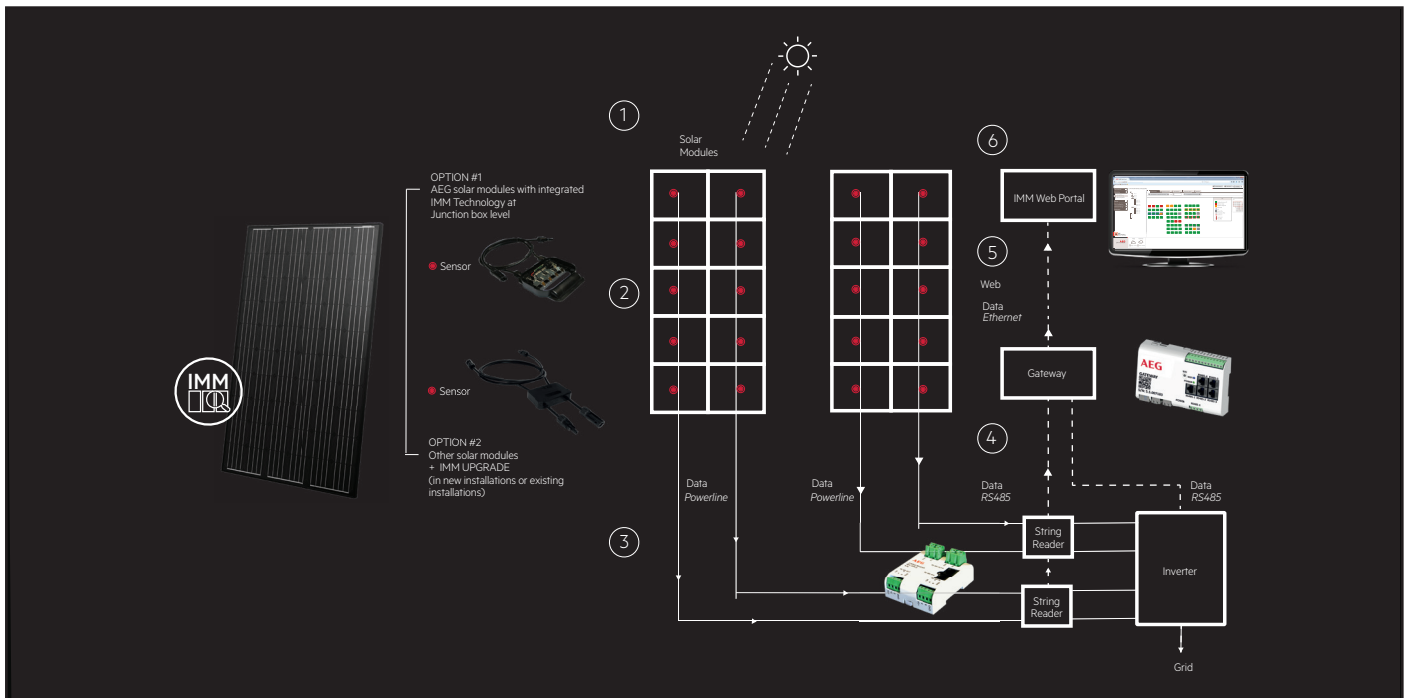


## IMM COMPONENTS CONNECTION / INTERACTION



1. Irradiated by sunshine, the AEG solar modules with integrated IMM Technology / the existing solar modules with IMM Upgrade produce clean energy.

2. The IMM Sensors within the IMM junction box/within the IMM Upgrade measure the voltage of each module and the temperature of each junction box.

3. The data from the IMM Sensors are sent to the String Reader via smart Powerline communication (existing DC cabling)

4. The String Readers receive the data from the IMM Sensors and forward them to the Gateway. The String Reader too measures temperature, voltage and current.

5. The transmitted data of the String Reader are collected in the Gateway and sent via internet to the Web Portal.

6. The Web Portal elaborates the data and displays the analysis.



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Technical specifications in this document are subject to change without notice. Please read carefully the related installation manuals before installing the products. The installation must be carried out by a specialist. Improper installation can void the warranty.

Version: V.202106.V01-1.EN

# THE IMM UPGRADE

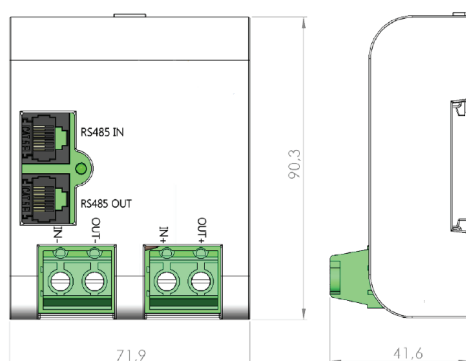


Plug-and-play to upgrade existing solar modules with IMM; features an IMM Sensor.

## AS-EF01-1

Rated current (J/D)	14.5 A / 30 [A]
Rated voltage	IEC 1000 [V] / UL 600 [V]
Reverse current	25 [A]
Dimensions	100 x 67 x 20 [mm]
Temperature range	-40°C~+ 85 [°C]
Cable size	4.0 [mm <sup>2</sup> ] / 12 [AWG]
Cable length	50 / 900 [mm]
Protection degree	IP 67
Flammability class	5VA
Weight	0.09 [kg]

String Reader AS-ER01 (rev. DIN-I):



# THE IMM STRING READER

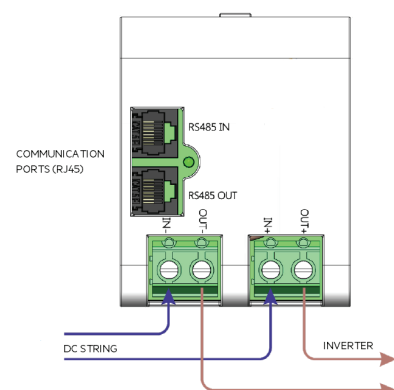


For consistent data collection from the individual strings.

## AS-ER01 (rev. DIN-I)

Measurement rate string voltage ( $U_{STR}$ )	0-1500 [V]
Measurement rate string current ( $I_{STR}$ )	0-10.8 [A]
Maximum overload current	15.8 [A]
Maximum modules of PV modules per string ( $N_{MOD}$ )	30
Power supply voltage ( $U_S$ ) supplied through Gateway <sup>24</sup>	[V]
Power consumption ( $P_S$ )	< 0.1 [W]
Dimension (LxWxH)	71.9 x 90.3 x 41.6 [mm]
Weight	126 [g]
COMMUNICATION	
Communication interface	2-wire RS485 (4 cables)
Communication speed ( $B_R$ )	9600 [Baud]
Communication protocol	MODBUS RTU
Maximum String Readers per one RS485 line	30

String Reader AS-ER01 (rev. DIN-I): Connections



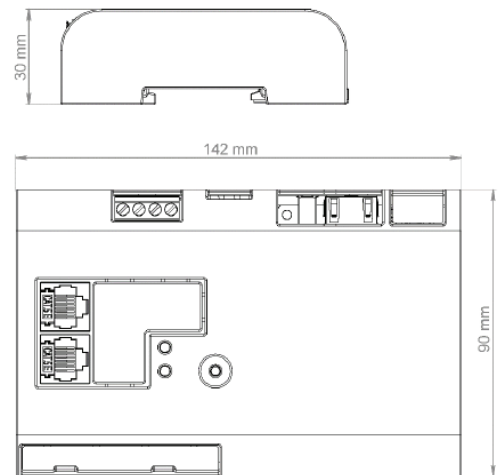
# THE IMM GATEWAY (S)



TEST IMM TECHNOLOGY!  
Request a demo at  
[www.imm-portal.com](http://www.imm-portal.com)



Gateway AS-EG01-S-1: Dimensions

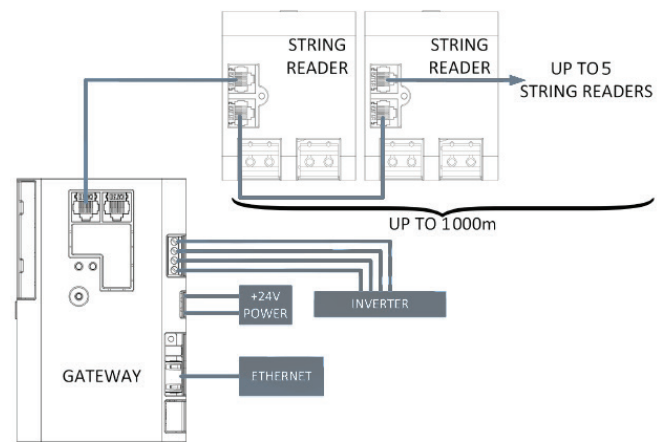


Gathers telemetry from in-field devices and pushes it to the IMM Web Portal.

## AS-EG01-S-1 (rev.D)

RS485 communication channels	3
Supported protocols (RS485)	MODBUS RTU.
S0 Inputs (S0)	2
Analog Sensor Inputs (NSENSOR)	up to 4
Maximum attached String Readers (NSTR)	up to 150 [pcs.]
Maximum inverters (NINV)	up to 30 [pcs.]
Maximum RS485 cable length	1000 [m]
Dimension (LxWxH)	142 x 90 x 30 [mm]
Weight	0,20 [kg]
Installation	DIN-rail
Protective insulation	2
Protection class	IP 20
Operating temperature	-25 to +60 [°C]
<b>INTERNET CONNECTION</b>	
Interface	Ethernet RJ45
IP Address	dynamic or static
Power supply requirements	+24 (DC) [V]
Gateway consumption	<5 [W]
Consumption per attached String Reader	<0.5 [W]

Gateway AS-EG01-S-1: Connections



Gateway AS-EG01-S-1: pinout

