µLog DL400E

Digital recorder
8 events inputs

- Records events = digital input state changes.
- Detects on/off or off/on transitions or both.
- Accepts a wide range of signals (voltage, dry contact,...).
- Long battery life (>2 years).
- Miniature.
- Easy to connect and use.
- Cost effective and suitable to be used in great numbers during long periods.
- Real time measurements output.

The DL400E is suitable for applications involving signals with only two states (on/off states, open/closed contacts, 0/1 logical states) and only records input state changes. When a change is detected; date, time and state are stored into memory. If no change occurs, no data is stored. From the list of recorded events, it is possible to determine duration between changes, frequency of events and time % ON-state over selectable periods.

Applications

Recording of sporadic or momentary contact closures (relay, switch,...).
Time of use and on/ off cycles of fans, motors, air conditioners, pumps, heaters,...
Energy management and load profiles.
Rainfall logging.
Access survey.

DL400E recorders and accessories :

DL400E	: 8 event inputs, 2.000 events memory.	D9-2FM	: PC connection cable.
CI8xV	: connection cable for 8 inputs, 2m.	RDFIX	: DIN rail fixation adapter
-EXT	: Memory extension to 8.000 events.	µLOGDLE	: DL400E Windows software.

C.P. Log
Cathodic Protection & Dedicated Loggers

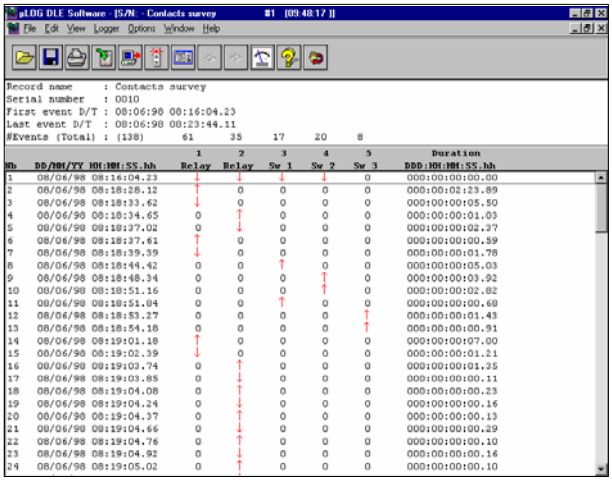
http://www.cp-log.be

Rue des Anciens Etangs, 38, 1190 Bruxelles, tel: +32 2 346.95.45, fax: +32 2 347.34.60

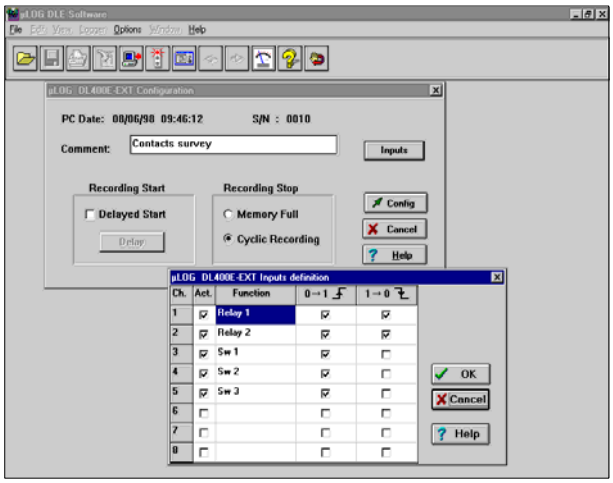
µLOGDLE Software

The µLOGDLE Windows software allows for user-friendly configuration of the DL400E recorders and is used to process the recorded measurements.

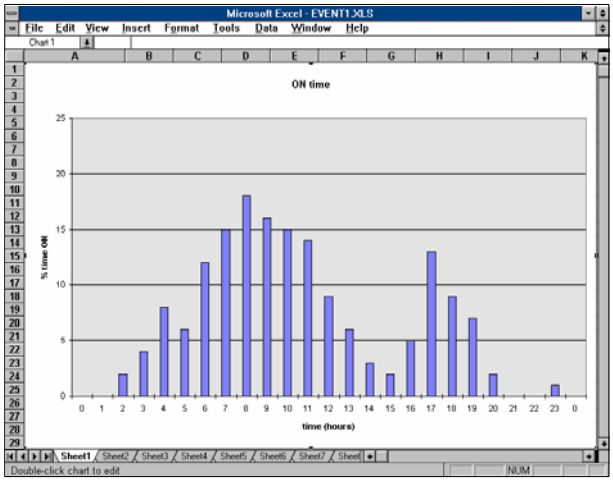
Configuration (➢):
For each input, it is possible to select individually the event detection condition (0->1, 1->0 or both), depending of the application.



Statistical results can be exported for further **(➢)** presentation and analysis in spreadsheet programs (EXCEL, LOTUS,...). Two files of results are presented :
- list of number of events/ (selectable) time unit,
  Ex : rainfall (mm water/hour) logging or frequency of contact closure (#/day) logging.
- list of time% 1 (or 0) state/ (selectable) time unit,
  Ex : time of use of motors, pumps, lighting,...



Processing (➢) :
The detailed events list is presented with date/time, inputs states and duration between events.



Technical specifications

- *Inputs :* 8 - digital.
- *Input signals :* voltage (max 28V) or dry contact (contact power supply from the DL400E).
- *Input impedance :* 100 kΩ.
- *Input levels :* - low (level 0) : between 0 and 0.5V,
  - high (level 1) : between 2.5 and 28V.
- *Event detection :* levels 0 to 1, 1 to 0 or both transition(s), selectable for each input.
- *Minimum time between two events :* 50 milliseconds.
- *Time resolution :* 10 milliseconds.
- *Power supply :* mixed - lithium internal battery and/or supply from the RS232 connection.
- *Battery autonomy :* >2 years typical.
- *Memory capacity :*
  DL400E : 16 kb: 2.000 events.
  DL400E-EXT : 64 kb: 8.000 events.
- Stop on memory full or overwrite oldest records.
- Possible to download while still recording.
- Real time clock.
- PC software : under Windows (95, 98, NT2000, NT4, XP) : recorder configuration - download and saving of the recordings - events list - export of recordings to spreadsheets as EXCEL ,LOTUS, etc...
- *Starting recording :* on programmed date and time or without delay.
- *Security :* automatic stop on low batteries; non Volatile memory.
- *Inputs connection :* Dsub9M connector.
- *Communication :* RS232 interface - DSub 9F connector.
- *Housing :* polycarbonate 82 x 80 x 55mm.
- *Weight :* 250 gr (with battery).
- *Temperature :* working -20°C to +65°C.