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

- 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

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
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

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

There are two application scenarios possible:

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

Example A
Active power loadshare

Example B
Active power loadshare
## FEATURES OVERVIEW

<table>
<thead>
<tr>
<th>Supported devices</th>
<th>Load Share Gateway (LSG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Woodward EGCP-1 / EGCP-2</td>
<td>RS-485 (P &amp; Q)(^1)</td>
</tr>
</tbody>
</table>
| Woodward SPM-D11 | R\(^2\) = 4.99k  
P\(^3\) = 0 – 4V (0 to 100%)  
Q\(^4\) = 0 – 5V (-85 to +85%) |
| MFR 15 SYN | R\(^2\) = 4.99k  
P\(^3\) = 0 – 4V (0 to 100%)  
Q\(^4\) = 0 – 3V (0 to 100%) |
| Woodward 2301 A | R\(^2\) = 54.9k  
P\(^3\) = 0 – 3V (0 to 100%) |
| Caterpillar LSM | R\(^2\) = 25.00k  
P\(^3\) = 0 – 3V (0 to 100%) |
| Cummins  
PCC 3100; PCC 3200; PCC 3201; PCC 3300 | R\(^2\) = 5.00k  
P\(^3\) = 0 – 2.5V (-14.1 to +121.9%)  
Q\(^4\) = 0 – 2.5V (-16.7 to +125.3%) |
| POW-R-CON | R\(^2\) = 20.67k  
P\(^3\) = 0 – 5V (0 to 100%) |
| Prepared\(^5\) | R\(^2\) = 25.00k  
P\(^3\) = -5 – +5V (0 to 100%) |
| Prepared\(^5\) | R\(^2\) = 25.00k  
P\(^3\) = 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)\(^5\)  
P/N 8444-1  
1073
- Re-active power load share gateway (Q)\(^5\)  
P/N 8444-1  
1074

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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.