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IRT Eurocard

Types DDF-3100 / DDF-3101
803911

Dual RF Passive Splitter

Designed and manufactured in Australia

IRT can be found on the Internet at:
http://www.irtelectronics.com

IRT Eurocard

Type DDF-3100 / DDF-3101
803911

Dual RF Passive Splitter

Instruction Book

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Operational Safety:

WARNING

Operation of electronic equipment involves the use of voltages and currents that may be dangerous to human life. Note that under certain conditions dangerous potentials may exist in some circuits when power controls are in the **OFF** position. Maintenance personnel should observe all safety regulations.

Do not make any adjustments inside equipment with power **ON** unless proper precautions are observed. All internal adjustments should only be made by suitably qualified personnel. All operational adjustments are available externally without the need for removing covers or use of extender cards.

IRT Eurocard
Type DDF-3100 / DDF-3101
803911
Dual RF Passive Splitter

GENERAL DESCRIPTION

The DDF-3100, DDF-3101 and 803911 are dual RF passive splitters suitable for mounting in either IRT's 1RU or 3RU frames. Being passive, they require no power to operate.

The DDF-3101 supersedes the earlier DDF-3100 and 803911 RF splitters. Operationally these all operate the same using the same RF splitter modules.

The DDF-3100 and DDF-3101 are in a standard 3RU Eurocard format. As such, it can be mounted in the same frame as VDA's, ADA's, detectors and processors. The only difference between these two cards is the input and output pin numbers on the 64 pin Eurocard connector.

The 803911 is an earlier version of the DDF-3100. It mounts on the front or back of a frame like the DDF-3100 and DDF-3101 rear connector units. If the 803911 is mounted on the back of a rack, an FB-700 blanking panel may be used to cover the missing module space from the front.

These splitters are rated for 250 kHz to 300 MHz operation. This wide frequency range makes it suitable for many types of signals, but it is especially suited to G.703 data signals in the range 8 to 45 Mb/s. The splitters are also suitable for use with 70 MHz and 140 MHz IF signals.

As well as acting as a splitter, it can also act in reverse as a combiner.

Due to its passive nature the splitter will continue to function regardless of mains power losses and may thus be used to provide redundant path outputs from equipment possessing only one output. These outputs may then be used by redundant path switching DA's, which will compensate for the insertion loss of the splitter.

Technical Specifications
DDF-3100, DDF-3101, 803911
Dual RF Passive Splitter

Input / output:

Number		2
Type		75 Ohm
Format		Passive 2 way split

Performance:

Frequency range		0.25 to 300 MHz
Isolation	0.25-2.5 MHz	>15 dB
	2.5-150 MHz	>15 dB
	150-300 MHz	>15 dB
Insertion loss above 3 dB		
	0.25-2.5 MHz	<0.75 dB
	2.5-150 MHz	<2.0 dB
	150-300 MHz	<2.0 dB
Phase unbalance		
	.25-2.5 MHz	<2.0°
	2.5-150 MHz	<3.0°
	150-300 MHz	<5.0°
Amplitude unbalance		
	.25-2.5 MHz	<0.15 dB
	2.5-150 MHz	<0.2 dB
	150-300 MHz	<0.3 dB
Maximum power dissipation		1 W

Connectors:

BNC.

Power requirement:

Nil – totally passive.

Other:

Temperature range		0 - 50° C ambient.
Mechanical		Suitable for mounting in IRT 19" rack chassis with input and output connections on the rear panel.
Finish:	Front panel	Grey enamel, silk-screened black lettering & red IRT logo.
	Rear assembly	Detachable silk-screened PCB with direct mount connectors to Eurocard and external signals.
Dimensions		6 HP x 3 U x 220 mm IRT Eurocard.
Supplied accessories		Rear connector assembly (DDF-3100, DDF-3101)
Optional Accessories		FB-700 front blanking panels (803911)

CIRCUIT DESCRIPTION

The DDF-3100 and DDF-3101 use two PSC-2-1-75 RF splitter modules mounted on a Eurocard module connected directly to its 64 pin connector.

The DDF-3100 inputs are at pins 29ab and 5ab and its outputs are at pins 27ab, 31ab and 2ab, 8ab respectively. Connections are made via BNC connectors mounted on its rear connector unit. An R-L filter arrangement is on all inputs and outputs, see circuit diagram 804392.

The DDF-3101 inputs are at pins 29ab and 5ab and its outputs are at pins 28a, 31ab and 2ab, 8ab respectively. Connections are made via BNC connectors mounted on its rear connector unit. An R-L filter arrangement is on all inputs and outputs, see circuit diagram 804498.

The 803911 board houses two PSC-2-1-75 RF splitter modules together with BNC or 1.6/5.6 connectors connected directly to the splitter modules. No R-L filtering is included as in the DDF-3100 and DDF-3101 modules. See circuit diagram 803911.

There are no adjustments to any of these modules.

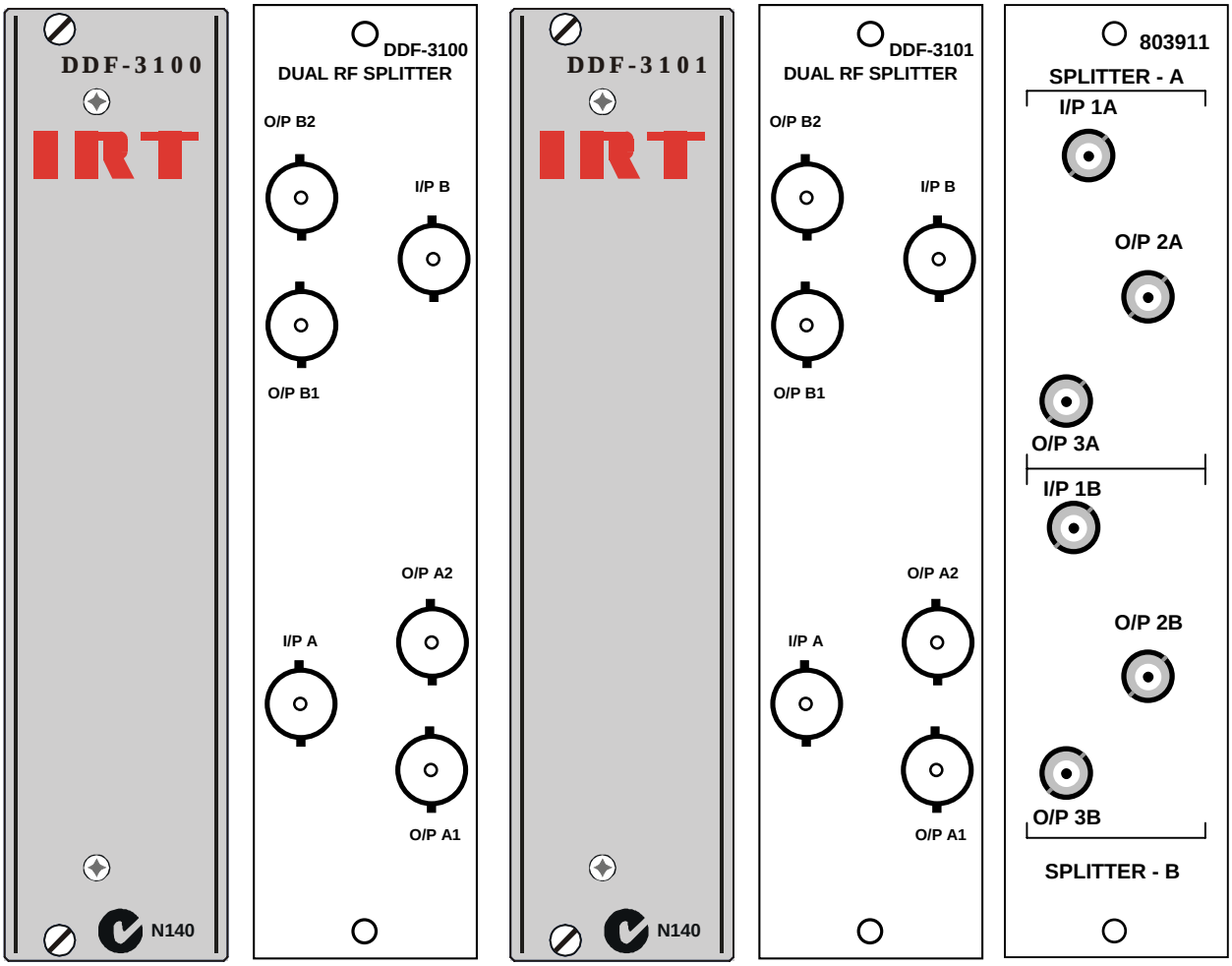
INSTALLATION

Installation in frame or chassis:

See details in separate manual for selected frame type.

Front & rear panel connector diagrams

The following front panel and rear assembly drawings are not to scale and are intended to show connection order and approximate layout only.



Maintenance & storage

Maintenance:

No regular maintenance is required.

Care however should be taken to ensure that all connectors are kept clean and free from contamination of any kind. This is especially important in fibre optic equipment where cleanliness of optical connections is critical to performance.

Storage:

If the equipment is not to be used for an extended period, it is recommended the whole unit be placed in a sealed plastic bag to prevent dust contamination. In areas of high humidity a suitably sized bag of silica gel should be included to deter corrosion.

Where individual circuit cards are stored, they should be placed in antistatic bags. Proper antistatic procedures should be followed when inserting or removing cards from these bags.

Warranty & Service

Equipment is covered by a limited warranty period of three years from date of first delivery unless contrary conditions apply under a particular contract of supply. For situations when "**No Fault Found**" for repairs, a minimum charge of 1 hour's labour, at IRT's current labour charge rate, will apply, whether the equipment is within the warranty period or not.

Equipment warranty is limited to faults attributable to defects in original design or manufacture. Warranty on components shall be extended by IRT only to the extent obtainable from the component supplier.

Equipment return:

Before arranging service, ensure that the fault is in the unit to be serviced and not in associated equipment. If possible, confirm this by substitution.

Before returning equipment contact should be made with IRT or your local agent to determine whether the equipment can be serviced in the field or should be returned for repair.

The equipment should be properly packed for return observing antistatic procedures.

The following information should accompany the unit to be returned:

1. A fault report should be included indicating the nature of the fault
2. The operating conditions under which the fault initially occurred.
3. Any additional information, which may be of assistance in fault location and remedy.
4. A contact name and telephone and fax numbers.
5. Details of payment method for items not covered by warranty.
6. Full return address.
7. For situations when "**No Fault Found**" for repairs, a minimum charge of 1 hour's labour will apply, whether the equipment is within the warranty period or not. Contact IRT for current hourly rate.

Please note that all freight charges are the responsibility of the customer.

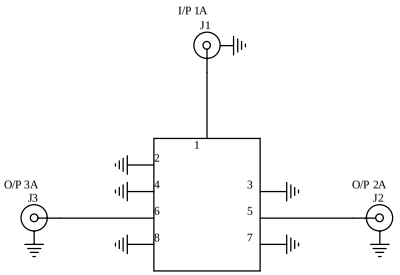
The equipment should be returned **to the agent who originally supplied the equipment** or, where this is not possible, to IRT direct as follows.

Equipment Service
IRT Electronics Pty Ltd
26 Hotham Parade
ARTARMON
N.S.W. 2064
AUSTRALIA

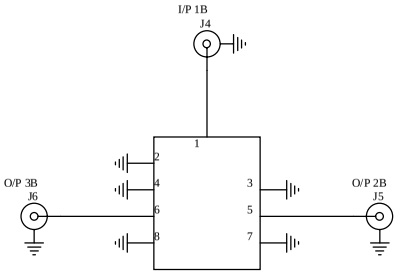
Phone: 61 2 9439 3744 Fax: 61 2 9439 7439
Email: service@irtelectronics.com

Drawing List Index

Drawing #	Sheet #	Description
803911	1	Dual passive splitter.
804392	1	DDF-3100 Dual 75 Ohms RF splitter.
804498	1	DDF-3101 Dual 75 Ohms RF splitter.



PSC-2-1-75



PSC-2-1-75

PCB 803912

1 20/12/95

DRAWN

CHECKED

ENG. APP.

CONTRACT No.

IRT

SIZE A3

TITLE DUAL PASSIVE SPLITTER

SCALE

DRAWING No. 803911

SHEET 1 OF 1

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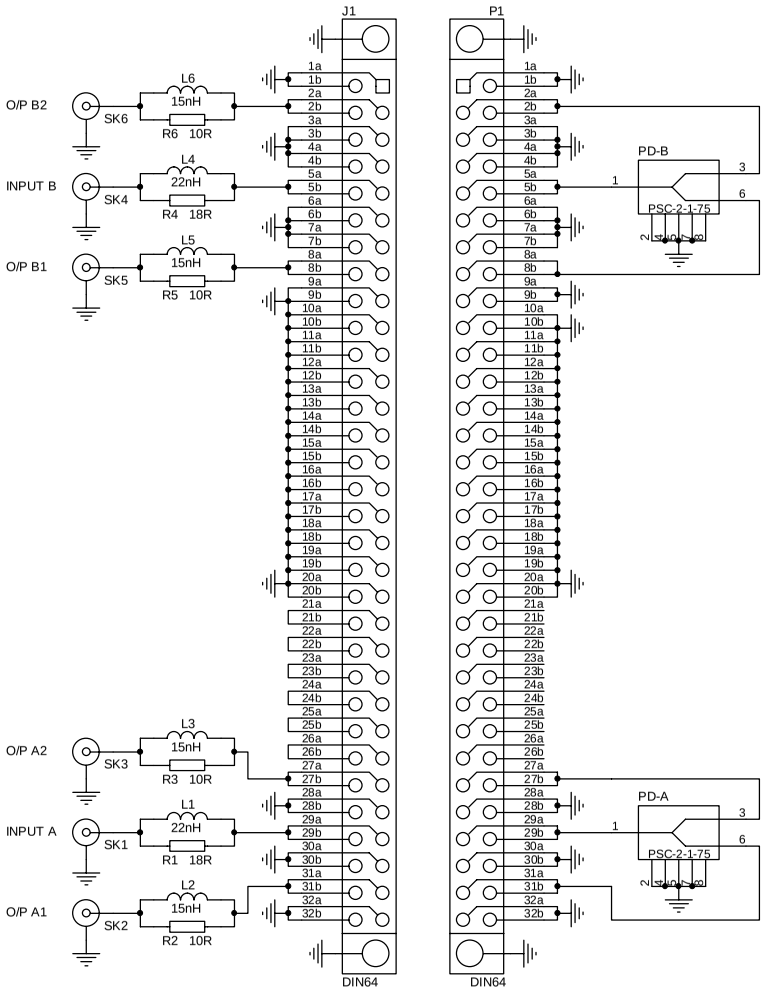
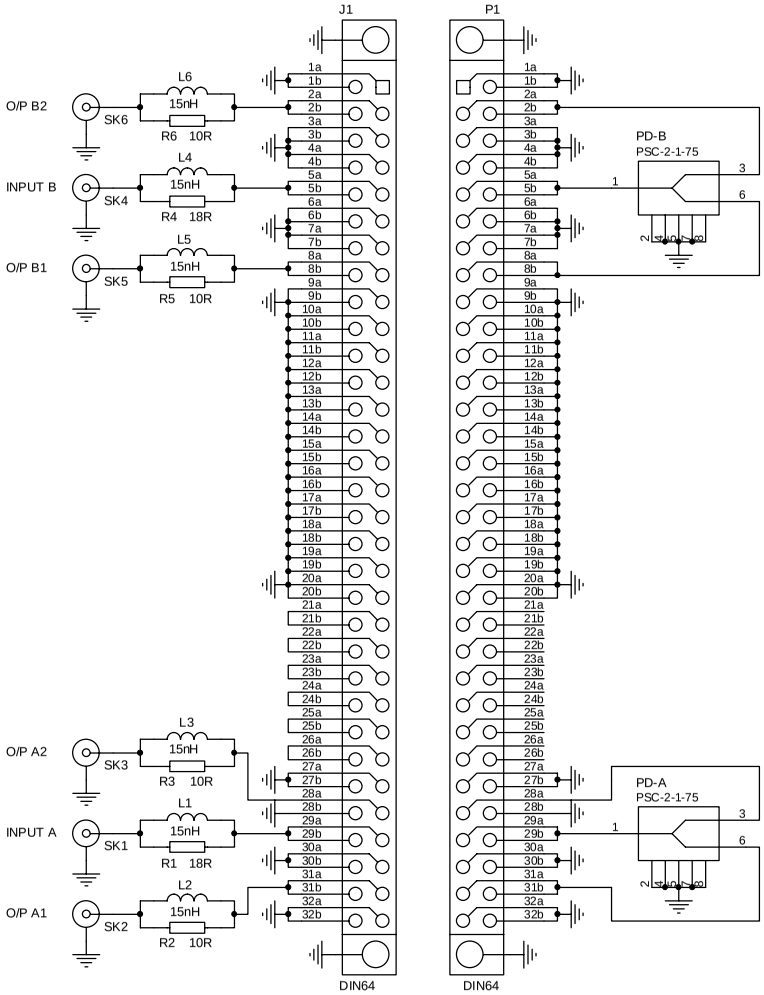
ARTARMON NSW AUSTRALIA 2064



1 25-02-2000		IRT	
	DRAWN K.N.	SIZE A3	Title DDF-3100 DUAL 75 OHMS RF SPLITTER
	CHECKED	SCALE N.T.S.	Drawing No. 804392 — Sheet 1 of 1
	ENG. APP.		
	Revision: 1	IRT Electronics Pty. Ltd. ARTARMON NSW AUSTRALIA 2064	
	Date: 14-Feb-2001		



Changes from DDF-3100 module
Output 1 from PD-A moved from pins 27a,b to pin 28a.
Pins 27a,b grounded.
Pins 21a,b to 26a,b removed from the DIN64 plug on the module.

1 4-12-2000

IRT

DRAWN K.N.	SIZE A3	Title DDF-3101 DUAL 75 OHMS RF SPLITTER	
CHECKED	SCALE N.T.S.	Drawing No. 804498	Sheet 1 of 1
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Revision: 1		IRT Electronics Pty. Ltd. ARTARMON NSW AUSTRALIA 2064	
Date: 14-Feb-2001			