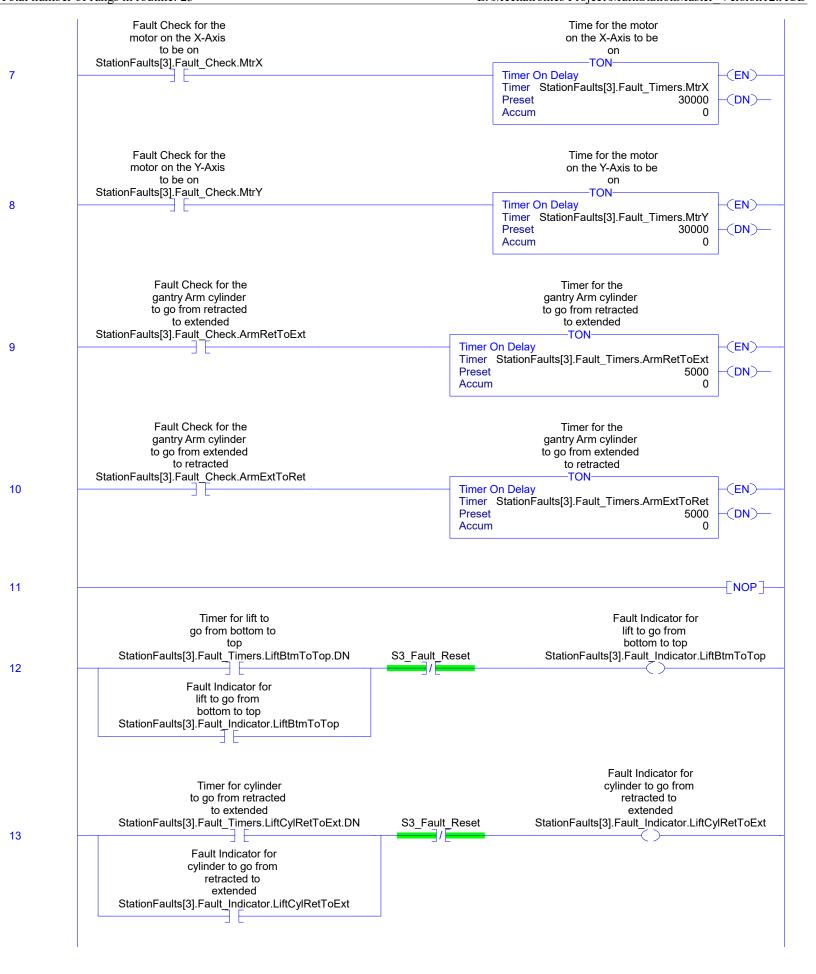**S3_Faults - Ladder Diagram**
Page 2

MultiStation_test:FaultTask:Station3_ProgramFaults
5/2/2022 3:05:42 PM

Total number of rungs in routine: 23
E:\Mechatronics Project\MultiStationMaster_Version12.ACD

7

Fault Check for the
motor on the X-Axis
to be on
StationFaults[3].Fault_Check.MtrX

Time for the motor
on the X-Axis to be
on
TON
Timer On Delay — (EN)
Timer StationFaults[3].Fault_Timers.MtrX
Preset 30000
Accum 0 — (DN)

8

Fault Check for the
motor on the Y-Axis
to be on
StationFaults[3].Fault_Check.MtrY

Time for the motor
on the Y-Axis to be
on
TON
Timer On Delay — (EN)
Timer StationFaults[3].Fault_Timers.MtrY
Preset 30000
Accum 0 — (DN)

9

Fault Check for the
gantry Arm cylinder
to go from retracted
to extended
StationFaults[3].Fault_Check.ArmRetToExt

Timer for the
gantry Arm cylinder
to go from retracted
to extended
TON
Timer On Delay — (EN)
Timer StationFaults[3].Fault_Timers.ArmRetToExt
Preset 5000
Accum 0 — (DN)

10

Fault Check for the
gantry Arm cylinder
to go from extended
to retracted
StationFaults[3].Fault_Check.ArmExtToRet

Timer for the
gantry Arm cylinder
to go from extended
to retracted
TON
Timer On Delay — (EN)
Timer StationFaults[3].Fault_Timers.ArmExtToRet
Preset 5000
Accum 0 — (DN)

11 — [NOP]

12

Timer for lift to
go from bottom to
top
StationFaults[3].Fault_Timers.LiftBtmToTop.DN

S3_Fault_Reset —/—

Fault Indicator for
lift to go from
bottom to top
StationFaults[3].Fault_Indicator.LiftBtmToTop —( )

Fault Indicator for
lift to go from
bottom to top
StationFaults[3].Fault_Indicator.LiftBtmToTop

13

Timer for cylinder
to go from retracted
to extended
StationFaults[3].Fault_Timers.LiftCylRetToExt.DN

S3_Fault_Reset —/—

Fault Indicator for
cylinder to go from
retracted to
extended
StationFaults[3].Fault_Indicator.LiftCylRetToExt —( )

Fault Indicator for
cylinder to go from
retracted to
extended
StationFaults[3].Fault_Indicator.LiftCylRetToExt

14

Timer for cylinder to go from extended to retracted
StationFaults[3].Fault_Timers.LiftCylExtToRet.DN

Fault Indicator for cylinder to go from extended to retracted
StationFaults[3].Fault_Indicator.LiftCylExtToRet

S3_Fault_Reset

Fault Indicator for cylinder to go from extended to retracted
StationFaults[3].Fault_Indicator.LiftCylExtToRet

15

Timer for lift to go from top to bottom
StationFaults[3].Fault_Timers.LiftTopToBtm.DN

Fault Indicator for lift to go from top to bottom
StationFaults[3].Fault_Indicator.LiftTopToBtm

S3_Fault_Reset

Fault Indicator for lift to go from top to bottom
StationFaults[3].Fault_Indicator.LiftTopToBtm

16

Timer for conveyor motor ON
StationFaults[3].Fault_Timers.ConveyorMtr.DN

Fault Indicator for conveyor motor ON
StationFaults[3].Fault_Indicator.ConveyorMtr

S3_Fault_Reset

Fault Indicator for conveyor motor ON
StationFaults[3].Fault_Indicator.ConveyorMtr

17

Timer object to leave lift until it reaches pickup spot
StationFaults[3].Fault_Timers.LiftToPickup.DN

Fault Indicator for object to leave lift until it reaches pickup spot
StationFaults[3].Fault_Indicator.LiftToPickup

S3_Fault_Reset

Fault Indicator for object to leave lift until it reaches pickup spot
StationFaults[3].Fault_Indicator.LiftToPickup

18

Time for the motor on the X-Axis to be on
StationFaults[3].Fault_Timers.MtrX.DN

Fault Indicator for the motor on the X-Axis to be on
StationFaults[3].Fault_Indicator.MtrX

S3_Fault_Reset

Fault Indicator for the motor on the X-Axis to be on
StationFaults[3].Fault_Indicator.MtrX

19

Time for the motor on the Y-Axis to be on
StationFaults[3].Fault_Timers.MtrY.DN

Fault Indicator for the motor on the Y-Axis to be on
StationFaults[3].Fault_Indicator.MtrY

S3_Fault_Reset

Fault Indicator for the motor on the Y-Axis to be on
StationFaults[3].Fault_Indicator.MtrY

```
                    Timer for the                                                      Fault Indicator for
                    gantry Arm cylinder                                                 the gantry Arm
                    to go from retracted                                                cylinder to go from
                    to extended                                                         retracted to
                    StationFaults[3].Fault_Timers.ArmRetToExt.DN    S3_Fault_Reset      extended
                                                                                        StationFaults[3].Fault_Indicator.ArmRetToExt
20  ├──────────────┬────────────┤ ├────────────────────┤/├──────────────────────────────────────( )──────────────┤
                   │  Fault Indicator for
                   │  the gantry Arm
                   │  cylinder to go from
                   │  retracted to
                   │  extended
                   │  StationFaults[3].Fault_Indicator.ArmRetToExt
                   └────────────┤ ├────────────────────┘


                    Timer for the                                                      Fault Indicator for
                    gantry Arm cylinder                                                 the gantry Arm
                    to go from extended                                                 cylinder to go from
                    to retracted                                                        extended to
                    StationFaults[3].Fault_Timers.ArmExtToRet.DN    S3_Fault_Reset      retracted
                                                                                        StationFaults[3].Fault_Indicator.ArmExtToRet
21  ├──────────────┬────────────┤ ├────────────────────┤/├──────────────────────────────────────( )──────────────┤
                   │  Fault Indicator for
                   │  the gantry Arm
                   │  cylinder to go from
                   │  extended to
                   │  retracted
                   │  StationFaults[3].Fault_Indicator.ArmExtToRet
                   └────────────┤ ├────────────────────┘
```

22

Fault Indicator for
lift to go from
bottom to top
StationFaults[3].Fault_Indicator.LiftBtmToTop
] [

S3_Fault_Reset
]/[

S3_FaultFlag
( )

Fault Indicator for
cylinder to go from
retracted to
extended
StationFaults[3].Fault_Indicator.LiftCylRetToExt
] [

Fault Indicator for
cylinder to go from
extended to
retracted
StationFaults[3].Fault_Indicator.LiftCylExtToRet
] [

Fault Indicator for
lift to go from top
to bottom
StationFaults[3].Fault_Indicator.LiftTopToBtm
] [

Fault Indicator for
conveyor motor ON
StationFaults[3].Fault_Indicator.ConveyorMtr
] [

Fault Indicator for
object to leave lift
until it reaches
pickup spot
StationFaults[3].Fault_Indicator.LiftToPickup
] [

Fault Indicator for
the motor on the
X-Axis to be on
StationFaults[3].Fault_Indicator.MtrX
] [

Fault Indicator for
the motor on the
Y-Axis to be on
StationFaults[3].Fault_Indicator.MtrY
] [

Fault Indicator for
the gantry Arm
cylinder to go from
retracted to
extended
StationFaults[3].Fault_Indicator.ArmRetToExt
] [

Fault Indicator for
the gantry Arm
cylinder to go from
extended to
retracted
StationFaults[3].Fault_Indicator.ArmExtToRet
] [

S3_FaultFlag
] [

(End)