INSTRUCTION MANUAL

SIL 2 - SC 3 Repeater Power Supply / Analog Signal Converter and Trip Amplifiers, DIN-Rail & Termination Board, Model D6254S

gmi technology for safety

Characteristics

General Description: the single channel Power Supply Repeater and Trip Amplifier D6254S provides a fully floating dc supply to energize conventional 2 wires 4-20 mA transmitters; it also accepts 0/4-20 mA current input signals, as well as ±12 V voltage inputs (also suitable for 0/1-5 V and 0/2-10 V signals).
The module repeats/converts (in linear or square root scale) the input as on current signal, in a floating circuit to drive a load, suitable for applications requiring SIL 2 (according to IEC 61508:2010) in safety related systems for high risk industries. The output signal can be in direct or reverse form.
Two independent Alarm Trip Amplifiers are also provided. Each alarm energizes or de-energizes an SPDT relay for low, high, window or fault repeater alarm functions.
The two alarm relays trip points are settable over the entire input signal range. An optional alarm acknowledgement input is also provided.
Function: 1 channel analog input for 2 wires loop powered or separately powered Smart transmitters or Current or Voltage signals, provides 3 port isolation (input/output/supply) and current (source or sink mode) output signal. In addition, it provides two SPDT relay alarm contacts with adjustable alarm trip point.
The out-of-range (burnout) fault is repeated to the bus.
Configurability: totally software configurable (no jumpers or switches), by PC via USB with PPC5092 Adapter and related configurator software or by RS485 Modbus output, in order to choose: mA or V input signal, linear or reverse output signal, alarm trip point, low, high, window or fault repeater alarm mode, hysteresis, delay time.

Mounting on standard DIN-Rail, with or without Power Bus, or on customized Termination Boards.

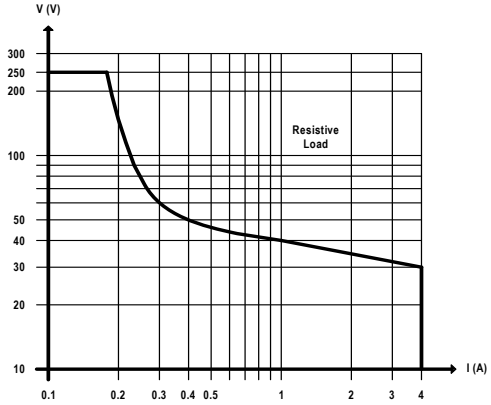
Functional Safety Management Certification:
G.M. International is certified by TÜV to conform to IEC61508:2010 part 1 clauses 5-6 for safety related systems up to and included SIL3.

FSM SIL 3

Technical Data

Supply: 24 Vdc nom (21.5 to 30 Vdc) reverse polarity protected, ripple within voltage limits ≤ 5 Vpp, 2 A time lag fuse internally protected.
Current consumption @ 24 V: 110 mA max. with 20 mA input/output and alarm relays energized.
Power dissipation: 2.3 W max. at 24 V supply, 20 mA input/output and alarm relays energized.
Isolation (Test Voltage): Input / all Outputs 1.5 KV; Input / Supply 1.5 KV; Input / Ack 1.5 KV; Analog Output / Alarm Outputs 1.5 KV; Analog Output / Supply 500 V; Analog Output / Ack 500 V; Alarm Outputs / Supply 1.5 KV; Supply / Ack 500 V, Alarm Output / AlarmOutput 1.5 KV.
Input: 0/4 to 20 mA (separately powered input, voltage drop ≤ 0.5 V) or 4 to 20 mA (2 wires Tx current limited at ≈ 25 mA), or voltage input ±12 V.
Integration time: 100 ms. ***Input range :*** 0 / +25 mA for current, ± 12 V for voltage.
Resolution / Visualization: 1 µA for current; 1 mV (±12 V range).
Transmitter line voltage: 15.5 V typical at 20 mA with max. 20 mV ripple, 15.0 V minimum.
Acknowledgement Input: logic level reverse polarity protected.
Trip voltage levels: OFF status ≤ 5.0 V, ON status ≥ 18.0 V (maximum 30 V).
Current consumption @ 24 V: 10 mA max.
Fault: Out-of-range (burnout) fault detection can be enabled or disabled. Analog output can be programmed to detect fault condition with downscale or highscale forcing. Alarms can be programmed to detect fault condition. Fault conditions are also signalled via Power Bus or Termination Board and by a red LED on the front panel.
Out- of-range: low and high separated trip point values are fully programmable.
Analog Output: Fully customizable 0/4 to 20 mA, on max. 300 Ω load source mode, current limited at 25 mA.
In sink mode, external voltage generator range is V min. 3.5 V at 0 Ω load and V max. 30 V. If generator voltage Vg > 10 V, a series resistance ≥ (Vg - 10)/0.024 Ω is needed.
The maximum value of series resistance is (Vg - 3.5)/0.024 Ω.
Resolution: 1 µA. ***Transfer characteristic:*** linear or reverse.
Response time: ≤ 100 ms (10 to 90% step change).
Output ripple: ≤ 20 mVrms on 250 Ω.
Alarm: ***Trip point range:*** within rated limits of input sensor.
ON-OFF delay time: 0 to 1000 s, 100 ms step, separate setting.
Hysteresis: programmable over full measuring range.
Output: voltage free SPDT relay contacts (NO and NC).
Contact material: Ag Alloy (Cd free) or $AgSnO_2$.
Contact rating: 4 A 250 Vac 1000 VA, 4 A 250 Vdc 120 W (resistive load).
Mechanical / Electrical life: $5 * 10^6 / 3 * 10^4$ operation, typical.
Bounce time NO / NC contact: 3 / 8 ms, typical.
Frequency response: 10 Hz maximum.
Modbus Output: for parameter configuration and fault indication. Modbus RTU protocol up to 115.2 Kbit/s with RS-485 connection on Power Bus connector.
Transmission cable length: ≤ 1000 m up to 115.2 Kbit/s.
Performance: Ref. Conditions 24 V supply, 250 Ω load, 23 ± 1 °C ambient temperature.
Input: *Calibration and linearity accuracy:* ≤ ± 10 µA for current;
≤ ± 5 mV (0-10 V range), for voltage.
Temperature influence: ≤ ± 0.005 % of input range for a 1°C change for current and voltage signals.
Analog: *Calibration accuracy:* ≤ ± 0.05 % of full scale;
Output *Linearity error:* ≤ ± 0.05 % of full scale;
Supply voltage influence: ≤ ± 0.02% of full scale for min to max supply change;
Load influence: ≤ ± 0.02% of full scale for a 0 to 100% load resistance change;
Temperature influence: ≤ 0.005% of output range for a 1°C change.

DC Load breaking capacity:



Compatibility:
CE mark compliant, conforms to Directives:
2014/30/EU EMC, 2014/35/EU LVD, 2011/65/EU RoHS.
Environmental conditions:
Operating: temperature limits – 40 to + 70 °C, relative humidity 95 %, up to 55 °C.
Storage: temperature limits - 45 to + 80 °C.
Approvals:

TUV Certificate No. C-IS-722160171, SIL 2 conforms to IEC61508:2010 Ed.2 .
SIL 3 Functional Safety TÜV Certificate conforms to IEC61508:2010 Ed.2, for Management of Functional Safetyety.
Mounting: EN/IEC60715 TH 35 DIN-Rail, with or without Power Bus or on customized Termination Board.
Connection: by polarized plug-in disconnect screw terminal blocks to accommodate terminations up to 2.5 mm^2.
Protection class: IP 20.
Weight: about 120 g.
Dimensions: Width 22.5 mm, Depth 123 mm, Height 120 mm.

Ordering Information

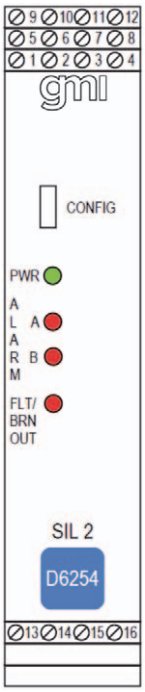
Model:	D6254	
1 channel		S

Power Bus and DIN-Rail accessories:

Connector JDFT050	Cover and fix MCHP196
Terminal block male MOR017	Terminal block female MOR022

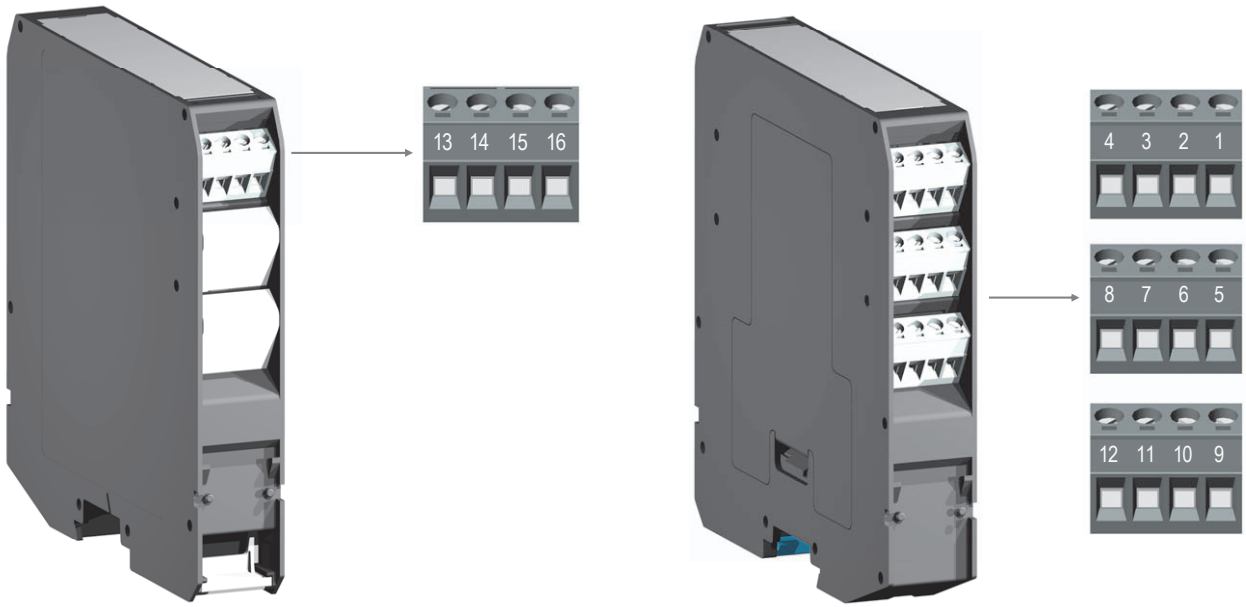
Operating parameters are programmable from PC by the GM Pocket Portable Adapter PPC5092 via USB serial line and SWC5090 Configurator software.

Front Panel and Features



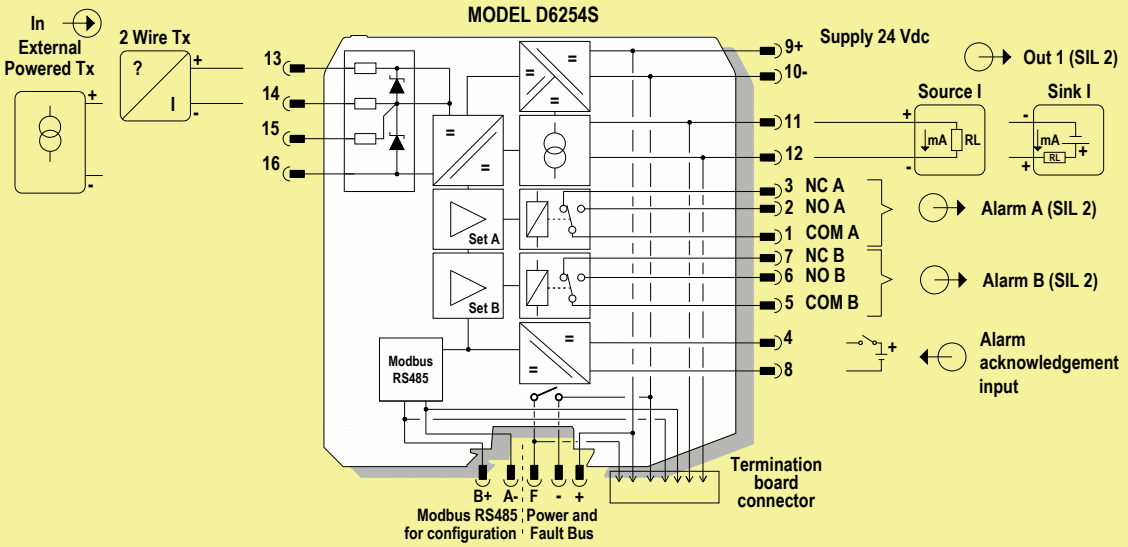
- SIL 2 according to IEC 61508:2010 (Route 2H) with Tproof = 10 / 20 years (≤10% / >10 % of total SIF), PFDavg(1year) 9.38E-05, DC 88.58%, SFF 93.56% for input current & analog current source/sink output.
- SIL 2 according to IEC 61508:2010 (Route 2H) with Tproof = 5 / 20 years (≤10% / >10 % of total SIF), PFDavg(1year) 1.87E-04, DC 70.96%, SFF 87.46% for input current & single alarm trip amplifier with relay output.
- SIL 2 according to IEC 61508:2010 (Route 2H) with Tproof = 20 years (≤10% of total SIF), PFDavg(1year) 4.87E-05, DC 90.47%, SFF 96.06% for input current & 1oo2 architecture of alarm trip amplifiers with relay outputs.
- SC 3: Systematic Capability SIL 3.
- Current Input signal: 4-20 mA loop or 0/4-20 mA externally powered. Voltage Input signal: ±12 V.
- Source/Sink Current Output signal: 0/4-20 mA linear or reverse.
- Input and Output short circuit protection.
- Modbus RTU RS-485 Output.
- Out-of-range (burnout) fault detection.
- High Accuracy, µP controlled A/D converter.
- Three port isolation, Input / Output / Supply.
- EMC Compatibility to EN61000-6-2, EN61000-6-4, EN61326-1, EN61326-3-1 for safety systems.
- TÜV Certification and TÜV Functional Safety Certification.
- Fully programmable operating parameters.
- High Density: 1 channel, 2 trips with alarm relays.
- Optional alarm acknowledgement input.
- Simplified installation using standard DIN-Rail and plug-in terminal blocks, with or without power Bus, or customized Termination Boards.

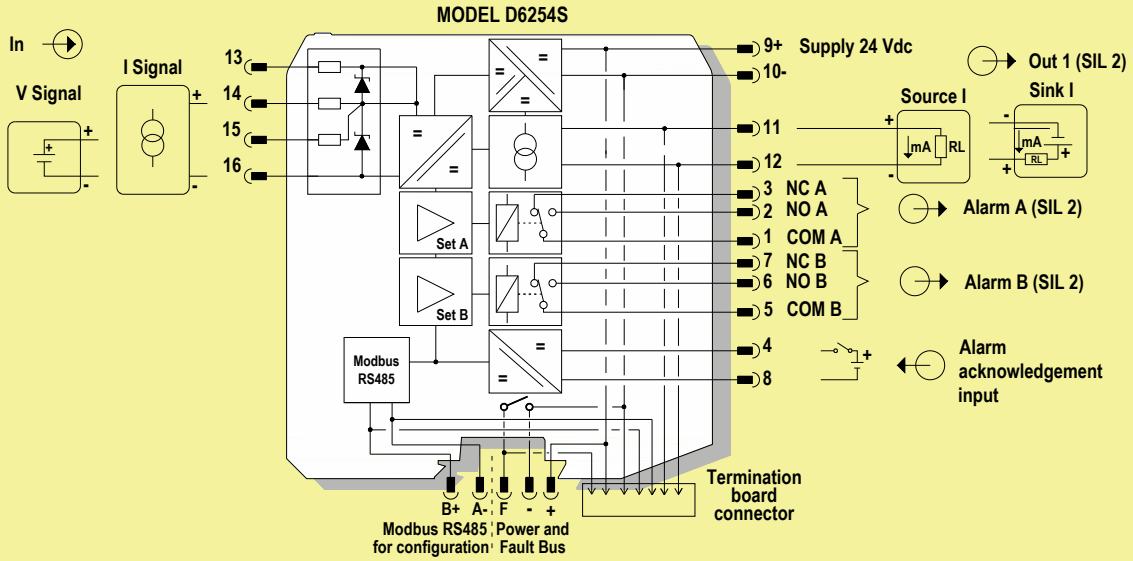
Terminal block connections



13	+ Input for 2 Wire Transmitters
14	- Input for 2 Wire Transmitters or + Input for External Powered Transmitters
15	+ Input for V signal
16	- Input for External Powered Transmitters or - Input for V signal

1	Common pole (COM A) of Alarm A output
2	Normally Open pole (NO A) of Alarm A output
3	Normally Closed pole (NC A) of Alarm A output
4	+ Alarm Acknowledgement Input
5	Common pole (COM B) of Alarm B output
6	Normally Open pole (NO B) of Alarm B output
7	Normally Closed pole (NC B) of Alarm B output
8	- Alarm Acknowledgement Input
9	+ Power Supply 24 Vdc
10	- Power Supply 24 Vdc
11	+ Output 1 (source mode); - Output 1 (sink mode)
12	- Output 1 (source mode); + Output 1 (sink mode)





Relay contacts shown in de-energized position.
Terminals: 1-2 and 5-6 are open; 1-3 and 5-7 are closed.

Warning

D6254S must be installed, operated and maintained only by qualified personnel, in accordance to the relevant national/international installation standards.
Warning: de-energize main power source (turn off power supply voltage) and disconnect plug-in terminal blocks before opening the enclosure to avoid electrical shock when connected to live hazardous potential.
Failure to properly installation or use of the equipment may risk to damage the unit or severe personal injury. The unit cannot be repaired by the end user and must be returned to the manufacturer or his authorized representative. Any unauthorized modification must be avoided.

Operation

The single channel Power Supply Repeater and Trip Amplifier D6254S provides a fully floating dc supply to energize conventional 2 wires 4-20 mA transmitters; it also accepts 0/4-20 mA current input signals, as well as ±12 V voltage inputs (also suitable for 0/1-5 V and 0/2-10 V signals). The module repeats/converts (in linear or square root scale) the input as on current signal, in a floating circuit to drive a load, suitable for applications requiring SIL 2 (according to IEC 61508:2010) in safety related systems for high risk industries.
The output signal can be in direct or reverse form.
Two independent Alarm Trip Amplifiers are also provided. Each alarm energizes or de-energizes an SPDT relay for low, high, window or fault repeater alarm functions.
The two alarm relays trip points are settable over the entire input signal range. Out-of-range (burnout) fault detection can be enabled or disabled.
An optional alarm acknowledgement input is also provided.
Presence of supply power is displayed by a “POWER ON” green signaling LED; Alarm A, Alarm B and Burnout condition are signaled by related red front panel fault LED.

Installation

D6254S is a repeater power supply with trip amplifiers housed in a plastic enclosure suitable for installation on EN/IEC60715 TH 35 DIN-Rail, with or without Power Bus or on customized Termination Board. D6254S unit can be mounted with any orientation over the entire ambient temperature range.
Electrical connection of conductors up to 2.5 mm² are accommodated by polarized plug-in removable screw terminal blocks which can be plugged in/out into a powered unit without suffering or causing any damage. Connect only one individual conductor per each clamping point, use conductors up to 2.5 mm² and a torque value of 0.5-0.6 Nm. Use only cables that are suitable for a temperature of at least 85°C.
The wiring cables have to be proportionate in base to the current and the length of the cable.
On the section “Function Diagram” and enclosure side a block diagram identifies all connections.
Identify the function and location of each connection terminal using the wiring diagram on the corresponding section,
as an example (source current output, both trip amplifier outputs of alarms):
Connect 24 Vdc power supply positive at terminal “9” and negative at terminal “10”.
Connect positive output of analog channel at terminal “11” and negative output at “12”.
Connect trip amplifier output of alarm 1 at terminal “1” - “3” (for Normally Open NO contact) or “1” - “2” (for Normally Closed NC contact).
Connect trip amplifier output of alarm 2 at terminal “5” - “6” (for Normally Open NO contact) or “5” - “4” (for Normally Closed NC contact).
In case of a 2 wire input transmitter, connect the wires at terminal “13” for positive and “14” for negative.
For separately powered transmitters, connect input signal at terminal “14” for positive and “16” for negative..

Connect SPST alarm contacts checking the load rating to be within the contact maximum rating 4 A 250 Vac 1000 VA, 4 A 250 Vdc 120 W (resistive load).
To prevent alarm relay contacts from damaging, connect an external protection (fuse or similar), chosen according to the relay breaking capacity diagram on data sheet.
The enclosure provides, according to EN60529, an IP20 minimum degree of protection (or similar to NEMA Standard 250 type 1). The unit shall be installed in an area of not more than pollution degree 2 according to EN/IEC60664-1.
Units must be protected against dirt, dust, extreme mechanical (e.g. vibration, impact and shock) and thermal stress, and casual contacts.
If enclosure needs to be cleaned use only a cloth lightly moistened by a mixture of detergent in water.
Any penetration of cleaning liquid must be avoided to prevent damage to the unit. Any unauthorized modification must be avoided.
According to EN61010, D6254S must be connected to SELV or SELV-E supplies.
All circuits connected to D6254S unit must comply with the overvoltage category II (or better) according to EN/IEC60664-1.
Alarm relay output contacts must be connected to load non exceeding category II overvoltage limits.
Warning: de-energize main power source (turn off power supply voltage) and disconnect plug-in terminal blocks before opening the enclosure to avoid electrical shock when connected to live hazardous potential.

Start-up

Before powering the unit check that all wires are properly connected, particularly supply conductors and their polarity, input and output wires.
Check conductors for exposed wires that could touch each other causing dangerous unwanted shorts.
Turn on power, the “power on” green led must be lit, for 2 wire transmitter connection the supply voltage on each channel must be ≥ 15 V, output signal should be corresponding to the input from the transmitter, alarm LED should reflect the input variable condition with respect to trip points setting.
If possible change the transmitter output and check the corresponding output.

Configuration parameters:

INPUT:

Input Type:

☐ current (for SIL applications)

☐ voltage

Range:

☐ 0/4-20 mA represents the allowed input current ranges (only 4-20 mA range for SIL applications)

☐ ± 12 V represents the allowed input voltage ranges

Input conversion: (for SIL applications)

☐ Linear the module repeats in linear scale the input to the output

☐ Square root the module converts in square root scale the input to output

Out of range: (for SIL applications: Low threshold ≤ Under Range < 4 mA and High threshold ≥ Over Range > 20 mA)

☐ Low threshold input value below which the fault is triggered

☐ High threshold input value above which the fault is triggered

Tag:

16 alphanumerical characters

OUTPUT

Type:

☐ 0-20 mA Sink

☐ 4-20 mA Sink (for SIL applications)

☐ Custom Sink all Output parameters are fully customizable

☐ 0-20 mA Source

☐ 4-20 mA Source (for SIL applications)

☐ Custom Source all Output parameters are fully customizable

Downscale (only 4 mA value for SIL applications)

analog output downscale in normal working condition (range 0 to 24 mA)

Upscale (only 20 mA value for SIL applications)

analog output upscale in normal working condition (range 0 to 24 mA)

Under range (value < 4 mA for SIL applications)

analog output value in under range condition (range 0 to 24 mA)

Over range (value > 20 mA for SIL applications)

analog output value in over range condition (range 0 to 24 mA)

Fault Output Value (for SIL applications: value ≤ Under Range < 4 mA or value ≥ Over Range > 20 mA)

analog output value in case of fault condition (range 0 to 24 mA)

Fault in case of (for SIL applications)

analog output is forced to "Fault Output Value" when input is out of configured range

ALARM

Type: (for SIL applications)

☐ None alarm is disabled

☐ Low alarm is triggered when input descends below "Low Set"

☐ High alarm is triggered when input ascends above "High Set"

☐ Window alarm is triggered below "Low Set" and above "High Set"

Alarm Lock:

alarm is inhibited until source ascends above or descends below the configuration parameters, and then, it behaves as standard configuration.

NO contact position in case of alarm:

☐ Open alarm output is closed under regular working conditions, and it opens in case of alarm (for SIL applications)

☐ Closed alarm output is open under regular working conditions, and it closes in case of alarm

Low Set: (only value in the range 4 to 20 mA for SIL applications)

input value below which the alarm is triggered (in Low, Window)

Low Hysteresis: (only value ≤ (20 mA - Low Set) for SIL applications)

hysteresis on the low set value

High Set: (only value in the range 4 to 20 mA for SIL applications)

Input value above which the alarm is triggered (in High, Window)

High Hysteresis: (only value ≤ (High Set - 4 mA) for SIL applications)

hysteresis on the high set value

On Delay (for SIL applications, in accordance with SIF requirements)

time for which the input has to be in alarm condition before the alarm output is triggered; configurable from 0 to 1000 seconds in steps of 100 ms.

Off Delay (for SIL applications, in accordance with SIF requirements)

time for which the input has to be in normal condition before the alarm output is deactivated; configurable from 0 to 1000 seconds in steps of 100 ms.

FAULT

Alarm is triggered when input is out of configured range

In case of fault:

☐ Ignore alarm is affected

☐ Lock status remains in the same status as it was before Fault occurred

☐ Alarm active alarm is triggered (for SIL applications)

☐ Alarm inactive alarm is deactivated

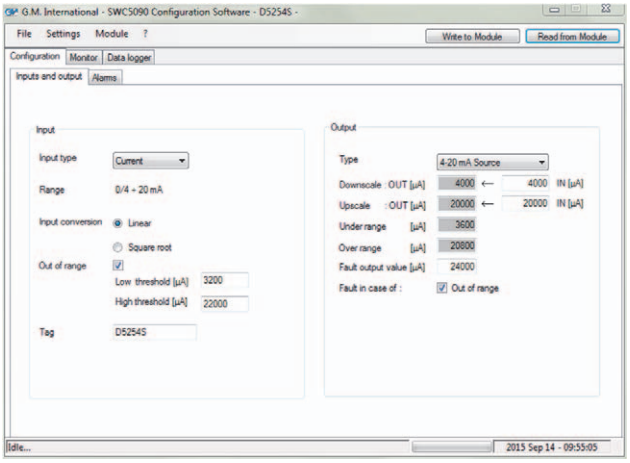
Alarm acknowledgement: (it doesn't affect SIL applications)

☐ Ignore alarm is automatically reset

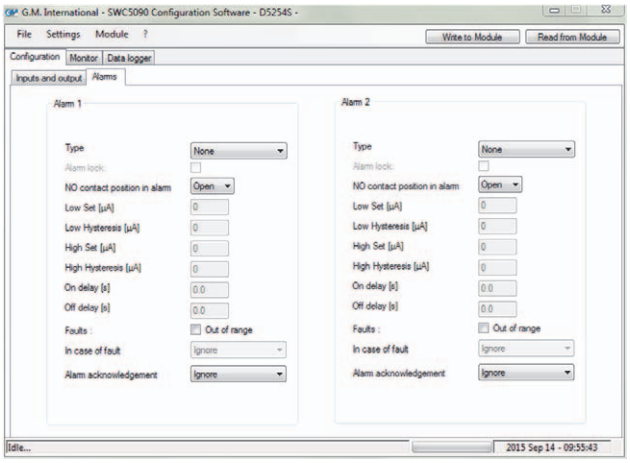
☐ Active high a voltage source of 24 Vdc must be applied, at the relative terminals, to reset alarm

☐ Alarm active a voltage source of 0 Vdc must be applied, at the relative terminals, to reset the alarm

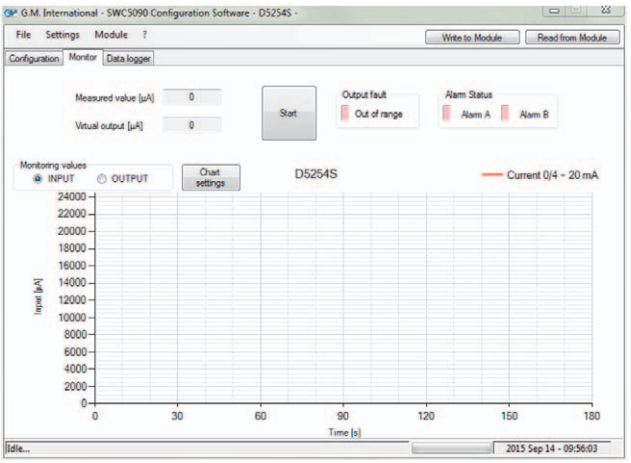
Screenshots:



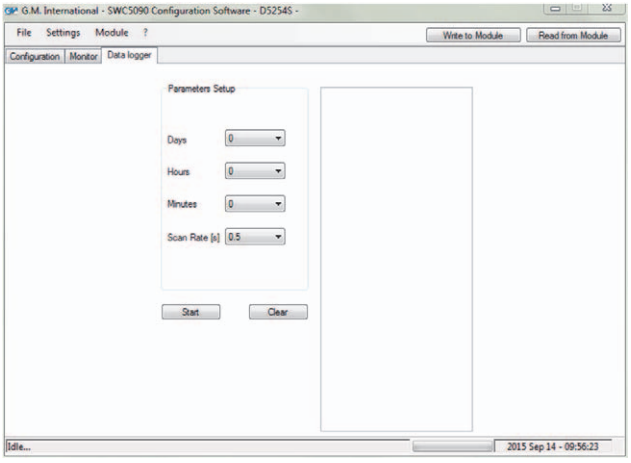
D6254S Input/Output screen



D6254S Alarm screen



D6254S Monitor screen



D6254S Data Logger screen

Supported ModBus Parameters:

Param. Address	Description	Notes	Type (15)
0	G.M. Factory Code	Identification Data	R
1	Instrument Code		
2	Option Code		
3	Hardware Release		
4	Software Release		
5 to 15	Reserved		
16	Modbus Address	Communication Data	R/W
17	Modbus Baudrate		
18	Modbus Format		
64	Measured Value (Low 16 bits) (1)	Input (Field) Data	R
65	Measured Value (High 16 bits) (1)		
66	Converted Value (Low 16 bits) (1)		
67	Converted Value (High 16 bits) (1)		
68	Input Fault (2)		
102	Input Downscale (Low 16 bits) (1)	Input (Field) Configuration	R/W
103	Input Downscale (High 16 bits) (1)		
104	Input Upscale (Low 16 bits) (1)		
105	Input Upscale (High 16 bits) (1)		
106	Input Type (3)		
107	Input Conversion Voltage (4)		
108	Input Fault Switch (5)		
109	Input Low Range Fault (Low 16 bits) (1)		
110	Input Low Range Fault (High 16 bits) (1)		
111	Input High Range Fault (Low 16 bits) (1)		
112	Input High Range Fault (High 16 bits) (1)		
160	Output Downscale (Low 16 bits) (6)	Output Configuration	R/W
161	Output Downscale (High 16 bits) (6)		
162	Output Upscale (Low 16 bits) (6)		
163	Output Upscale (High 16 bits) (6)		
164	Output Under Range (Low 16 bits) (6)		
165	Output Under Range (High 16 bits) (6)		
166	Output Over Range (Low 16 bits) (6)		
167	Output Over Range (High 16 bits) (6)		
168	Output Fault Current (Low 16 bits) (6)		
169	Output Fault Current (High 16 bits) (6)		
170	Output Fault Mask (6) (7)		
171	Output Source (8)		
240	Alarm 1 Configuration (9)	Alarm 1 Control	R/W
241	Alarm 1 Acknowledgement configuration (10)		
242	Alarm 1 Startup Lock		
243	Alarm 1 Fault Configuration (11)		
244	Alarm 1 Fault Mask (12)		
245	Contact Position in Case of Alarm 1 (13)		
246	Delay to Alarm 1 Issue (14)		
247	Delay to Alarm 1 Removal (14)		
248	Alarm 1 Low Threshold (Low 16 bits) (1)		
249	Alarm 1 Low Threshold (High 16 bits) (1)		
250	Alarm 1 Low Threshold Hysteresis (Low 16 bits) (1)		
251	Alarm 1 Low Threshold Hysteresis (High 16 bits) (1)		
252	Alarm 1 High Threshold (Low 16 bits) (1)		
253	Alarm 1 High Threshold (High 16 bits) (1)		
254	Alarm 1 High Threshold Hysteresis (Low 16 bits) (1)		
255	Alarm 1 High Threshold Hysteresis (High 16 bits) (1)		
256	Alarm 2 Configuration (9)	Alarm 2 Control	R/W
257	Alarm 2 Acknowledgement configuration (10)		
258	Alarm 2 Startup Lock		
259	Alarm 2 Fault Configuration (11)		
260	Alarm 2 Fault Mask (12)		
261	Contact Position in Case of Alarm 2 (13)		
262	Delay to Alarm 2 Issue (14)		
263	Delay to Alarm 2 Removal (14)		
264	Alarm 2 Low Threshold (Low 16 bits) (1)		
265	Alarm 2 Low Threshold (High 16 bits) (1)		
266	Alarm 2 Low Threshold Hysteresis (Low 16 bits) (1)		
267	Alarm 2 Low Threshold Hysteresis (High 16 bits) (1)		
268	Alarm 2 High Threshold (Low 16 bits) (1)		
269	Alarm 2 High Threshold (High 16 bits) (1)		
270	Alarm 2 High Threshold Hysteresis (Low 16 bits) (1)		
271	Alarm 2 High Threshold Hysteresis (High 16 bits) (1)		
464	EEPROM Write	Command	W
539	Output virtual value	Output Data	R
543	Alarm 1 Status	Alarm Data	R
546	Alarm 2 Status	Alarm Data	R

ModBus parameters details:

Param. Address	Description	Notes	Type (15)
548	Ch. 1 chars 0, 1	Tags	R/W
549	Ch. 1 chars 2, 3	Tags	R/W
550	Ch. 1 chars 4, 5	Tags	R/W
551	Ch. 1 chars 6, 7	Tags	R/W
552	Ch. 1 chars 8, 9	Tags	R/W
553	Ch. 1 chars 10, 11	Tags	R/W
554	Ch. 1 chars 12, 13	Tags	R/W
555	Ch. 1 chars 14, 15	Tags	R/W

Supported ModBus Baudrates

Index	Baudrate
0	4800
1	9600
2	19200
3	38400
4	57600
5	115200

Address 18: Supported Modbus Formats

High Byte								Low Byte							
Bit position															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Endianness 32 bit Data (0 = Little; 1 = Big)
Termination resistance (1 = enabled)
Supported Modbus Parity:
0 8 data bit, no parity, 1 stop bit
1 8 data bit, even parity, 1 stop bit
2 8 data bit, odd parity, 1 stop bit

Address 464: EEPROM Write

High Byte								Low Byte							
Bit position															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

1 Save Input/Output Configuration
2 Save Modbus configuration
8 Save Tags

(1) Expressed in 100 nA for input current
100 µV for Voltage (± 30 V)
1 µV for Voltage (± 1 V)
(2) 0 = no fault; 1 = Input out-of-range / burnout fault
(3) 0 = Current
1 = Voltage (± 30 V)
2 = Voltage (± 1 V)
(4) 0 = No conversion
1 = Square root
(5) 0 = Ignore input fault
1 = Report input out-of-range / burnout input fault
(6) Expressed in 100 µA
(7) 0 = Ignore input fault
1 = Report input out-of-range / burnout input fault force output to fault current
(8) 0 = Output Sink; 1 = Output Source
(9) 0 = None; 1 = Low Threshold; 2 = High Threshold;
3 = Window Thresholds; 4 = Fault Repeater
(10) 0 = None
1 = Acknowledgement active when input is energized
2 = Acknowledgement active when input is de-energized
(11) 0 = Ignore input fault
1 = Freeze alarm before fault issue
2 = Alarm on in case of input fault
3 = Alarm off in case of input fault
(12) 0 = Ignore input fault
1 = Out-of-range / burnout input fault force alarm to fault configuration
(13) 0 = Open; 1 = Closed
(14) Expressed in 100 ms
(15) Parameter Type:
R = read only,
W = write only,
R/W = read and write.