ANALOGUE FIRE DETECTION

SenTRI CONTROL PANEL

- Designed to comply with EN54: Parts 2 & 4 1997
- One loop and two loop options
- Network options for large systems
- Up to 200 device capacity per 1km loop
- 8 line x 40 character LCD back-lit display
- 32 zonal fire LEDs, hidden until lit
- Simultaneous display of first and current fires
- Password protection for user controls

The SenTRI Panel offers a flexible solution for small and medium sized buildings. The standard panel comes with 1 loop capable of connecting 200 devices. An additional loop can be added to the same panel doubling the size of the system managed by the same panel. For larger buildings, many SenTRI panels can be connected in a network of up to 32 panels (31 panels plus a node). The network card delivers a fully secure and fault tolerant network loop. The flexible architecture delivers a saving in installation costs and a system that can be extended to meet the changing needs of a building throughout its life.

The SenTRI panel meets all the requirements of BS 5839 Part 1 2002. 32 zonal fire LEDs provide a rapid identification of any zone in fire and the LCD display clearly presents information on the system status and pinpoints the exact location of an alarm.

The SenTRI panel and detection loop provides a powerful and flexible system. A SenTRI loop can manage up to 200 devices. Sensors, call points, sounders, interfaces and repeat panels all connect to the same 2 core circuit delivering power and control without the need for additional power supplies. Powerful control panel software manages the detection of fires and fire plans can be configured to ensure the safe management of the building once an alarm is discovered.

ORDER CODES	
SenTRI control panel	SENTRI
Additional loop card	SENADV-LPC
SenTRI Network card	SENTRI-NC
Control panel semi flushing bezel	SENADV-FLUSH
All panels require batteries (2 x 12V 12 Ah)	SENS-BATT

ANALOGUE FIRE DETECTION

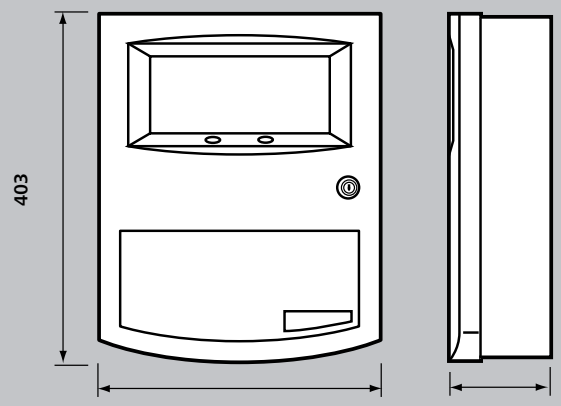
SenTRI CONTROL PANEL

Control Panel Outputs – Maximum

- 2 Master Alarm Circuits 250mA @ 24V dc each
- 1 RS232 / RS485 Serial Communications Port
- 1 dedicated RS485 Serial Communication for LCD repeat panel
- 1 Configurable Relay (1A @ 24V dc)
- 2 Auxiliary Contacts, programmable relays to operate with fire, fault or disablement (1A @ 24V dc)

TECHNICAL SPECIFICATION	
Max Number of Loops	2
Loop Capacity	200 devices
Ingress Protection	IP31
Approx Weight	10 Kg
Operating Temperature	0ºC to +40ºC
Relevant Standards	EN54 Parts 2 & 4 1997
Batteries	2 x 12V @ 12AH
Battery Standby	24 Hours + 30 minutes alarm (subject to loop loading)
Supply Voltage	216V – 253V 50Hz
Power Consumption	140 W
Cable Entry	Top and rear entry knockins
Auxiliary Contacts	Programmable to activate on Fire, Fault or Disablement (1 x SPCO 1 x DPCO)
Sounder Circuits	Loop powered sounders and 2 master alarm circuits 250mA
Monitored Input	1 input which is programmable to perform a logical action
Communication Ports	2 RS285/485 – selectable functions

DIMENSIONS (mm)



ANALOGUE FIRE DETECTION

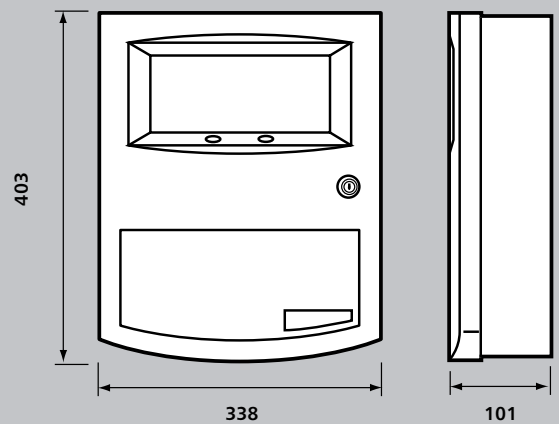
SenTRI REPEAT PANEL

The SenTRI repeat panel displays all information provided to the main control panel as well as providing main control functions.

These fully functional repeat panels are connected to the detection loop thus allowing them to be distributed around the building.

TECHNICAL SPECIFICATION	
Max Number per Loop	4
Loop Capacity	N/A
Batteries	12V @ 7AH
Battery Standby	24 Hours + 30 minutes alarm
Supply Voltage	216V – 253V 50Hz
Approx Weight	9 Kg
Operating Temperature	0°C to +45°C
Standard	EN54 Part 2
Cable Entry	Top and rear entry knockins

DIMENSIONS (mm)



ORDER CODES	
Fully Functional Loop Controlled Repeat Panel (max 4 per Loop)	SENTRI-RPT

ANALOGUE FIRE DETECTION

SenTRI LCD REPEAT PANEL

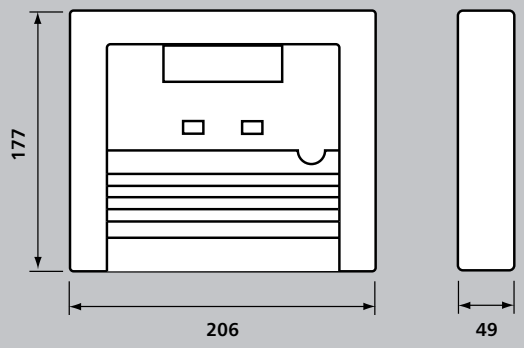
An affordable LCD repeat panel is available to support the SenTRI control panel. This neat unit can be powered from the SenTRI panel and is driven from a dedicated RS485 repeat output.

The LCD repeat panel indicates Fire, Fault and Disablement information on a 40 character display, either directly as events occur or by accessing the logs via dedicated keys.

A maximum of 4 Repeat Panels can be connected to a SenTRI control panel.

TECHNICAL SPECIFICATION	
Type	LCD Repeat Panel (Indication Only)
Ingress Protection	IP30
Supply Voltage	21 – 30V dc
Power Consumption	Approx 30 mA
Approx Weight	0.75 Kg
Operating Temperature	0ºC to +45ºC
Communication ports	1x RS485 to communicate with the main control panel
Cable Entry	Top and rear knockins

DIMENSIONS (mm)

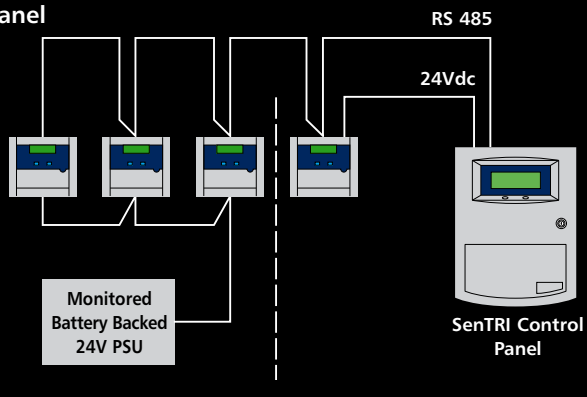


Wiring Details – LCD Repeat Panel (indication only)

Max Cable Length 1000M

One LCD repeat panel can be powered from the control panel, additional repeat indicators must be powered from an additional power supply.

The communication link to the panel is monitored, so if power to the repeat indicators fails the fault will be reported at the control panel.



ORDER CODES

LCD Repeat Indicator Connects to the control panel via the RS485 serial link	SENADV-IND

ANALOGUE FIRE DETECTION

SenTRI SENSOR RANGE

- Complete range of sensors and multisensors
- Patented multifunction sensor sounder and sensor sounder strobe
- LED output and monitored input facility on every device
- Powerful software algorithms to minimise false alarms

SENSOR SOUNDER

- Attention tones can be programmed either as a bell* or a choice of standard tones
- 'Soft' start (Volume option)
- Low current consumption
- Fully synchronised sound patterns via the control panel
- Rich harmonic sound output using patented design
- High sound output:
  - 90 dB(A) @1m (typical)

SENSOR SOUNDER STROBE

- A strobe option warns those with hearing difficulties of a potential fire hazard, now a legal requirement in all public buildings through DDA Legislation
- Low power consumption and high output LED technology ensures SenTRI strobes are cost efficient and more reliable in use than other high powered strobes
- Wide viewing angle synchronised across the loop
- Strobe can operate independently of the sounder if required
- Strobe variant includes bell tone ideal for class change in schools

** Bell tone only available on Sensor Sounder Strobe*

Advanced sensing technology coupled with integral sounder and strobe in one intelligent device provides the UK's most innovative solution to the detection and signaling of fires.

SenTRI sensors employ true analogue detection techniques combining exceptional processing power in the sensor as well as the power of the SenTRI control panel intelligence to achieve fast fire decisions. SenTRI combines traditional sensing technology with innovative techniques increasing the integrity of the fire decision and minimising incidents of false alarms.

Each SenTRI sensor has sensitivity settings managed by the panel which can be adjusted to suit the environment / application and can be programmed for different time periods during the day or night.

SenTRI Sensor Sounder Strobe

This cost effective solution saves money on the number of devices required to satisfy the site and DDA requirements, as well as impacting hugely on both the cabling requirements and the labour time needed to install the device.

In addition, should the sound output need to be raised in particular areas, it is easy to replace a sensor for a sensor sounder directly into the base unit already installed.

Synchronised tones and the high intensity strobe are transmitted through the same sensor that detects the fire. This neat device is a cost effective way to deliver compliance to the fire detection and alarm requirements of the Disability Discrimination Act part III.

ANALOGUE FIRE DETECTION

SenTRI SENSOR RANGE

The patented combined sensor sounder strobe technology provides a cost effective solution for alarm signalling. The fully integrated high quality sounder and strobe in the sensor housing offers a power efficient solution to all site requirements.

The sounder and strobe functionalities within the sensor are fully compatible and synchronised with SenTRI Sounder Strobes installed on the same system.

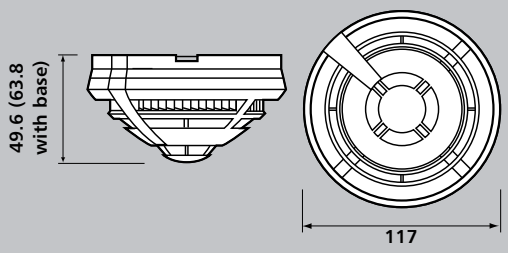
The table below shows the various 'states' of these smoke sensor options.

SENTRI DUAL OPTICAL/SMOKE & HEAT SENSOR		
STATE	**SENSOR**	**Description of State set up**
0	OHeat	Medium Optical + A1 Heat
2	OHeat	Low Optical + A1 Heat
3	OHeat	High Optical + A1 Heat
5	OHeat	Medium Optical + B Heat
6	OHeat	Low Optical + BS Heat
8	OHeat	Delayed Medium Optical + A1 Heat
11	OHeat	Low Optical + B Heat
12	OHeat	A1 Heat Only
15	OHeat	All channels set to off

TECHNICAL SPECIFICATION		
Type	Heat Sensor Sounder	Optical Heat Sensor Sounder
Device Load Factor*	8-16**	8-16**
Ingress Protection	IP30	
Approx Weight	0.11 Kg (0.17 Kg with base)	
Operating Temperature	-10ºC to +50ºC	
Relevant Standards	EN54 Parts 3 & 5	EN54 Parts 3 & 7 +5
Sound Output at 1m	Typically 90 dB(A)	
Approvals (EN54 Parts 5 & 7)	LPCB	LPCB

** Load factors for guide purposes only. ** Higher load factor for bell tone.*

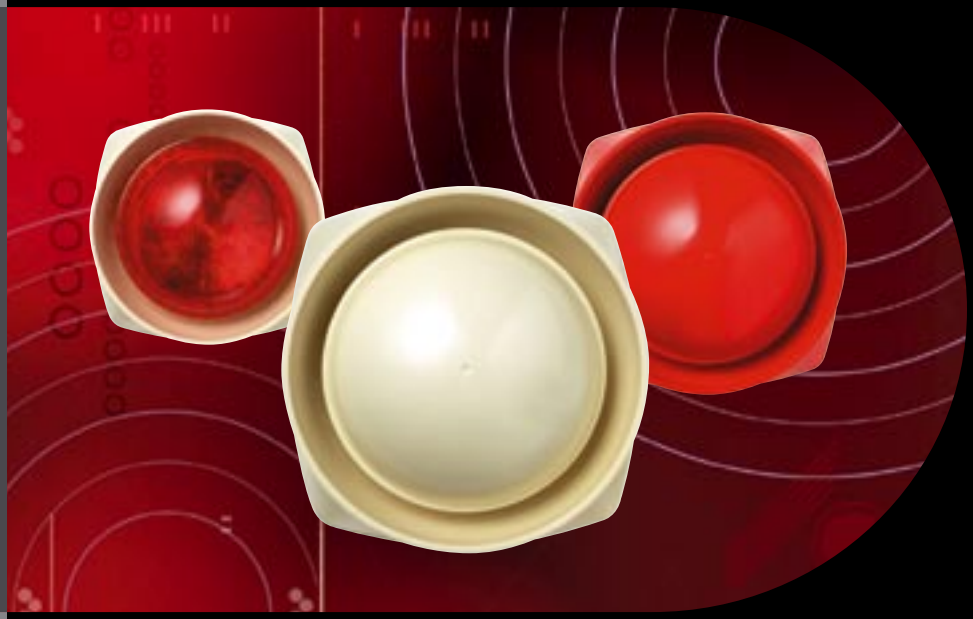
DIMENSIONS (mm)



ORDER CODES	
SenTRI Optical Sensor	SEN-715
SenTRI Optical Heat Sensor	SEN-710
SenTRI Optical Heat Sensor Sounder	SEN-770
SenTRI Optical Heat Sensor Sounder & Strobe	SEN-770-ST
SenTRI Heat Sensor	SEN-720
SenTRI Heat Sensor Sounder	SEN-780
SenTRI Heat Sensor Sounder & Strobe	SEN-780-ST
SenTRI Detector Base (With Remote LED Output)	SEN-700
SenTRI Semi-Flush mounting kit	SEN-FLUSH
SenTRI Sensor Dust Cover (50 Pack)	SEN-DUST-COVER
SenTRI Removal Tool Kit	SEN-EXTRACTOR
SenTRI Dust Cover Remover (Spare – remover tool c/w sucker)	SEN-COVER-REMOVER
SenTRI Base Label Plate (50 Pack)	SEN-BASE-LABEL

ANALOGUE FIRE DETECTION

SenTRI SOUNDER STROBES



- High efficiency design allows more devices per loop e.g. up to 200 sounders can be powered per loop
- The strobe option is equivalent to a standard 3w xenon strobe and uses 1/20th of the power
- The strobe element of the sounders is fully monitored for circuit failures
- All tones and strobe signals are synchronised across loops in the same control panel
- Complements the SenTRI sensor with complex sound signals
- The HandiLink remote control makes it much easier to adjust the sound level in situ
- Products incorporate innovative design features which are patented
- High intensity flashing strobe conforms to the Disability Discrimination Act (DDA) part III

The SenTRI Sounder Strobes range of alarm sounders incorporates sound and strobe effects in one range of alarm devices. The range offers all variants in the choice of 2 colours red or white with either a shallow base version sealed to IP31 or a deep base version sealed to IP55. The low profile sounders have the option of an integral strobe which is completely loop powered.

The SenTRI Sounder Strobe has been designed to assist with compliance to the fire detection and alarm requirements of the Disability Discrimination Act part III.

As an aid to commissioning there is the option to use the HandiLink Infrared remote control to turn on individual sounders and adjust the volume remotely. This means physical access is not required to make this adjustment during the commissioning process. Password access at the control panel is required to enable this feature so it is not possible to make this adjustment accidentally or maliciously.

TECHNICAL SPECIFICATION – SOUNDERS		
Type	Deep Base Sounder	Low Profile Sounder
	Standard Tone	Standard Tone
Max Quantity per Loop	200	200
Device Load Factor	5	5
Ingress Protection	IP55C with Deep Base IP31C with Shallow Base	
Approx Weight	0.3 Kg	
Operating Temperature	-10°C to +50°C	
Relevant Standards (Sounder only)	EN54 Part 3	
Sound Output at 1m	103 dB(A) ± 2dB(A)	100 dB(A) ± 2dB(A)
IR Control Operating Distance	3m	
Approvals	Designed to meet requirements of EN54 Part 3 (pending LPCB Approval)	

ORDER CODES	
*Electronic sounder, 2 way c/w isolator white body IP55	SENADV-IP-SN-W
*Electronic sounder, 2 way c/w isolator red body IP55	SENADV-IP-SN-R
Low profile Electronic sounder 2 way c/w isolator white body IP31	SENADV-SN-W
Low profile Electronic sounder 2 way c/w isolator red body IP31	SENADV-SN-R
*Electronic beacon red body red lens IP55	SENADV-IP-ST-RR
*Sounder beacon red body red lens IP55	SENADV-IP-SN-ST-RR
*Sounder beacon white body red lens IP55	SENADV-IP-SN-ST-WR

** These units have deep bases = IP55*

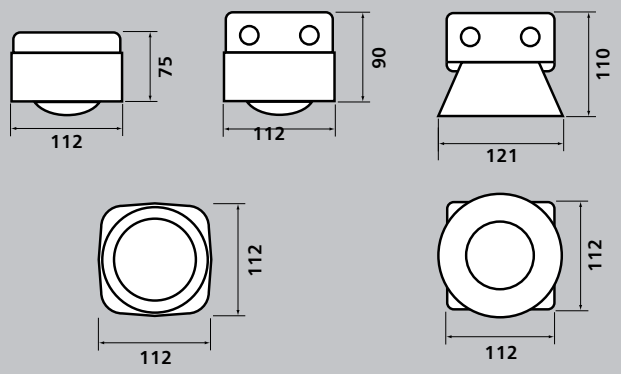
ANALOGUE FIRE DETECTION

SenTRI SOUNDER STROBES

TECHNICAL SPECIFICATION – SOUNDERS WITH STROBE				
Type	Sounder/Strobe		Strobe Only	
Strobe Colour	Red	White	Red	White
Max Quantity per Loop	60	30	100	40
Device Load Factor	15	28	10	23
Ingress Protection	IP55C with Deep Base IP31C with Shallow Base			
Approx Weight	0.3 Kg			
Operating Temperature	-10ºC to +50ºC			
Relevant Standards (Sounder only)	EN54 Part 3			
Sound Output at 1m	100 dB(A) ± 2 dB(A)			
Strobe Light Output	Equivalent to a 3w Xenon			
Strobe Flash Rate	Signal 1 0.5Hz Signal 2 & 3 1.0Hz			
IR Control Operating Distance	3m			
Approvals	EN54 Part 3 Pending LPCB Approval			

DIMENSIONS (mm)

Low profile sounder **System sounder**



ANALOGUE FIRE DETECTION

SenTRI BEAM SENSORS

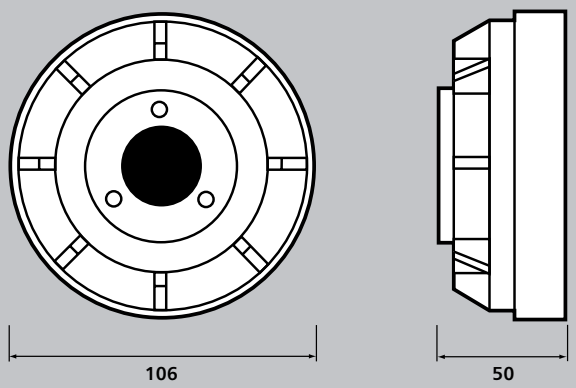
SenTRI loop powered beam sensors are suitable for large open areas where installation of single point detectors may be difficult or ineffective. The SenTRI beam sensors are controlled and powered by the detection loop. There is no need for separate power supplies or re-set modules.

The SenTRI beam sensor employs 'true' analogue detection techniques, filtering other interruptions, caused by people or shadows.

The SenTRI beams have automatic gain setting at the control panel and have a built-in alignment indicator for easy commissioning.

TECHNICAL SPECIFICATION	
Max. Quantity per Loop	16 pairs
Approx Weight	0.6 Kg per pair
Ingress Protection	IP42
Operating Temperature	0ºC to +50ºC
Standards	Complies with EN54 Part 12
Beam Length	Up to 100m
Mounting Height	Up to 40m
Device Load Factor	2

DIMENSIONS (mm)



ORDER CODES

SenTRI Loop Powered Beam Sensor (pair incl base and brackets)	78474-02NM

ANALOGUE FIRE DETECTION

SenTRI MANUAL CALL POINTS

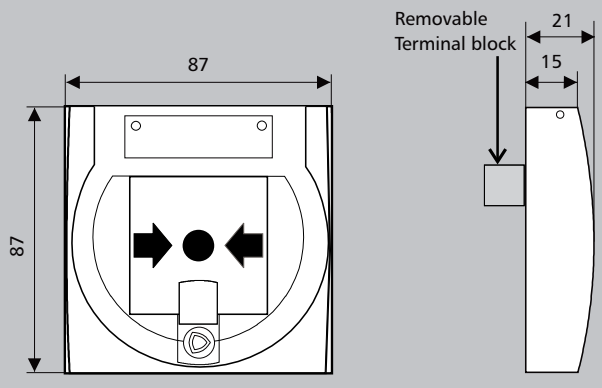
An EN54 part 11 compliant addressable call point with a response time less than 1 second.

Versions available include:

- Resettable or break glass
- Lift up covers
- Surface and flush mounted into a back box
- Anti vandal lift up cover
- Simple glass replacement process
- LED confirmation of operation

TECHNICAL SPECIFICATION	
Max Quantity per Loop	200
Operating Temperature	-25°C to +55°C
Ingress Protection	Standard IP43, Special IP55 (with cover and backbox)
Pending Approval	EN54 Part 11
Approx Weight	0.11 Kg
Device Load Factor	1

DIMENSIONS (mm)



ORDER CODES	
SenTRI Manual Call Point (Glass) IP43	SEN-800
SenTRI Manual Call Point with Resettable Element	SEN-805
SenTRI Surface Mounted Key switch MCP complete with back box	SEN-807
Resettable Element for SenTRI MCP (sold in packs of 10) price per pack	SEN-890
Replacement Glass for SenTRI MCP (sold in pack of 10) price per pack	SEN-891
Protective Cover for SenTRI MCP Range (sold in pack of 5) price per pack	SEN-892
Surface Back Box for SenTRI MCP (Red) (Sold in packs of 10) price per pack	SEN-895
Pack of 10 Spare Test Keys	71167-91NM

ANALOGUE FIRE DETECTION

SenTRI INTERFACES

A comprehensive range of SenTRI system interfaces allows plant control and connection to other life safety systems such as sprinklers. SenTRI interfaces provide highly flexible functionality and most units are loop powered without the need for separate power supplies.

A range of mounting options is available making it easy to design and install the SenTRI interfaces.

TECHNICAL SPECIFICATION

Type	Low Voltage Input / Output Range			Output Interface (Mains)
	Single Input S4-34410	Four Channel Input/Output (I/O) S4-34450	Single Input/Output S4-34420	S4-34415 / S4-34411
Approval	EN54-17: 2005 and EN54-18: 2005 (Approval pending)			
Weight	92g ①	100g ①	100g ①	DIN mountable: 138g PCB with cover in metal box: 800g
Operating Temperature	-10ºC to +60ºC			
Relative Humidity	Up to 95% – Temperature +5ºC to +45ºC (Non condensing)			
Ingress Protection	IP31 for plastic box S4-34490 IP40 estimated for metal box S4-34492			Metal box – IP40 estimated
Load Factor	Load Factor 1-4 switch inputs = 1 (maximum 200 per loop) 1-4 relay outputs = 2 (maximum 200 per loop only 8 individually sectored) Zone Input = 26 (maximum 30 per loop) Every LED output = + 5 (maximum 100 LED outputs per loop)			5 (maximum 200 devices per loop)
Panel Compatibility	Compatible with Loop = V4.35 and Main Control Card = V4.37			

ORDER CODES

Output Interface (mains switching 240V, 13A) c/w metal enclosure	SEN-INT-AC
Output Interface (mains switching 240V, 13A) c/w DIN Rail mounting kit	SEN-INT-ACDIN
Input Interface (low voltage relay 30V, 1A)	SEN-INT-INPUT
Output Interface (low voltage relay 30V, 1A)	SEN-INT-OUTPUT
4 Channel Input Output Unit	SEN-INT-4IO
Key Operated Output Interface (low voltage)	SEN-INT-KEY
Interface Housing (plastic)	SEN-490
DIN Rail Mounting Kit (pack of 5)	SEN-491
Interface Housing for Single Channel (metal)	SEN-492

DIMENSIONS (mm)