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## ARCAL FO

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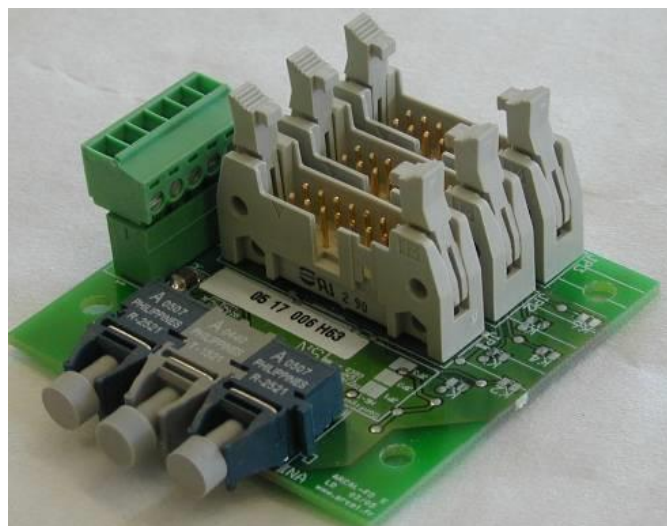


### Fiber distributed data interface for ARCAL drivers

The ARCAL-FO board is a fibre distributed data – control signals interface.

One board is enough to drive up to 3 ARCAL drivers at the same time.

This board includes two control optical fibres for each channel as well as an optical fibre for the return default. Each HE14 connector enables to connect a driver board of the ARCAL range.



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## 1. ELECTRICAL AND OPTICAL SPECIFICATIONS

Données à 25°C, sauf spécifications contraires.

### 1.1. Power supply

Symbol	Parameters	Min.	Typ.	Max.	Unit
VDD	Positive rated power supply	14.5	15	15.5	VDC
Vss	Negative rated power supply	-14.5	-15	-15.5	VDC
IDD <sub>0</sub>	Total off-load current supply		20		mA

### 1.2. Optical specifications

Symbol	Parameters	Min.	Typ.	Max.	Unit
TRM (10-90%)	Rising reaction time (control signal & HE10 output)		250		nS
TRD (10-90%)	Lowering reaction time (control signal & HE10 output)	-	100		nS

### 1.3. Pin connections

*JP1, JP2 and JP3 connectors (14-pin driver connectors)*

Pin	Symbol	Description
1	VSS	-15V supply
2	INB-X	B control for parallel arms
3	ERR_X	IGBT default return coming from the driver
4	INA-X	A control for parallel arms
8, 9	VCC	+15V supply
10, 11	GND	Mass
12	OVER-TEMP-X	IGBT temperature default return coming from a driver

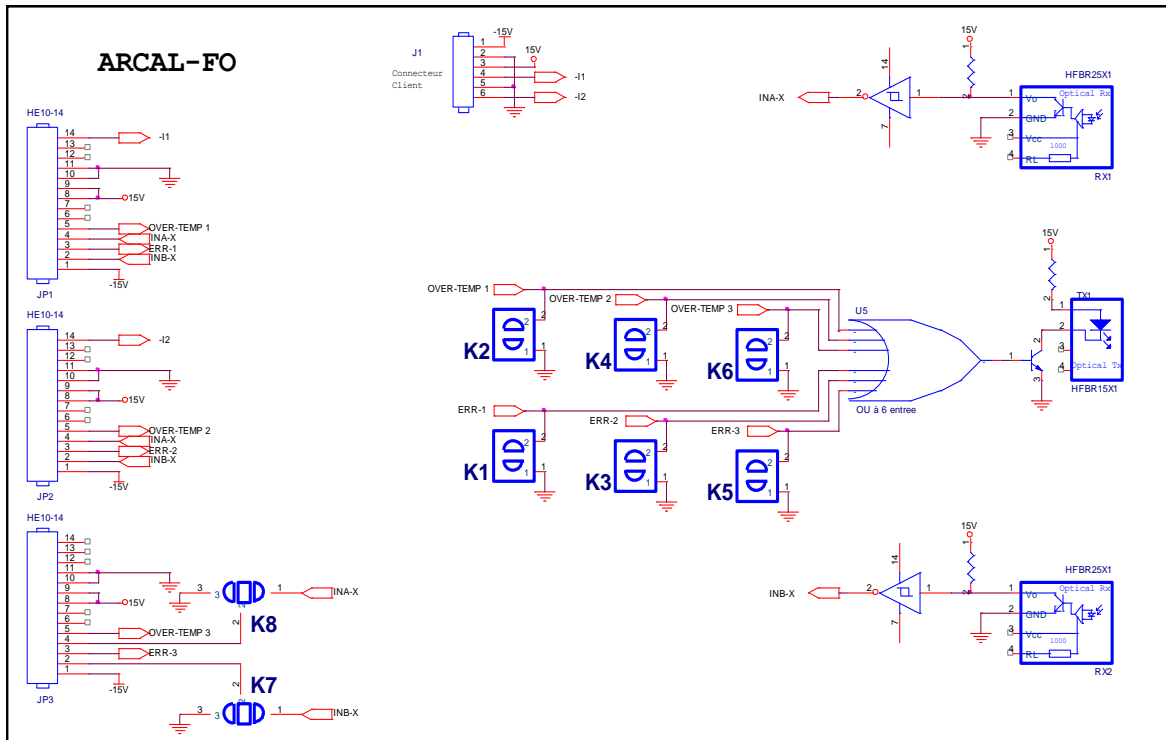
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*J1 connector (customer supply connector)*

Pin	Symbol	Description
1	VSS	-15V Supply
2	GND	Mass
3	VCC	+15V Supply
4	-I1	(reverse) current information coming from the driver connected to JP1
5	GND	Mass
6	-I2	(reverse) current information coming from the driver connected to JP2

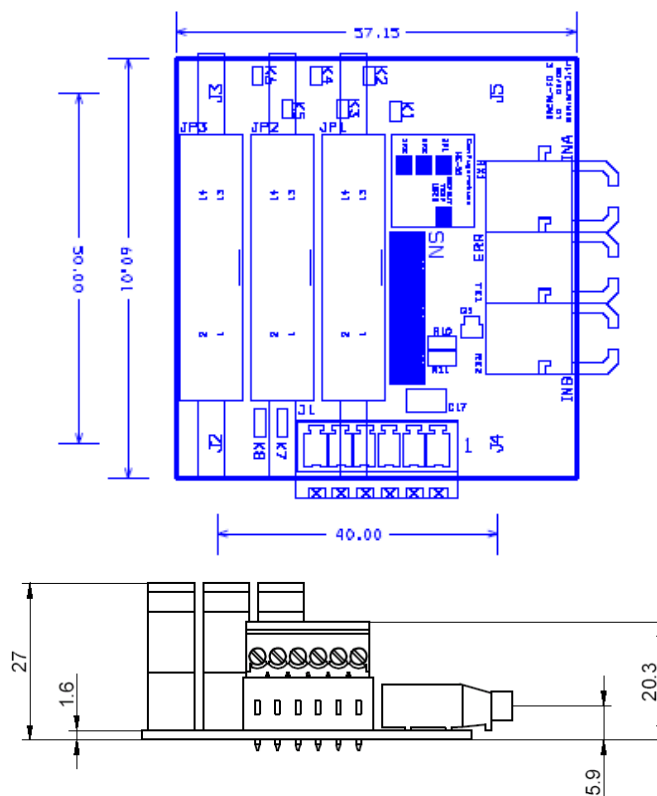
**2. ELECTRICAL DIAGRAM**



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### 3. MECHANICAL SPECIFICATIONS



### 4. MAIN SPECIFICATIONS

- DC power supply +15V.
- It enables to drive up to three parallel drivers. In case you use the board with several drivers, we advise you to configure them in Direct Mode in order to synchronize the control orders.
- A -15V input is provided for the supply of the power collector which is connected on to the ARCAL-E+3P board.
- It returns a driver and/or temperature default through the optical fibre according to the type of driver you use.
- It returns a voltage picture information of the currents coming from the cabled arms on JP1 and JP2, only if the driver enables it.

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- It also enables to determine the faulty board. In this case you must follow the **procedure for the isolation of the default.**

## 5. CONFIGURATIONS

### *ARCAL-FO interfaced with ARCAL boards with temperature default*

Number of cabled drivers and their position on the ARCAL-FO board	K1	K2	K3	K4	K5	K6	K7	K8
1 driver on JP1	/	/	CC	CC	CC	CC	CC2-3	CC2-3
2 drivers on JP1 and JP2	/	/	/	/	CC	CC	CC2-3	CC2-3
3 drivers on JP1, JP2 and JP3	/	/	/	/	/	/	CC1-2	CC1-2

### *ARCAL-FO interfaced with ARCAL boards without temperature default*

Number of cabled drivers and their position on the ARCAL-FO board	K1	K2	K3	K4	K5	K6	K7	K8
1 driver on JP1	/	CC	CC	CC	CC	CC	CC2-3	CC2-3
2 drivers on JP1 and JP2	/	CC	/	CC	CC	CC	CC2-3	CC2-3
3 drivers on JP1, JP2 and JP3	/	CC	/	CC	/	CC	CC1-2	CC1-2

Note : When using the ARCAL-E+3P, it is possible to get a voltage picture information of the current on the J1 tie-point block (terminals 4 and 6).

*Remarks:*

*C-C:*                    *strap the two corresponding KX labels.*

*/:*                         *nothing to be done.*

*1-2 ou 2-3:*           *strap labels 1 & 2 of KX (marked with a « 1 » on the board)*

*A screen printing is available on each ARCAL-FO to indicate the configuration.*

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## 6. DEFAULT ISOLATION PROCEDURE

Owing to the configuration of straps K7 and K8, the JP3 connector enables to isolate the control orders. This option makes it possible to test each driver board in order to determine the origin of the default.

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