

# EM50

## Intelligent Interface Adaptor Fuse & Distribution Unit Electric Step Controller

FIAT  
INTERFACE  
CONNECTOR

ECU Data

FIAT POWER  
CONNECTOR

50A Supply

AUTOMATIC  
ENTRY LIGHT

AUTOMATIC  
AWNING LIGHT

### Introducing the new EM50 interface unit designed for the new Fiat X250 Cab

- Interfaces directly with Fiat Interface Connector
- Provides relay controlled fused outputs for Battery Charging, Fridge, Marker Lights, \*Air Conditioner, Electric Step, Awning / Entry lights & \*Heater
- Has inbuilt intelligent Electric Step Controller providing push button operation, automatic retract with warning buzzer, step-protect circuitry and selectable automatic operation with the central locking system
- Automatic control of the Awning and Entry lights via the central locking remote control

FRIDGE

MARKER  
LIGHTS

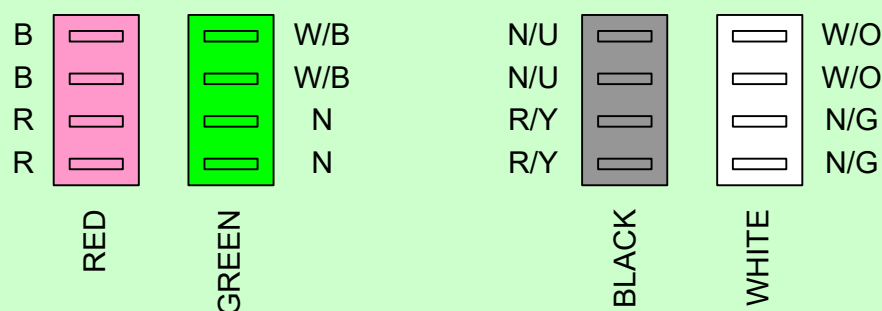
AIR  
CONDITIONER  
UNIT

HEATER

FRIDGE /  
FREEZER

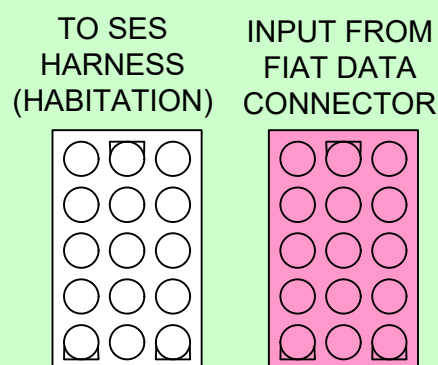


# EM50 Intelligent Interface Adaptor – Connection Data



*NOTE: Prototypes / initial units will have all WHITE connectors*

## EM50 Circuit Board



- B = NEGATIVE INPUT FROM FIAT POWER CONNECTOR (2 CABLES)  
R = POSITIVE INPUT FROM FIAT POWER CONNECTOR (2 CABLES)
- W/B = NEGATIVE OUTPUT TO LARGE FRIDGE / FREEZER (2 CABLES)  
N = POSITIVE OUTPUT TO LARGE FRIDGE / FREEZER (2 CABLES)
- N/U = POSITIVE CHARGING OUTPUT TO LEISURE BATTERY (2 CABLES)  
R/Y = POSITIVE OUTPUT TO STANDARD FRIDGE (2 CABLES)
- W/O = NEGATIVE OUTPUT TO MAIN HARNESS (2 CABLES) REPLACES CHASSIS BOND  
N/G = VEHICLE BATTERY OUTPUT TO MAIN HARNESS (2 CABLES)

USE SUPPLIED POWER LINK CABLE BETWEEN BLACK CONNECTOR AND FIAT POWER CONNECTOR

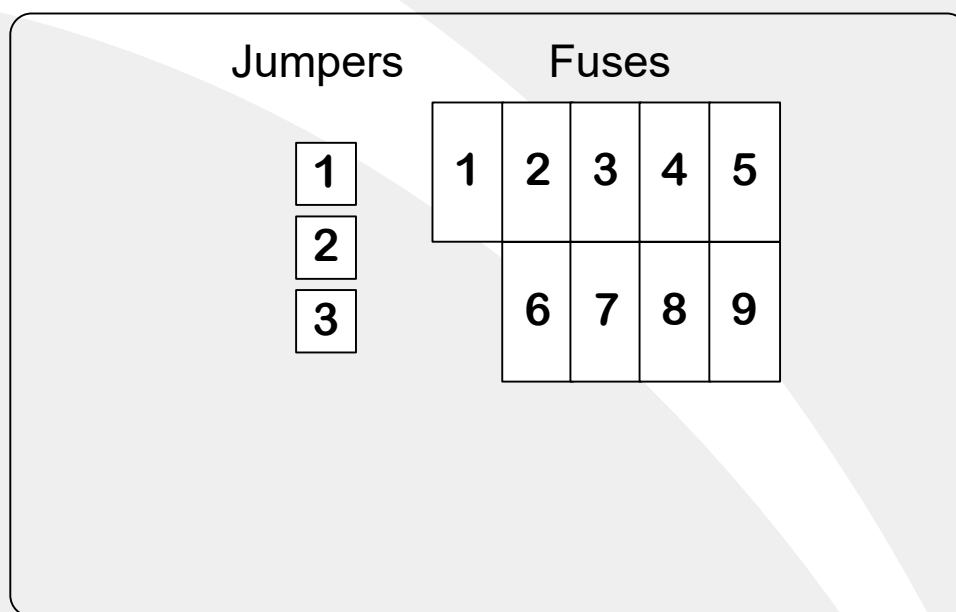
USE SUPPLIED DATA LINK CABLE BETWEEN 15 WAY RED CONNECTOR AND FIAT DATA CONNECTOR.

IF FIAT OPTION 708 IS NOT PRESENT ON CAB CONNECT SEPARATE RED AND RED/BLACK CABLES TO CENTRAL DOOR LOCKING CONNECTOR (24 WAY CONNECTOR UNDER DASH) AS FOLLOWS:

FOR **RIGHT** HAND DRIVE CABS, CONNECT RED CABLE TO FIAT PINK CABLE AND RED/BLACK CABLE TO FIAT BLACK/YELLOW

FOR **LEFT** HAND DRIVE CABS, CONNECT RED CABLE TO FIAT PINK/YELLOW CABLE AND RED/BLACK CABLE TO FIAT BLACK/PURPLE

## EM50 Intelligent Interface Adaptor – Fuse / Config Data



### Fuse Allocation

F1 = 2A EM50 Supply

F2 = 7.5A Marker Lights

F3 = 20A Heater \*\*

F4 = 20A Air Conditioner \*\*

F5 = 20A Electric Step

F6 = 5A Awning / Entry Light

F7 = 20A Fridge

F8 = 20A Split Charge Supply \*\*

F9 = 20A Vehicle Battery

**\*\* Depends on vehicle specification**

### Configuration (Jumper) Settings

Pins joined = ON pins open = OFF

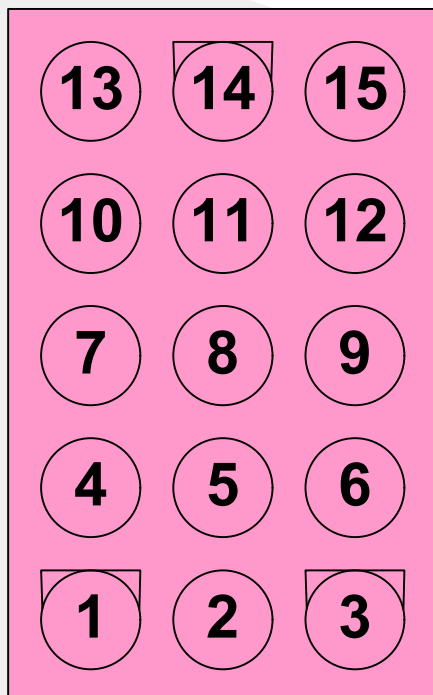
1 = Step operates with LOCK

2 = Step operates with UNLOCK

3 = Awning / Entry light operates with Step

# EM50 Intelligent Interface Adaptor – Connector Data

## FROM FIAT CAB



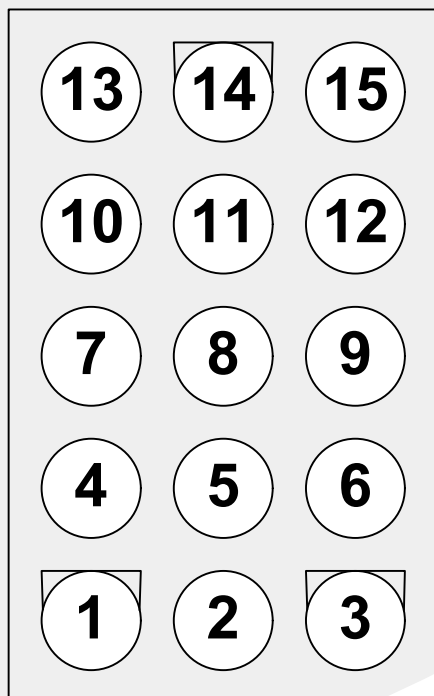
Pin	Fiat	SES	Description
1=	[W]	(W)	THIRD BRAKE LIGHT FEED FROM CAB
2=	[N/B]	(W/N)	D- SIGNAL FROM CAB (-VE ENGINE RUN)
3=	[N/G]		VEHICLE SPEED SIGNAL
4=	[R/B]	(R)	DOOR LOCK SIGNAL
5=	[B/R]	(B/R)	DOOR UNLOCK SIGNAL
6=	[P/B]		REAR DOOR SIGNAL INPUT TO CAB
7=	[G/R]		CEILING LIGHT +VE SUPPLY FROM CAB
8=	[G/W]		CEILING LIGHT -VE SUPPLY FROM CAB
9=	[K/W]		CAN BUS SIGNAL (LOW)
10=	[K/B]		CAN BUS SIGNAL (HIGH)
11=	[R/Y]	(P)	SIDE MARKER SIGNAL FROM CAB
12=	[Y/G]	(Y/G)	AIRCON SIGNAL FROM CAB
13=	[U/Y]	(U)	IGNITION SIGNAL FROM CAB
14=	[G/N]	(G/N)	HEATER SIGNAL FROM CAB
15=	[ ]		NOT CONNECTED

Green = Not used by EM50

Blue = Only required as option on EM50

Black = Required signals

## TO SES HARNESS



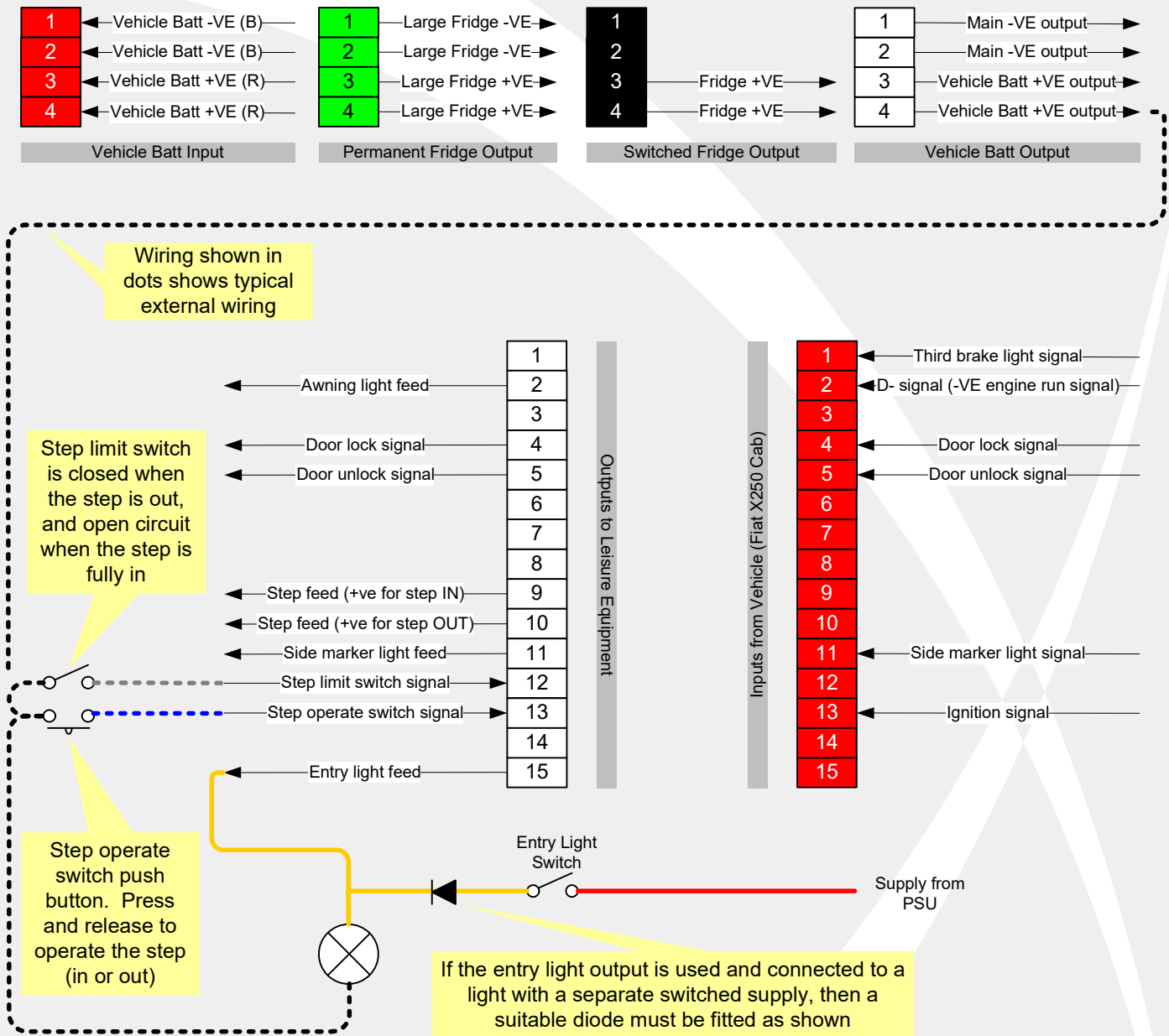
1=	THIRD BRAKE LIGHT FEED
2=	(S/R) AWNING LIGHT FEED
3=	FEED TO AUX AIRCON *
4=	(R/B) DOOR LOCK SIGNAL TO REAR DOOR
5=	(B/R) DOOR UNLOCK SIGNAL TO REAR DOOR
6=	REAR DOOR SIGNAL (DOOR CONTACT)
7=	CEILING LIGHT +VE
8=	CEILING LIGHT -VE
9=	(R/W) STEP SIGNAL +VE STEP IN (OMNI ORANGE)
10=	(R/U) STEP SIGNAL +VE STEP OUT (OMNI PURPLE)
11=	(Y/B) SIDE MARKER FEED
12=	(U/W) STEP LIMIT SWITCH SIGNAL (OMNI GREY)
13=	(U/R) STEP OPERATE SWITCH (PUSH BUTTON)
14=	FEED TO AUX HEATER *
15=	(S/Y) ENTRY LIGHT FEED

Green = Not used by EM50, passed through to harness connector for future use

Blue = Only available if option purchased on EM50

Black = Available outputs to harness

# EM50 – Circuit Connection Information



## EM50 – Declaration of Conformity

**Equipment:** Vehicle Interface Unit

**Model name:** EM50

I hereby declare that the equipment named above has been designed to comply with the relevant sections of Electro Magnetic Compatibility (EMC) directive 2004/108/EC. The unit complies with all essential requirements of the Directive.

Signed	Name	Position	Manufacturer
	I L Sargent	Technical Director	Sargent Electrical Services Ltd Unit 39, Tokenspire Business Park Woodmansey, Beverley East Yorkshire, United Kingdom
Date:			

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