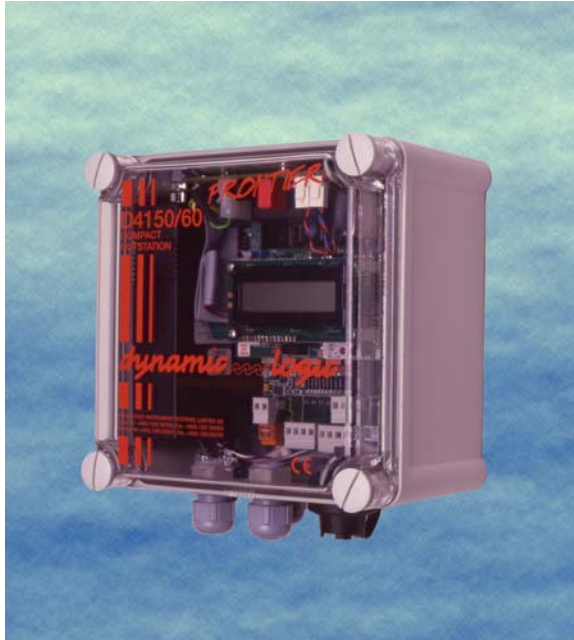


# dynamic logic



## D4150 / D4160

### Series Outstations

The D4150 and D4160 Series Outstations are small, low cost, ultra low power, programmable, logging outstations utilising the latest surface mount technology. The benefits of telemetry, process control and logging are combined

#### BENEFITS

- Compact enclosure consumes little panel area and can be transported to and fitted into previously inaccessible applications (e.g., manholes).
- IP67 enclosure as standard, IP68 as an option.
- Optional LCD module provides instant information to local personnel.
- Choice of power options: compact battery pack or mains supply (universal input) with battery back-up.
- Modem-less version is ideally suited to stand-alone logging applications.
- Telemetry, process control & logging in one unit maximise hardware efficiency and minimise installation costs.
- Extensive local calculation and intelligent control through user-defined sequences minimise external hardware.
- Intelligence concentrated at plant level, reduces modem traffic to host and, therefore, cuts running costs.

#### PRODUCT DESCRIPTION

The D4150 and D4160 series Outstations are part of the versatile and intelligent **Frontier** range of Outstations produced by Dynamic Logic Ltd, incorporating over 25 years of expertise in the Telemetry Industry.

The D4150 and D4160 series are ideal for smaller I/O and low power applications.

A high level of intelligence is offered through user generated sequence control programs, which access live data conditions and allow complex plant control decisions to be made automatically.

The D4150 and D4160 are easily programmed via a local or remote Outstation Programming Terminal (OPT) and/or a compatible Masterstation running Dynamic Logic's "OPTimize" software.

Extensive logging, incorporated as standard, provides for full historical data records that can be imported into the OPT and analysed by industry-standard software packages (such as Lotus 123 or Excel).

These Outstations are compatible with existing Dynamic Logic Masterstations, Outstations and Programming Terminals.

# FEATURES

## ■ I/O Options

The I/O on the D4150/60 series may be either **isolated** or **non-isolated**.

I/O configurations are:

**D4150 series:**

2 Dig In + 2 Ana In + 2 Count In + 2 Dig Out

**D4160 series:**

6 Dig In + 4 Ana In + 2 Count In + 4 Dig Out

As well as these "real" points, **50 derived digital** and **25 derived analogue** inputs are available.  
Note: 2 Counts may be used instead of 2 Digital Inputs.

Digital Inputs active on signals > 1 sec.

Optional isolation to 2,500Vac.

Digital Outputs. Volt free relay contacts (1A @ 24Vac/dc max).

Analogue Inputs. Isolation to 250Vac.

0-20mA, 0-5V and pot. inputs selectable.

10 bit resolution.

Count Inputs. Max frequency 25Hz.

## ■ Power Supply Options

Ultra low power design allows choice of compact, internal battery pack or integral mains power supply.

Battery pack provides for operation up to 5 years and offers the maximum in portable flexibility.

Battery life will depend on usage and application.

Universal mains power supply (85 to 264Vac)

allows unit to work on both 110 and 240V.

Power consumption is almost negligible.

## ■ Multi-point Logging

Integral data logging with 64kb of battery-backed RAM, giving up to 11,000 stored records.

Four types of logging are available:

**time logging:** 1 min. to 45 hour samples.

**event logging:** choice of conditions.

**averaging:** 1 min. samples averaged over 15 min.

**sequence:** customisable logging (see below).

Powerful sequence logging can provide:

**Variable rate logging** triggered automatically by time or alarm event. For example, logging can be intensified around a pollution incident or overflow alarm.

**Significant change logging**, where only changes of a pre-determined magnitude are logged. This avoids repetitive logging of a stable value.

## ■ Sequence Language Programs

Up to **16 separate sequence programs** can run concurrently and independently.

## Order codes:

■ **D4150** Small I/O (**D4155** = mains version) + options as required: (+ **LCD**) (+ **Modem**) (**Isolated**)

■ **D4160** Larger I/O (**D4165** = mains version) + options as required: (+ **LCD**) (+ **Modem**) (**Isolated**)

■ **Warranty:** 12 months from delivery. Full on-site maintenance support available.

■ **Services:** Full training, installation, commissioning and applications support is available, as with all our products.

■ **User defined** control and calculation programs, written easily in **pseudo English** can be fully tested on the OPT before being downloaded.

**Derived points** can be calculated using arithmetic functions on other measured values.

Control of plant can be programmed to occur on any time, event or alarm function.

Typical uses of sequences are:

Pump monitoring and wet well control.

Penstock control and monitoring.

Customised logging (see logging section).

Engineer-on-site safety timers.

Intruder alarm systems.

Dial-out on combination of sensor conditions (e.g., 2 out of 3 pumps failed).

## ■ Outstation Programming Terminal

The **OPT** is a menu driven, user-friendly programming terminal running the Dynamic Logic **"OPTimize"** software package on an IBM compatible laptop PC.

It is a powerful tool providing:

**Local and/or remote connection** to any D4100 series Outstation for data reading, configuration or programming. This allows duty engineers, for example, to configure or check plant status from their office or home telephone line and analyse reported alarm call-outs **before** a costly site visit.

**A platform for generating user defined control sequences** - allowing testing and debugging before downloading.

**Communication** at up to 4800 baud locally and at up to 1200/2400 baud remotely.

## ■ Other Specifications

**Modem** (optional) communicates at up to 1200/2400 baud via PSTN using a BAPT approved modem in the UK or a suitably approved OEM modem in other countries. Up to 5 telephone numbers, master/back-up dial-out rota & sensor-directed dialling are configurable.

## Environment

-10 to +55 °C, 0 to 95% relative humidity.

## Installation

Polycarbonate enclosure 190x190x130mm (l x w x d) suitable for wall or panel mounting.  
Cable gland access to 2-part screw terminals.

---

## ITT Flygt Ltd - Monitoring and Control

2 Dunlop Court

Deans Industrial Park

Livingston EH54 8SL

Tel: +44 (0) 1506 401199

Fax: +44 (0) 1506 464900

e.mail: info@dynamiclogic.co.uk

Website: www.dynamiclogic.co.uk

The Company's policy is one of continued improvement and it reserves the right to change specifications at any time without notice.