

# S4 and S4C Electrical Maintenance

## Course Outline

Duration 4 days

Beneficial to maintenance staff who have S4 operational experience

Students must have attended the S4 operator course or have working knowledge of topics covered

## Subject areas

### Safety Instructions

Safe working practices

Pinch and Trapping points

Emergency stops & the enabling device

Teach velocity

Static precautions

### System Description

Robot mechanical unit & control system overview

Circuit diagrams

### System block diagram

Mains connections

Power supply

Customer connections

Motors on chain

Power unit

### Computer system description

Main computer

Robot computer

Memory expansion board

### System Parameters

#### Setting system time & date

#### Error logs

Using the trouble shooting guides

Input / Output connections

#### The 'Cold Boot' procedure

System Calibration

Motor offsets

Revolution counter updating

#### The servo system

Rectifier, servo drive boards & resolver feedback

Motor removal and set up

Serial measurement system

Cable connections

#### Preventative maintenance procedures

Oil quantities

Battery replacement

Greasing

### Objectives

On completion, participants will be able to perform:

- Electrical repair and preventative maintenance
- System parameter set-up and editing
- Trouble shooting and component replacement