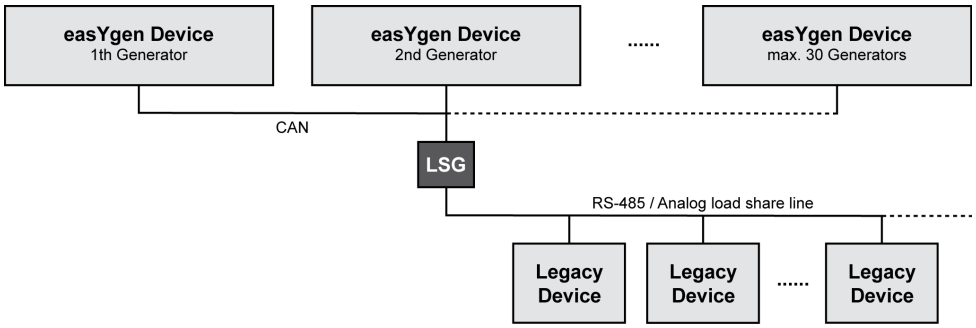
# Load Share Gateway (LSG)


## DESCRIPTION

The Load Share Gateway (LSG) is a next generation communication converter specifically designed to operate the easYgen-2000 / easYgen-3000 Series and legacy devices (RS-485 bus or analog load share line coupled) in one single load share network.

**Example:**




## FEATURES

- Easy and direct configuration via easYgen
- Converts CAN bus loadshare information into RS-485 data
- Converts CAN bus loadshare information to analog load share line
- Several analog load share line voltage ranges are selectable for a variety of analog load share devices
- Status LEDs for CAN & RS-485 communciation are present
- Robust industrial grade metal housing
- LSG is visualized on the sequencing display screens on the easYgen

**Technical requirements**
The Load Share Gateway (LSG) works only in combination with:

- easYgen-3100/3200 (Package P2 – Software Version 1.12xx & 1.13xx)
- easYgen-3100/3200 (Software Version 1.15xx or higher)
- easYgen-3400/3500 (Software Version 1.17xx or higher)
- easYgen-2000 Series

- **Ideal communication converter between easYgen-2000/3000 and legacy analog load share networks**
- **Easy and direct configuration via easYgen-2000/3000**
- **Preconfigured operating modes for legacy Woodward and third party devices**
- **Robust industrial grade aluminium housing**
- **CAN-to-RS-485 load share line gateway**
- **CAN-to-analog load share line gateway**
- **CE marked**

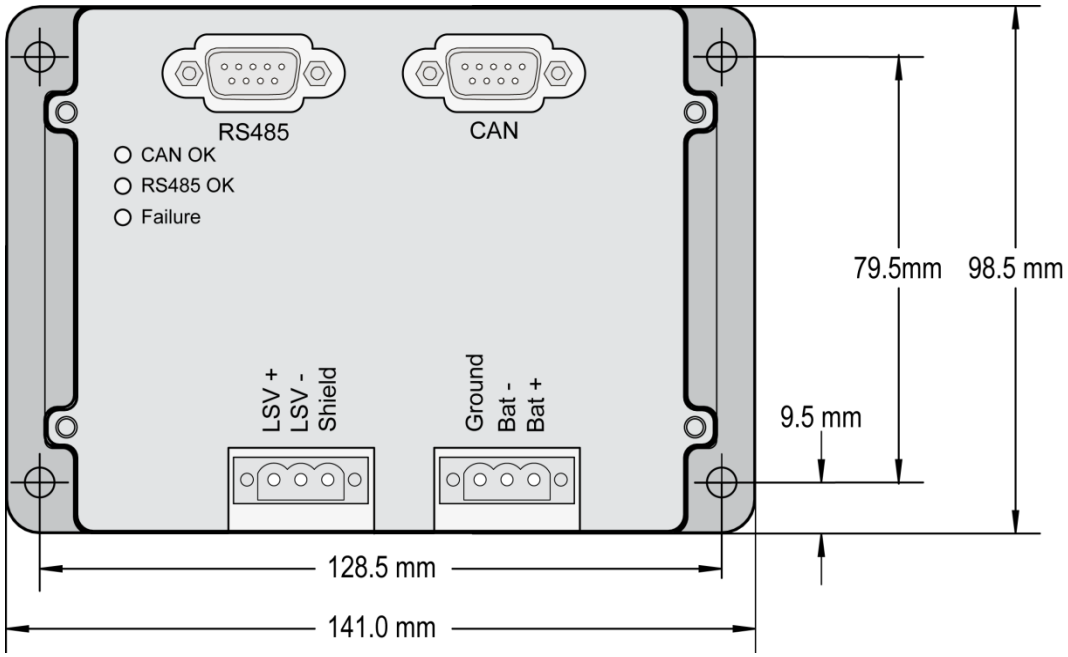
# SPECIFICATIONS

Power supply.....12/24 Vdc (8 to 40 Vdc)
Intrinsic consumption .....max. 3 W
Ambient temperature (operation).....-20 to 70 °C / -4 to 158 °F
Ambient temperature (storage).....-30 to 80 °C / -22 to 176 °F
Ambient humidity.....60°C, 95% RH non-condensing, 5 days
……IEC 60068-2-30, Test Db

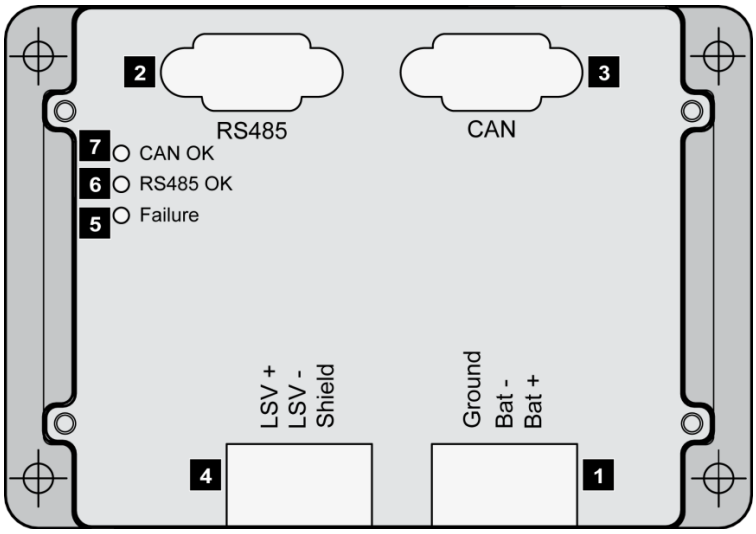
**Housing**
Type .....Aluminium
Dimensions WxHxD..... 141 × 98.5 × 21 mm
Connection..... screw/plug terminals 2.5 mm²
Protection system .....IP20
Weight.....approx. 280 g
**Disturbance test** (CE) ..... tested according to applicable EN guidelines

# DIMENSIONS

**Metal housing**




# TERMINAL DIAGRAM

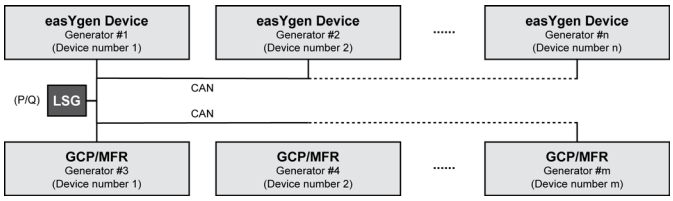



1. Power terminal block socket
2. RS-485 connector
3. CAN connector
4. Analog terminal block socket
5. Error indication LED
6. RS-485 / GCP/MFR CAN / Analog Status Indicator
7. easYgen (CAN) Communication Status LED

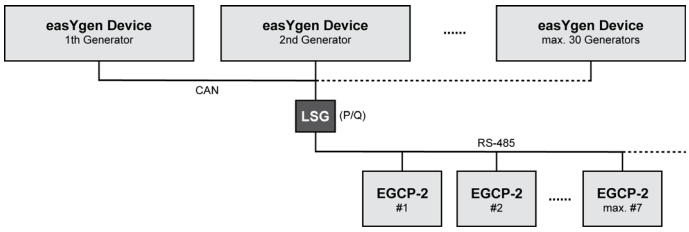
LSG – wiring diagram

# APPLICATIONS

## easYgen connected to GCP-2x/GCP-3x/MFR2/MFR3x (CAN)




## easYgen connected to EGCP-1 + EGCP-2 (CAN/RS-485)

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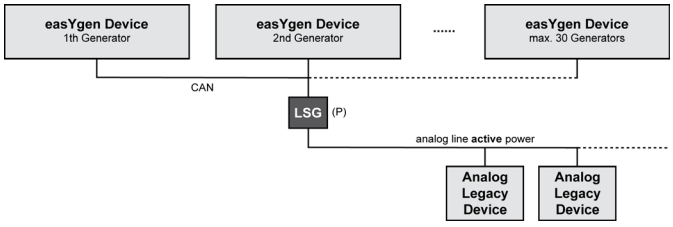
## easYgen connected to legacy device (CAN/Analog)

There are two application scenarios possible:

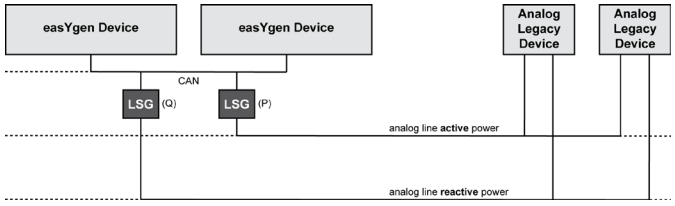
- Examples A shows the applications with one LSG for all easYgen devices
- Examples B shows the applications with one LSG for each easYgen devices

**Example A**

Active power loadshare

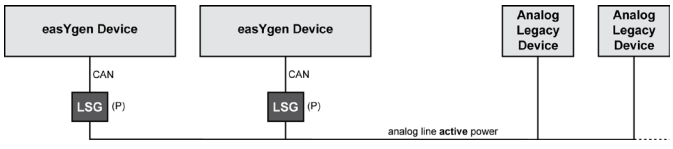



Active and reactive power loadshare

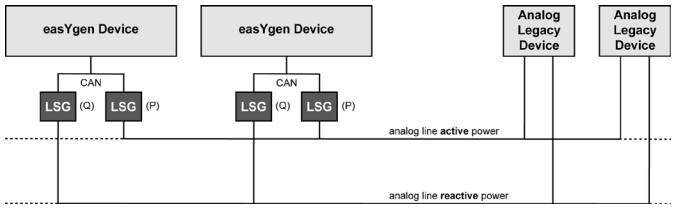



**Example B**

Active power loadshare




Active and reactive power loadshare



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# FEATURES OVERVIEW

| Model | Load Share Gateway (LSG) |
|---|---|
| **Supported devices** | |
| Woodward EGCP-1 / EGCP-2 | RS-485 (**P** & **Q**)[1] |
| Woodward SPM-D11 | **R**[2] = 4.99k<br>**P**[3] = 0 − 4V (0 to 100%)<br>**Q**[4] = 0 − 5V (-85 to +85%) |
| MFR 15 SYN | **R** = 4.99k<br>**P** = 0 − 4V (0 to 100%) |
| Woodward 2301 A | **R** = 54.90k<br>**P** = 0 − 3V (0 to 100%) |
| Caterpillar LSM | **R** = 25.00k<br>**P** = 0 − 3V (0 to 100%) |
| Cummins<br>PCC 3100; PCC 3200; PCC 3201; PCC 3300 | **R** = 5.00k<br>**P** = 0 − 2.5V (-14.1 to +121.9%)<br>**Q** = 0 − 2.5V (-16.7 to +125.3%) |
| POW-R-CON | **R** = 20.67k<br>**P** = 0 − 5V (0 to 100%) |
| Prepared[5] | **R** = 25.00k<br>**P** = -5 − +5V (0 to 100% ) |
| Prepared[5] | **R** = 25.00k<br>**P** = 0 − 7V (0 to 100%) |
| GCP/MFR | CAN (**P** & **Q**)[1] – easYgens and GCP/MFR share the same CAN bus |
| **I/Os** | |
| CAN bus load share line | ✓ |
| Analog load share line | ✓ |
| RS-485 load share line | ✓ |
| LED for CAN Status | ✓ |
| LED for RS485/Analog line Status | ✓ |
| LED for bus failure visualization | ✓ |
| **Listings/Approvals** | |
| CE Marked | ✓ |
| **Part Numbers** | |
| Active power load share gateway (P)[3] P/N 8444- | 1075 |
| Re-active power load share gateway (Q)[4] P/N 8444- | 1074 |

[1] Operation mode supports one LSG device. This single device is able to share P and Q.
[2] R = Resistance
[3] P = Active power load share line range
[4] Q = Reactive power load share line range
[5] For Load Share devices that meet the specifications shown in the table above.