

User guide MCS GasCommander SK



The operation of this instrument requires thorough knowledge of and compliance with this user guide.

The evaluation instrument is not authorized for use in areas with the risk of explosion.

Liability for Function or Damage

The liability for the function of this instrument passes on to the owner or operator in so far as the instrument is improperly maintained or repaired by individuals, who do not belong to the service department of the MCS company or when operation occurs, which does not comply with the proper use.

The MCS company is not liable for damage that is caused by non-compliance with the remarks above.

Maintenance

The instrument must be submitted to a regular annual inspection, performed by qualified personnel. The service interval is stated on the service decal.
It is recommended that a service contract is made with the service department of MCS.

Function

The GasCommander SK is a microprocessor-controlled system for the monitoring of up to 8 signal generators/contact manometers.

The GasCommander SK is available in four versions (SK2, SK4, SK6, SK8).

GasCommander **SK2** = maximum of **2 channels** (contact manometers)

GasCommander **SK4** = maximum of **4 channels** (contact manometers)

GasCommander **SK6** = maximum of **6 channels** (contact manometers)

GasCommander **SK8** = maximum of **8 channels** (contact manometers)

The GasCommander SK is a fault indication unit and monitors up to 8 control circuits in regard to deviations from the normal state. Normal operation of the GasCommander SK is indicated with the green standby LED.

An integrated light and horn test in addition enables function testing of the unit. When one or more fault reports (e.g. insufficient gas) occur, an audible signal (piezo) and an optical signal (red LED) is supplied for each channel.

The audible signal can be acknowledged by means of pressing a button, the optical signal is only switched off after all fault causes have been removed (e.g. replacement of the gas bottle).

The unit is equipped with a collective alarm for transmitting the alarm to a control room, to a control unit or external signalisation equipment. As a signal generator, all equipment can be utilised that is equipped with a mechanical contact or an inductive contact in accordance with DIN 19234 NAMUR. As standard the signal generators are connected in the operational direction NC (normally closed): mechanical contact is closed in the undamped state, inductive contact in the undamped state, undamped contact.

For applications in the EX range the signal is made intrinsically safe with the utilisation of a disconnection switch unit. VDE 0165

Connection of signal generator

Depending on the version up to 8 signal generators/contact manometers can be connected.
The inputs are potential-free break contacts, i.e. in the alarm state the contacts are open.

Relay Outputs

The GasCommander SK is equipped with 2 potential-free relays.

The contacts are from left to right: Make contacts, reversing contacts, break contacts.

The make contact is closed, when messages are to be made, i.e. pending alarms or current fault indications.

Alarm Indications

On the front of the unit the status of the alarm indications can be displayed by means of LEDs for each signal generator/contact manometer.

When the signal generator/contact manometer is active, the corresponding alarm is triggered. The corresponding LED is lit and the relay is activated.

Instrument Fault Indications

A fault indication for the instrument is displayed under the following conditions:

- Power failure
- in the case of active false alarm suppression, approx. 2 min. after return of power
- Loss of fuse
- Equipment failure
- Interruption or short-circuit of the sensor supply

In the case of malfunctions of the unit, the standby LED will flash and the contacts of the fault report relays of the unit are closed.

Unit test

By pressing a screwdriver into the test opening at the front of the unit, all alarms and fault reports are activated and the connected warning equipment can be tested.

Changing the equipment configuration

If necessary, the following changes can be performed on the equipment:
The changes must be performed by qualified personnel.

Start-up

The GasCommander is programmed at the factory for the respective number of contact manometers.

GasCommander SK2	=	2 contact manometers
GasCommander SK4	=	4 contact manometers
GasCommander SK6	=	6 contact manometers
GasCommander SK8	=	8 contact manometers

Inputs that are not required must be bridged.

The MCS GmbH company offers initial start-up with simultaneous instruction of the operating personnel.

Service

In order to maintain operational reliability, maintenance at regular intervals must be performed. The service interval is stated on the testing decal. It is never longer than 1 year.

Technical Data

Subject to technical alterations.

Enclosure	wall enclosure	or blind frame for cabinet installation	
Installation type	wall mounting	mounting rail attachment DIN EN 50022	
Enclosure Material		Hostyren/Polystyrol impact-resistant	
Dimensions	L x W x H	190 x 140 x 60 mm, incl. PG screws	
Protection Class	IP 50		
Inputs	potential-free, mechanical contacts, according to the version 2, 4, 6, 8 10 V max. through the unit, 10 mA max. (short-circuit proof) 330 mH/ 4.0 µF (EEx ib IIC), 1000 mH/ 30.0 µF (EEx ib IIB)		
Switch outputs	group status message Horn, external	potential-free change-over contact potential-free make contacts can be acknowledged	250V/2.5A 250V/2.5A
Piezo buzzer	100dB/1m	can be actively acknowledged in the case of an alarm	
Controls	1 push button 1 push button	Horn off, alarm reset Instrument test	
Adjusters	via software		
Display elements	LED Display	Red Alarm Red Horn active Green Standby, instrument fault	per input collective alarm
Connection values	230V/50Hz/20W	24V/DC/20W	
Environmental values	max. 40 °C	0 - 95 % rel. humidity, non-condensating	
Wiring technique	Terminal block 2-pin	10V/DC,	
A. cross sections	1.5 mm ² max.		
Options	Mounting rail attachment GasCommander Exi	for cabinet installation EX modules, buffer amplifier	

Type overview GasCommander SK

Instrument type	Channels	Article number
GasCommander SK 2	2	20-1002
GasCommander SK 4	4	20-1004
GasCommander SK 6	6	20-1006
GasCommander SK 8	8	20-1008

Type overview GasCommander EX

Instrument type	Channels	Article number
GasCommander EXi 2	2	21-1002
GasCommander EXi 4	4	21-1004
GasCommander EXi 6	6	21-1006
GasCommander EXi 8	8	21-1008