

Four Channels Intrinsic Safety Barrier

SAG-B-2101L+



Introduction

Natural gas metering system consist meter and EVCD Device. In natural gas metering system the EVCD is installed at Hazardous Area. In hazardous area for external power and data signal need to use barrier. Every EVCD needs to specific barrier as external power and data signal. There are a lot of EVCD brand. Some of EVCD have RS485 and someone have RS232 port for remote data transfer. Also some of EVCD support Modbus Standard protocol but someone use customized protocol.

Gas network develops in long time. The technology of EVCD is changing. The developer of gas network has to use new technology of EVCD. Therefore gas networks uses different brands and models of EVCD.

Gas network monitoring system is growing up. But sometimes operator needs to Change the EVCD from one brand or model to another brand or model. The operator has to change some part of monitoring or DCS system that depends on EVCD.

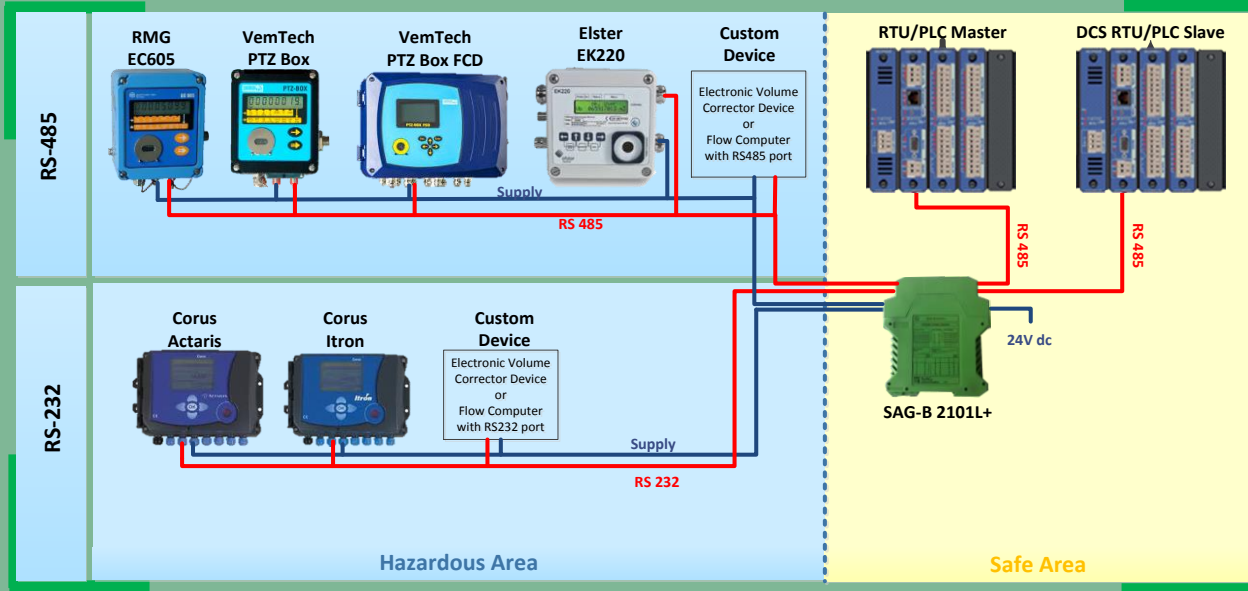
Because each EVCD uses specific barrier SAG Company develops the B-2101L+ barrier to solve this problem. B-2101L+ barrier support 4 channels power , one channel RS485 signal port and 3 channels RS232 signal port. This barrier supports most of EVCD brand and models. Then by changing the EVCD brand and model there is no need to change barrier and panel termination.

Technical Specifications

ATEX Approval	Class I, GRPS, A,B,C,D Class II, GRPS, E,F,G Class III, HAZ.LOC [Ex ia]
Environment	Operating Temperature: -20 to +60 °C IP Rate: IP20
Power Supply	24V DC
Power Output	Powering four devices with 0-9V DC
Com Ports	One RS485 port for Hazardous area Three RS232 ports for Hazardous area Two RS485 ports for Safe area
Dimensions	100*115*45 mm
Maximum Cable Length	RS232: 50m RS485: safe area up to 1 km Hazardous area up to 200 m
LEDs	One LED indicates Input power presence Four LEDs indicates Output power presence Two LEDs for Master RS485 in safe area Two LEDs for Slave RS485 in safe area Two LEDs for RS485 in Hazardous area Six LEDs for RS232 in Hazardous area
Communication Protocol	ModBus 16 RTU Standard and Customize
Weight	200 gr

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Supported Electronic Volume Correctors

- ✓ Elster EVCD Series
- ✓ Coruse EVCD Series
- ✓ RMG EVCD Series
- ✓ VemmTech EVCD Series
- ✓ Custom Devices with RS485/RS232 Modbus RTU Standard

B-2101L+ Barrier Futures

- ✓ This barrier is supporting common EVCDs brand. But as your requirement, you can define a customize device.
- ✓ It is designed to support concurrently four devices
- ✓ There are four output power channels
- ✓ The RS485 port supports up to 9 devices. Then you need to power on 5 devices with other barrier
- ✓ It is rail mount

Intrinsic Safety Parameters

Terminals	Uo (V)	Co (μF)	Io (mA)	Lo (mH)	Um (V)
(19,20) (23,24) (25,26) (27,28)	15.6	1.2	47	2	250
(1+,2-) (3+,4-) (5+,6-) (7+,8-)	10.7	1	450	0.5	250

About Communication SAG Company:

Our mission is developing and producing the general and specific communication parts base on standard communication protocols in Gas, Oil, Petrochemical, Power and Water fields.

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