

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND  
**CERTIFICATE OF TYPE APPROVAL**  
**(SUPPLEMENTARY)**

**Applicant:-**  
**L3 Communications**  
Aviation Recorders, PO Box 3041,  
6000 Fruitville Road, Sarasota  
FL 34230, Florida, USA

**Manufacturer:-**  
**L3 Communications**  
Aviation Recorders, PO Box 3041,  
6000 Fruitville Road, Sarasota  
FL 34230, Florida, USA

This is to certify that the applicant has submitted details of a:-

**S-VDR Protective Memory Capsule**

Of a type known and designated as:-

**L3 Communications, SVR03-xxx-xx**  
(Comprising component parts as described in schedule attached )

and that this has been assessed, tested, and, is CERTIFIED as complying with:-

**IEC 61996-2:2006 " Part 2:- Simplified voyage data recorder (S-VDR) "**

**Clauses 4.3.4, 4.3.5, 5.2.1, 5.3.1, 5.4.1, 5.4.2.1, 6.1.13, 6.1.13.4, 6.1.13.5, 6.1.13.6, 6.1.13.9, 6.1.13.10**

**IEC 60945:2002 "General Requirements for Marine Navigational Equipment"**

(being performance standard and general requirements - Method of testing and test results, published by the International Electrotechnical Commission).

The SVR03 may be used as the protective final memory capsule part of an approved full S-VDR system subject to successful data transfer, duration and integrity testing of complete system. It is also CERTIFIED that the equipment conforms to performance standards not inferior to those adopted by the International Maritime Organisation, and which are contained in the appropriate parts of Resolution MSC 163(78) and Resolution A694(17).

**SIGNED:**



**P J Goddard**

**Authorised Signatory**

**DATE of ISSUE:**

**10<sup>th</sup> August 2007**

**DATE of EXPIRY :**

**9<sup>th</sup> August 2012**

**Certificate Number:**

**QQ-TAN-03/07-01**

**This Certificate is Valid until expiry date shown, subject to the standard conditions of issue printed on the attached schedule**

QinetiQ  
Cody Technology Park  
Ively Road, Farnborough  
Hampshire. GU14 0LX



Maritime and Coastguard Agency  
The MCA is an Executive Agency of  
the Department for Transport.

*The QinetiQ Group PLC (formerly known as DERA) is specified as a "person" under the terms of The Merchant Shipping (Delegation of Equipment Approval) Regulations 1996, and this certificate is issued under the authority given in Merchant Shipping Notice No MSN 1735..*

## Certificate of Type Approval - Schedule 1

### L3, SVR03-xxx-xx – Simplified Voyage Data Recorder Capsule

The applicant declared that the following units when combined with suitable data acquisition and processing units may form an operational Marine Shipborne Voyage Data Recording system. The units below have been subject to the appropriate tests & assessments and satisfactory details of these units were included in the technical file.

MAIN UNITS Comprising:-

Final recording Medium (Protective capsule)      L3 SVR03-xxx-xx      \*1, 2, 3, 4

----- End of List -----

NOTES:-

1. The SVR03-xxx-xx is a Protective capsule incorporating the final recording medium as defined in IEC 61996-2 and is a separately identifiable part of a full S-VDR system. The final recording medium has an industry standard data interface (Ethernet with TCP/IP transfer protocol) which allows for integration into third party S-VDR systems (OEM Supply).
2. Final part number includes a 3 digit OEM code followed by a 2 digit memory size code (shown as "xxx-xx above), no technical differences are involved but labelling will reflect full number and may include OEM manufacturer's logo (e.g. when L-3 branded a 2Gb capsule will be SVR03-000-20)
3. This protective capsule is supplied as an OEM unit to many third party manufacturers of full S-VDR systems and provided that these have been appropriately type approved to the other requirements and test clauses of IEC 61996-2 (including data recording (duration & integrity) with this unit), may be accepted as a pre-compliant part of such systems.
4. Complete S-VDR systems already fully tested and approved with the L3, SVR02-xxx-xx protective capsule are accepted as compliant with the SVR03-xxx-xx capsule without further need for testing due to the identical nature of the data interface and memory arrangement.

### Technical Characteristics

PARAMETER	PROVISION	COMMENT
DATA INTERFACE	<b>Ethernet</b>	Connection to S-VDR main electronics via Category 5, IEA/TIA 568 or IEEE 802.5 cable. Max cable length is 246ft.
RECORDING MEDIUM and DURATION	<b>Flash memory &gt;12 Hours</b>	Internal Flash memory can be provided in 2, 4, 6 & 8 Gb options. Duration dependant on the data format and set-up of host VDR system.
FLOAT FREE	<b>No</b>	Protective capsule is for fixed installation only.
AIDS TO LOCATION	<b>Acoustic beacon</b>	Dukane underwater acoustic beacon to SAE AS 8045
MEANS TO FACILITATE RECOVERY	<b>Two large Eyes</b>	Large size toggle clamp release mechanism to free capsule and 2 large diameter eyes for recovery. Clevis pin protects against inadvertent action
RESERVE POWER	<b>not provided internally</b>	Power supply shall be supplied via the main S-VDR system to incorporate the reserve power supply requirement.
POWER SOURCE	<b>24V DC, nominal</b>	Supply expected to be via main VDR electronics assembly.
Temperature Range - Exposed & IEC 945 Class	<b>-25°C to +55°C +70°C (Storage)</b>	-- Protective Capsule

**Conditions of Issue of this certificate are printed the reverse of this sheet.**

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Certificates of Type Approval  
Conditions of Issue

1. Each Certificate will be used in its entirety and not reproduced in part.
2. This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested.
3. This certificate remains valid for a period of 5 years unless cancelled or revoked, provided any conditions contained in the schedule are complied with and the equipment remains satisfactory in service.
4. The approval status conferred by each certificate will apply only to the aspects of the equipment's performance defined by, and tested to, the specifications printed on that certificate.
5. Each unit of apparatus forming part of an equipment will have prominently marked on it the description given to it in the Certificate.
6. Each unit of an equipment will be marked with the minimum safe distance at which it should be mounted from a standard magnetic compass.
7. No unit of apparatus shall be advertised or labelled as "approved" or "certified" on behalf of the Maritime and Coastguard Agency (MCA), Department of Transport, DERA or QinetiQ in any sense other than that it is a type that has been assessed as satisfactory against the specification;

The manufacturer must advise QinetiQ of any future changes to the design or production of the equipment which might affect the equipment performance.

For minor modifications to the equipment, factory test results provided to QinetiQ by the manufacturer can be considered on a case-by-case basis. These test results will be reviewed by the QinetiQ, in consultation with the test facility which conducted the original Type Approval tests on the equipment.

QinetiQ will advise the manufacturer if there is a need for further testing.

If an equipment manufacturer wishes to have the type approved equipment designated under alternative names (e.g. agent/distributor's name and model number), a separate application should be completed and sent to QinetiQ.