

Dims (L x W): 45.5mm x 29mm

- Designed specifically for EVSE
- Compliant with IEC/ISO 15118-3
- 3.3V DC operation
- On-board transformer and coupling components for connection to customer CP line
- Built-in overvoltage protection
- Industrial temperature range operation
- Line-driver included resulting in greater noise immunity and allowing longer cable runs
- Low profile, small form factor design utilising single-sided components
- Pin header mounting



OVERVIEW

A Green PHY compliant powerline communication (PLC) modem designed for use in Electric Vehicle Supply Equipment (EVSE) in accordance with the IEC/ISO 15118 standard for road vehicle to grid digital communication.

The module consists of a Green PHY transceiver, on-board transformer and coupling components that allow it to be connected to a customer provided Control Pilot line.

PIN DESIGNATIONS & DESCRIPTIONS

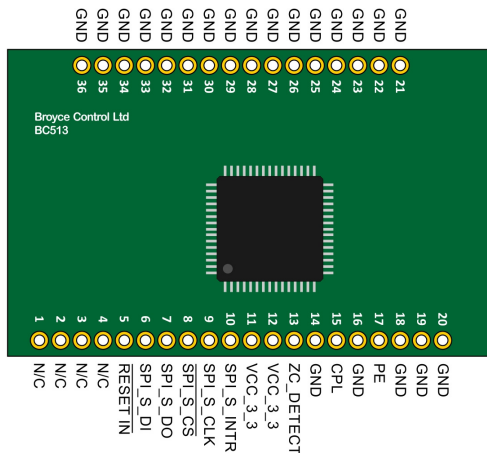


Fig. 2 Pin Arrangement
(viewed from the top)

Pin	Name	Type	Description
14, 16, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36	GND	Power	-
11, 12	VCC_3_3	Power In	3.3V DC power input
5	RESET_IN	Reset In	Active low reset signal to allow the host microcontroller to manage booting of the module (Optional)
6	SPI_S_DI	Data In	Master Out Slave In (MOSI) line of the module SPI slave interface
7	SPI_S_DO	Data Out	Master In Slave Out (MISO) line of the module SPI slave interface
8	SPI_S_CS	Digital In	Active low SPI chip select asserted by the host microcontroller when communicating with the module (3.3V)
9	SPI_S_CLK	Digital In	SPI clock input from the host microcontroller
10	SPI_S_INTR	Digital Out	Interrupt line to instruct the host microcontroller that the module has data to return (3.3V)
15	CPL	Signal	Control Pilot
17	PE	Power	Protective Earth
13	ZC_DETECT	Digital In	Non-isolated AC mains zero crossing detect input (3.3V, Optional)
1, 2, 3, 4	N/C	-	No connection

BLOCK DIAGRAM

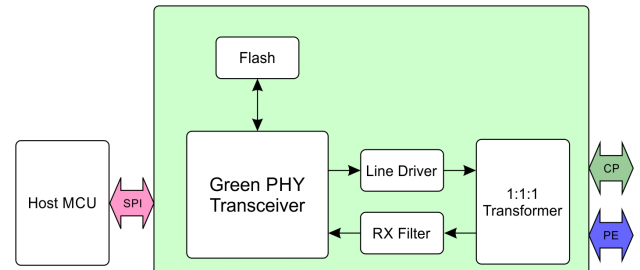


Fig. 1 Basic Block Diagram

TECHNICAL SPECIFICATION

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit
Supply voltage:	V _{cc_3_3}			3.6	V
Supply current:	I			500	mA
Ambient operating temp.:	T _A	-40		+85	°C

Operating Characteristics

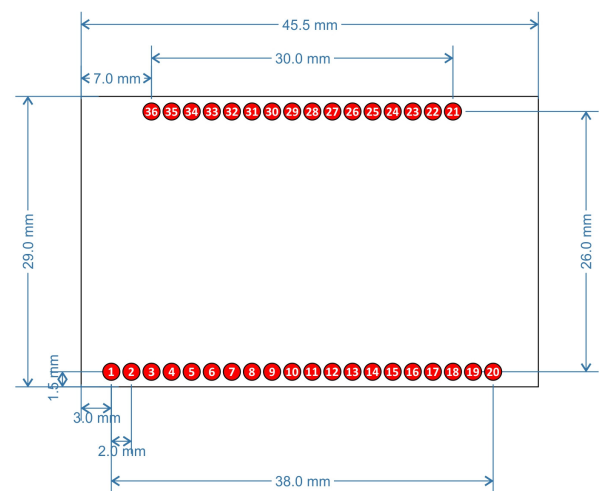
Parameter	Symbol	Min.	Typ.	Max.	Unit
Supply voltage:	V _{cc_3_3}	3.13	3.3	3.47	V
SPI_S_CLK frequency:		6		7.14	MHz

General

Printed Circuit Board	
Dimensions (W x L x H ¹):	45.5mm x 29mm x 8.2mm ¹
Material:	FR4, UL94-V0, 1.6mm
Pin dimensions:	0.5mm x 0.5mm (L = 4mm)
Pinning pitch:	2mm
Connections:	Refer to drawing on left
Approvals:	CE and RoHS Compliant.

¹ overall height includes components

PCB FOOTPRINT



Notes:

For optimum performance, avoid routing signal traces beneath the module.

Fig. 3 PCB Footprint
(viewed from the top)