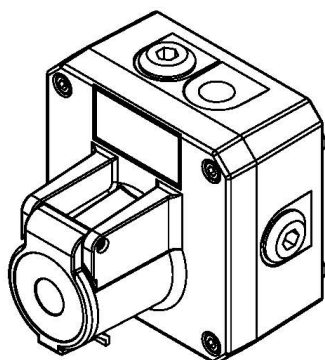


INSTRUCTION MANUAL

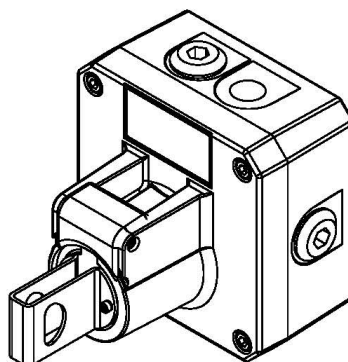
**GNExCP7-PB-S, GNExCP7-PB-D, GNExCP7-PM-S, GNExCP7-PM-D,
GNExCP7-PT-S, GNExCP7-PT-D Call Point**

Class I & II Div 2 ; UL60947

NEC / CEC / ATEX / IECEx / UKEx Zone 1, 2, 21, 22



GNExCP7-PM & GNExCP7-PT



GNExCP7-PB

1) Product Table

Unit Type Code	Input Voltage	Input Current
GNExCP7-PB-S GNExCP7-PB-D GNExCP7-PM-S GNExCP7-PM-D GNExCP7-PT-S GNExCP7-PT-D	250Vac Max	5.0 Max ATEX/IECEX/UKEx 3.33A Max Class Div/Zone
GNExCP7-PB-S GNExCP7-PB-S-L GNExCP7-PB-D GNExCP7-PB-D-L GNExCP7-PM-S GNExCP7-PM-S-L GNExCP7-PM-D GNExCP7-PM-D-L GNExCP7-PT-S GNExCP7-PT-S-L GNExCP7-PT-D GNExCP7-PT-D-L	48Vdc Max	1.0A Max
	24Vdc Max	3.0A Max
GNExCP7-PB-S-C GNExCP7-PB-D-C GNExCP7-PM-S-C GNExCP7-PM-D-C GNExCP7-PT-S-C GNExCP7-PT-D-C	48Vdc Max	20mA Max

Table 1: Electrical Ratings

2) Warnings



WARNINGS:

USE COVER BOLTS CLASS A4-70

DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT

POTENTIAL ELECTROSTATIC HAZARD – SEE INSTRUCTIONS

FOR INDOOR OR OUTDOOR USE

TO REDUCE THE RISK OF IGNITION OF HAZARDOUS ATMOSPHERES, CONDUIT RUNS MUST HAVE A SEALING FITTING CONNECTED WITHIN 18 INCHES OF CONDUIT

CAUTION - RISK OF ELECTRIC SHOCK - MORE THAN ONE DISCONNECT MAY BE REQUIRED TO DE-ENERGIZE THE EQUIPMENT BEFORE SERVICING

AVERTISSEMENT:

UTILISER COUVRIR BOULONS CLASSE A4-70

NE PAS OUVRIR UN PRESENCE D'ATMOSPHERE EXPLOSIVE

DANGER POTENTIEL CHARGE ÉLECTROSTATIQUE - VOIR LES INSTRUCTIONS

POUR USAGE INTÉRIEUR OU EXTERIEUR

POUR RÉDUIRE LE RISQUE D'INFLAMMATION DES ATMOSPHÈRES DANGEREUSES, LES CONDUITES DE CONDUIT DOIVENT AVOIR UN RACCORD D'ÉTANCHÉITÉ RACCORDÉ À MOINS DE 18 POUCES DE L'ENFERMEMENT

ATTENTION - RISQUE DE CHOC ELECTRIQUE - PLUSIEURS SECTIONNEURS PEUVENT ETRE NECESSAIRES POUR COUPER L'ALIMENTATION DE L'APPAREILLAGE AVANT D'ENTREPRENDRE L'ENTRETIEN

3) Marking & Rating Information

The GNExCP7-PB, -PT & -PM Call Points comply with the following standards for hazardous locations:

3.1 Class/Division Ratings for US & Canada

All models are approved for use as Alarm System use:

UL 60947-4-1 LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR - PART 4-1: CONTACTORS AND MOTORSTARTERS - ELECTROMECHANICAL CONTACTORS AND MOTOR-STARTERS- Edition 3 - Revision Date 2017/10/17

CSA C22.2 NO. 60947-4-1-14 LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR — PART 4-1: CONTACTORS AND MOTOR-STARTERS — ELECTROMECHANICAL CONTACTORS AND MOTOR-STARTERS- Edition 2 - Issue Date 2014/01/04

For Indoor and Outdoor Use
Pour usage Interier INTÉRIEUR

Ambient Temperature Range:
-55°C to +60°C

Standards	
UL 60079-0:2017 (Ed 6): Explosive Atmospheres - Part 0: Equipment - General requirements UL 60079-1:2015 (Ed7): Explosive Atmospheres - Part 1: Equipment protection by flameproof enclosures "d" UL 60079-31:2012 (Ed 2): Explosive Atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"	
CSA C22.2 NO. 60079-0:2015 (Ed 3) Explosive Atmospheres – Part 0: Equipment – General requirements CSA C22.2 NO. 60079-1:2016 (Ed 3): Explosive Atmospheres – Part 1: Equipment protection by flameproof enclosures "d" CSA C22.2 NO. 60079-31:2015 (Ed 2): Explosive Atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"	
Class Division Ratings for US (NEC) & Canada (CEC)	
Model No:	Rating
GNExCP7-PB-S	Class I Div 2 Group ABCD T6 Ta -55°C to +60°C
GNExCP7-PB-S-L	
GNExCP7-PB-S-C	Class II Div 2 Group FG T5 Ta -55°C to +60°C
GNExCP7-PB-D	
GNExCP7-PB-D-L	Class III Div 2 Ta -55°C to +60°C
GNExCP7-PB-D-C	
GNExCP7-PM-S	
GNExCP7-PM-S-L	

GNExCP7-PM-S-C	
GNExCP7-PM-D	
GNExCP7-PM-D-L	
GNExCP7-PM-D-C	
GNExCP7-PT-S	
GNExCP7-PT-S-L	
GNExCP7-PT-S-C	
GNExCP7-PT-D	
GNExCP7-PT-D-L	
GNExCP7-PT-D-C	

Class Zone Ratings for US (NEC)

Model No:	Rating
GNExCP7-PB-S	Class I Zone 1 AEx db IIC T6 Gb Ta -55°C to +60°C Zone 21 AEx tb IIIC T75°C Db Ta -55°C to +60°C
GNExCP7-PB-S-L	
GNExCP7-PB-S-C	
GNExCP7-PM-S	
GNExCP7-PM-S-L	
GNExCP7-PM-S-C	
GNExCP7-PT-S	
GNExCP7-PT-S-L	
GNExCP7-PT-S-C	Class I Zone 1 AEx db IIC T6 Gb Ta -55°C to +60°C Zone 21 AEx tb IIIC T90°C Db Ta -55°C to +60°C
GNExCP7-PB-D	
GNExCP7-PB-D-L	
GNExCP7-PB-D-C	
GNExCP7-PM-D	
GNExCP7-PM-D-L	
GNExCP7-PM-D-C	
GNExCP7-PT-D	
GNExCP7-PT-D-L	
GNExCP7-PT-D-C	

Class Zone Ratings for Canada (CEC)

Model No:	Rating
GNExCP7-PB-S	Ex db IIC T6 Gb Ta -55°C to +60°C Ex tb IIIC T75°C Db Ta -55°C to +60°C
GNExCP7-PB-S-L	
GNExCP7-PB-S-C	
GNExCP7-PM-S	
GNExCP7-PM-S-L	
GNExCP7-PM-S-C	
GNExCP7-PT-S	
GNExCP7-PT-S-L	
GNExCP7-PT-S-C	Ex db IIC T6 Gb X Ta -55°C to +60°C Ex tb IIIC T90°C Db Ta -55°C to +60°C
GNExCP7-PB-D	
GNExCP7-PB-D-L	
GNExCP7-PB-D-C	
GNExCP7-PM-D	
GNExCP7-PM-D-L	
GNExCP7-PM-D-C	
GNExCP7-PT-D	
GNExCP7-PT-D-L	
GNExCP7-PT-D-C	

Installation must be carried out in compliance with the National Electric Code / Canadian Electric Code

3.2 ATEX / IECEx & UKEx Ratings

Standards	
EN60079-0:2018/IEC60079-0:2017 (ed.7): Explosive Atmospheres - Equipment General Requirements. EN60079-1:2014/IEC60079-1:2014 (ed.7): Explosive Atmospheres - Equipment Protection by Flameproof Enclosures "d". EN60079-31:2014/IEC60079-31:2022 (ed.3): Explosive Atmospheres - Equipment Dust Ignition Protection by enclosure "t".	
Model No:	Rating
GNExCP7-PB-S GNExCP7-PB-S-L GNExCP7-PB-S-C GNExCP7-PM-S GNExCP7-PM-S-L GNExCP7-PM-S-C GNExCP7-PT-S GNExCP7-PT-S-L GNExCP7-PT-S-C	Ex db IIC T5 Gb Ta -55°C to +70°C Ex db IIC T6 Gb Ta -55°C to +65°C Ex tb IIIC T85°C Db Ta -55°C to +70°C
GNExCP7-PB-D GNExCP7-PM-D GNExCP7-PT-D	Ex db IIC T5 Gb Ta -55°C to +70°C Ex db IIC T6 Gb Ta -55°C to +60°C Ex tb IIIC T90°C Db Ta -55°C to +70°C
GNExCP7-PB-D-L GNExCP7-PB-D-C GNExCP7-PM-D-L GNExCP7-PM-D-C GNExCP7-PT-D-L GNExCP7-PT-D-C	Ex db IIC T4 Gb Ta -55°C to +70°C Ex db IIC T5 Gb Ta -55°C to +65°C Ex db IIC T6 Gb Ta -55°C to +50°C Ex tb IIIC T100°C Db Ta -55°C to +70°C
See Product table for electrical ratings of each unit model	

Certificate No. DEMKO 19 ATEX 2101X
IECEx ULD 19.0007X
UKEx UL UL21UKEX2134X

Epsilon x
Equipment Group
and Category:



II 2G
II 2D

CE Marking and
Notified Body No.



2813

UKCA Marking and
Notified Body No.



0518

3.3 DNV Type Approval

The units have been tested and approved for the installation on ships in the following locations:

Temperature: Class A,B,C & D (all locations including open decks and masts)
Humidity: Class A & B (all locations)
Vibration: Class A (all locations except installation on machinery such as combustion engines, compressors, pumps, including piping on such machinery)
EMC: Class A & B (all locations including open decks and bridge)
Enclosure: Class A, B & C – IP56 (all locations except submerged applications and bilges)

4) Zones, Gas Group, Category and Temperature Classification

The units can be installed in locations with the following conditions:

Area Classification Gas	
Zone 1	Explosive gas air mixture likely to occur in normal operation.
Zone 2	Explosive gas air mixture not likely to occur in normal operation, and if it does, it will only exist for a short time.
Gas Groupings	
Group IIA	Propane
Group IIB	Ethylene
Group IIC	Hydrogen and Acetylene
Temperature Classification for Gas Applications	
T1	450° C
T2	300° C
T3	200° C
T4	135° C
T5	100°C (GNExCP7-P*-D-L up to 65°C ambient)
T6	85°C (GNExCP7-P*-S up to 65°C ambient) (GNExCP7-P*-D up to 60°C ambient) (GNExCP7-P*-D-L up to 50°C ambient)
Area Classification Dust	
Zone 21	Explosive dust air mixture likely to occur in normal operation.
Zone 22	Explosive dust air mixture not likely to occur in normal operation, and if it does, it will only exist for a short time.
Dust Groupings	
Group IIHA	Combustible Dusts
Group IIIB	Non-Conductive Dusts
Group IIIC	Conductive Dusts
Equipment Category	
2G, 2D	
Equipment Protection Level	
Gb, Gc, Db, Dc	
Maximum Surface Temperature for Dust Applications	
85°C (GNExCP7-PB-S ; GNExCP7-PT-S ; GNExCP7-PM-S) ATEX/IECEx/UKEx 90°C (GNExCP7-PB-D ; GNExCP7-PT-D ; GNExCP7-PM-D) ATEX/IECEx/UKEx 100°C (GNExCP7-PB-D-L ; GNExCP7-PB-D-C ; GNExCP7-PT-D-L ; GNExCP7-PT-D-C ; GNExCP7-PM-D-L ; GNExCP7-PM-D-C) ATEX/IECEx/UKEx 75°C (GNExCP7-PB-S ; GNExCP7- PB -S-L ; GNExCP7- PB -S-C ; GNExCP7-PT-S ; GNExCP7- PT -S-L ; GNExCP7- PT -S-C ; GNExCP7-PM-S ; GNExCP7- PM -S-L ; GNExCP7- PM -S-C ;) Class Zone 90°C (GNExCP7-PB-D ; GNExCP7- PB -D-L ; GNExCP7- PB -D-C ; GNExCP7-PT- D ; GNExCP7- PT -D-L ; GNExCP7- PT -D-C ; GNExCP7-PM-D ; GNExCP7- PM -D- L ; GNExCP7- PM -D-C ;) Class Zone	
Ambient Temperature Range	
-55°C to +70°C (-67°F to +158°F) ATEX/IECEx/UKEx -55°C to +60°C (-67°F to +140°F) Class Zone	
IP Rating	
IP66/67/68 to EN/IEC60529 and IP6X to EN/IEC60079-0, EN/IEC60079-31 4 / 4X / 3R / 13 to UL50E / NEMA250	

Installation must be carried out in compliance with the latest issue of the following standards:

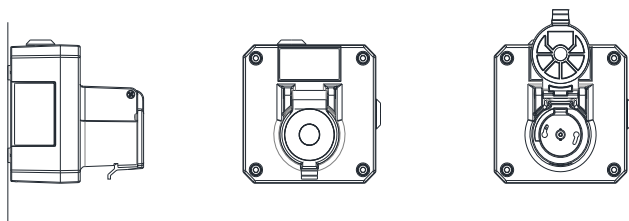
EN60079-14 / IEC60079-14: Explosive atmospheres - Electrical installations design, selection and erection
 EN60079-10-1 / IEC60079-10-1: Explosive atmospheres - Classification of areas. Explosive gas atmospheres
 EN60079-10-2 / IEC60079-10-2: Explosive atmospheres - Classification of areas. Explosive dust atmospheres

Pollution Degree: 3

5) Special Conditions of Use

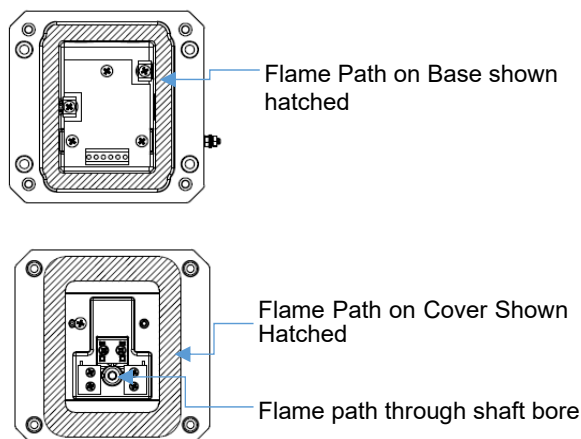
The stainless steel button is not earthed and may generate an ignition-capable level of electrostatic charges. It has a max capacitance of 6.33pF according to EN/IEC60079-0, clause 7.5.

Equipment is permitted to be wall mounted only in vertical position. The enclosure base is permitted in two mounting positions, with the double entry lowermost or uppermost.



6) Flame Path Positions

No repair to the Flamepaths is permitted



7) Location and Mounting

The location of the call point should enable ease of access for operation and testing. The unit should be mounted using the 4 off fixing holes which will accept up to M5 sized fixings. They should only be fixed to services that can carry the weight of the unit.

To gain access to the mounting holes in the base the front cover must be removed. See Section 7.

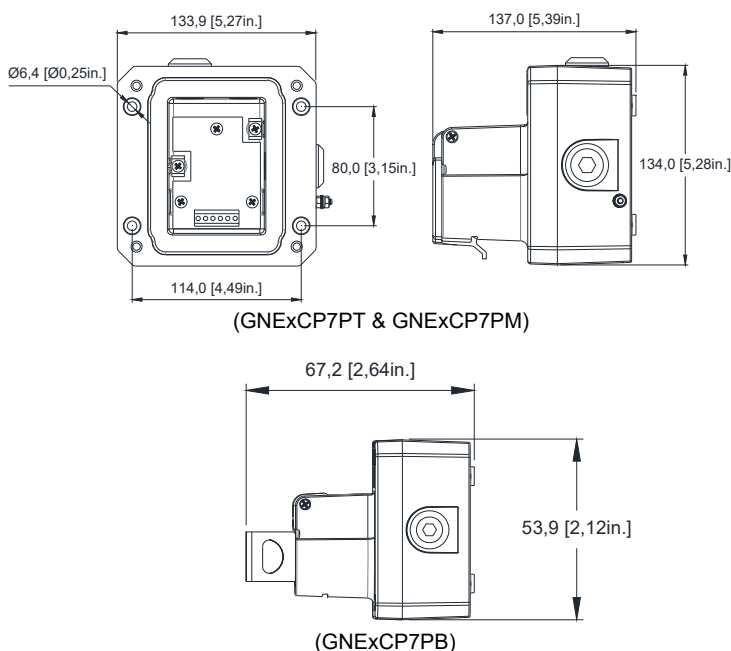


Fig. 1 View of base unit showing fixing centres (in mm).

8) Access to the Flameproof Enclosure



Warning – High voltage may be present, risk of electric shock. DO NOT open when energised, disconnect power before opening.



Warning – Hot surfaces. External surfaces and internal components may be hot after operation, take care when handling the equipment.

To access the Ex d chamber, remove the four off M6 x 50 hexagon socket head screws and withdraw the flameproof cover taking extreme care not to damage the flameproof joints in the process. M6 cover screws are Class A4-70 stainless steel and only screws of this category can be used for the enclosure.

On completion of the installation, the flameproof joints should be inspected to ensure that they are clean and that they have not been damaged during installation.

Once the screws are removed the cover will hang down out of the way to gain access to the terminals, the internal earth terminal and mounting hole recesses.

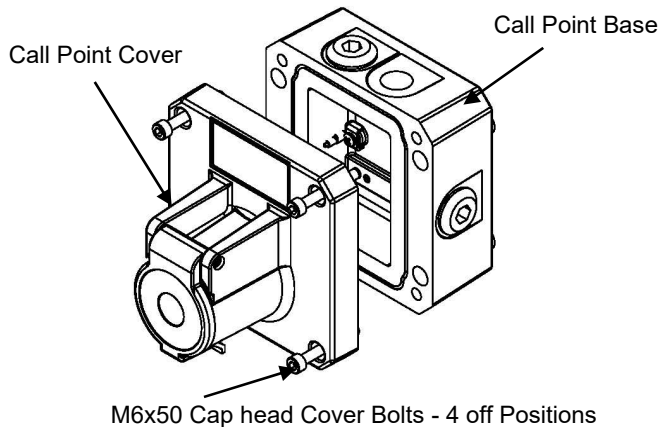


Fig. 2 Accessing the Explosion proof Enclosure.

Check that the earth bonding wire between the two castings is secure and the 'O' ring seal is in place.

When fitting the flameproof cover ensure the cover is sitting flat and correctly positioned on the base. Insert the M6 x 50 stainless steel A4-70 Cap Head cover bolts and fully tighten down (tightening torque 3.5Nm), ensuring no gap is visible between the cover and base of the enclosure.

The enclosure is non-conductive and may generate an ignition-capable level of electrostatic charges under certain extreme conditions. The user should ensure that the equipment is not installed in a location where it may be subjected to external conditions that might cause a build-up of electrostatic charges on non-conducting surfaces.

Additionally, cleaning of the equipment should be done only with a damp cloth.

9) Earthing

Bonding between conduit connections is not automatic and must be provided as part of the installation. Use of suitable grounding hubs and jumper wires are required.

The units are provided with internal and external earth terminals which are mounted in the base of the unit.

Internal earthing connections should be made to the Internal Earth terminal in the base of the housing using a ring crimp terminal to secure the earth conductor under the earth clamp. The earth conductor should be at least equal in size and rating to the incoming power conductors. When using the internal earth terminal ensure that the stainless steel M4 flat washer is between the incoming earth wire and the enclosure.

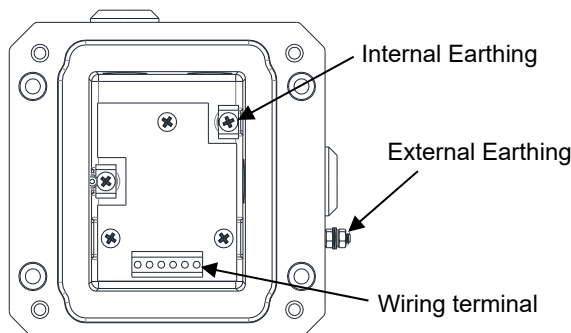


Fig 3 Earth terminals

10) Power Supply Selection

Electrical Ratings

See table 1

250Vac max. / 5.0A max (3.33A max NEC/CEC)

48Vdc max. / 1.0A max

24Vdc max / 3.0A max

48Vdc max / 20mA (LED -C option with no ballast resistor)

11) Selection of Cable, Cable Glands, Blanking Elements & Adapters

ATEX/IECEX & UKEx Installations:

The equipment must only be installed by suitably qualified personnel in accordance with the latest issues of the relevant standards:

EN60079-14 / IEC60079-14: Explosive atmospheres -

Electrical installations design, selection and erection

EN60079-10-1 / IEC60079-10-1: Explosive atmospheres - Classification of areas. Explosive gas atmospheres

The installation of the units must also be in accordance with any local codes that may apply and should only be carried out by a competent electrical engineer who has the necessary training.

The equipment must not be installed with any obstruction to the flanged flameproof joint any closer than permitted as per EN/IEC60079-14, table 13.

For high ambient temperatures the cable entry temperature may exceed +70°C or the cable branching point temperature may exceed 80°C and therefore suitable heat resisting cables and cable glands must be used, with a rated service temperature of at least the values stated below:

For Single Switch model GNExCP7-P*-S:

Max. ambient temperature °C	55	60	65	70
req. Cable / Cable Gland rating: °C	80	85	90	95

For Dual Switch models GNExCP7-P*-D:

Max. ambient temperature °C	40	45	50	55	60	65	70
req. Cable / Cable Gland rating: °C	85	90	95	100	105	110	115

The cable gland entries have an M20 x 1.5 entry thread. Only suitably rated ATEX / IECEx or UKEx certified cable glands which must be suitable for the type of cable being used and also meet the requirements of the current Ex 'd' flameproof installation standards EN 60079-14 / IEC60079-14.

When only one cable entry is used the other entries must be closed with suitably rated ATEX / IECEx or UKEx certified blanking plugs that meet the requirements of the current Ex 'db' and Ex 'tb' flameproof installation standards EN 60079-14 / IEC60079-14 (tightening torque 10Nm).

The stainless steel lift flap is not earthed and may generate an ignition-capable level of electrostatic charges. It has a max

capacitance of 6.33pF according to EN/IEC60079-0, clause 7.5.

Caution do not change factory applied finishes

NEC / CEC Installations:

The equipment must only be installed by suitably qualified personnel in accordance with the latest issues of the relevant standards:

The installation of the units must also be in accordance with any local codes that may apply and should only be carried out by a competent electrical engineer who has the necessary training.

The equipment must not be installed with any obstruction to the flanged flameproof joint any closer than permitted as per the NEC/CEC.

For high ambient temperatures the cable entry temperature may exceed +60°C or the cable branching point temperature may exceed 60°C and therefore suitable heat resisting cables and cable glands must be used, with a rated service temperature of at least the values stated below:

For Single Switch model GNExCP7-P*-S:

Max. ambient temperature °C	35	40	45	50	55	60
req. Cable / Cable Gland rating: °C	60	65	70	75	80	85

For Dual Switch model GNExCP7-P*-D:

Max. ambient temperature °C	20	25	30	35	40	45	50	55	60
req. Cable / Cable Gland rating: °C	65	70	75	80	85	90	95	100	105

For use in Class I Division II locations, in order to maintain the db type protection, flameproof conduit seals and/or cable glands must be used.

The cable gland entries have an M20 x 1.5 entry thread. Only suitably rated and certified cable glands which must be suitable for the type of cable being used and also meet the requirements of the current Ex 'db' and Ex 'tb' flameproof and NEC/CEC installation standards (tightening torque 10Nm).

When only one cable entry is used the other entries must be closed with suitably rated and certified blanking plugs that meet the requirements of the current Ex 'db' and Ex 'tb' flameproof and NEC/CEC installation standards (tightening torque 10Nm).

All Installations:

To access the Ex d chamber, remove the four off M6 x 60 stainless steel A4-70 Cap Head cover bolts.

If the installation is made using conduit, openings must have a sealing fitting connected as close as practical to the wall of the enclosure, but in no case more than the size of the conduit or 2" of enclosure, whichever is the lesser.

Electrical connections are to be made into the PCB / terminal blocks / DIN rail provided.

Internal earthing connections should be made to the Internal Earth terminal on the PCBA. The earth conductor should be at least equal in size and rating to the incoming power conductors.

On completion of the installation the flameproof joint surfaces should be inspected to ensure that they are clean and that they have not been damaged during installation. Flamepaths are not intended to be repaired.

When fitting the flameproof cover ensure the cover is sitting flat and correctly positioned on the base. Insert the M6 x 60 stainless steel A4-70 Cap Head cover bolts and fully tighten down (tightening torque 3.5Nm), ensuring no gap is visible between the cover and base of the enclosure.

If a high IP (Ingress Protection) rating is required then a suitable sealing washer must be fitted under the cable glands or blanking plugs.

The enclosure is non-conducting and may generate an ignition-capable level of electrostatic charges under certain extreme conditions. The user should ensure that the equipment is not installed in a location where it may be subjected to external conditions that might cause a build-up of electrostatic charges on non-conducting surfaces.

The GNExCP7 Call Point range can be supplied with the following types of adapters:

M20 to ½" NPT

M20 to ¾" NPT

M20 to M25

It is important to note that stopping plugs cannot be fitted onto adapters, only directly onto the M20 entries.

Any other adapters used must be suitably rated and ATEX / IECEx / UKEx or NEC/CEC certified adapters.

12) Cable Connections

The units come with two options.

A DIN rail version which has 8-way connection and allows for limited wiring of EOL devices by customer, or, full pre-wired configurations if outlined with order to E2S.

For full wiring details see wiring diagrams D202-06-211

The PCB Terminal Version has a 6-way connector but is designed to allow for full customer configuration with Series and EOL devices in a number of wiring configurations.

For full wiring details see wiring diagrams D202-06-212

For EOL and Series device limitations and configurations see Section 15. Fitting can be requested by E2S at the order stage or added to the correct terminal blocks afterward. All devices must comply with the requirements stipulated in section 15.

Electrical Connections are to be made into the terminal blocks using solid or stranded wire.

Wires having a cross sectional area between 0.5 mm² to 2.5mm² (AWG 20 – 14) can be connected to each terminal way.

In most configuration an input and output wire can be fitted to individual terminals, where these are more complex and if fitting 2-off wires to one terminal way, the sum of the 2-off wires must be a maximum cross sectional area of 2.5mm².

Strip wires to 8mm. Wires may also be fitted using ferrules.

Terminal screws need to be tightened down with a tightening torque of 0.45 Nm / 5 Lb-in.

DIN Rail Terminals: 0.51 Nm / 4.5 Lb-in;
Connector Block Terminals: 0.87 Nm / 7.7 Lb-in;

PCBA P1 Terminals: 0.45 Nm / 4.0 Lb-in;
PCBA EOL and Series (1 & 2) Terminals: 0.38 Nm / 3.4 Lb-in

When connecting wires to the terminals great care should be taken to dress the wires so that when the cover is inserted into the chamber the wires do not exert excess pressure on the terminal blocks. This is particularly important when using cables with large cross sectional areas such as 2.5mm².

13) Testing unit operation

The push button types -PB -PT and -PM are all operated by pressing in the main plunger down activating the switch.

PB – Dual Action Push Button

The -PB plunger needs to be firstly twisted by 90 degrees clockwise to position shown and then pressed in. There will be a click sound to indicate positive engagement and the plunger will stay in place.

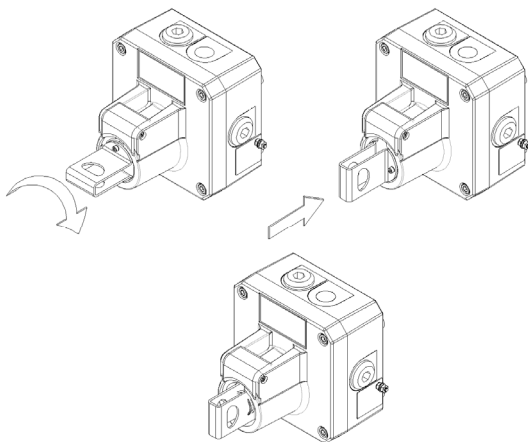


Fig 6 -PB Version Twist and Push Action

On -PB versions, the plunger will remain in position until the unit is reset. This is done by pulling the plunger back up to the start position shown in fig 6. Then the plunger is twisted back 90 degrees anti-clockwise to the stop.

PM – Momentary Push Button

The -PM needs to have the protective flip lid opened first and then the main plunger pressed in. There will be a click sound to indicate positive engagement, the plunger will spring back up if not held pressed.

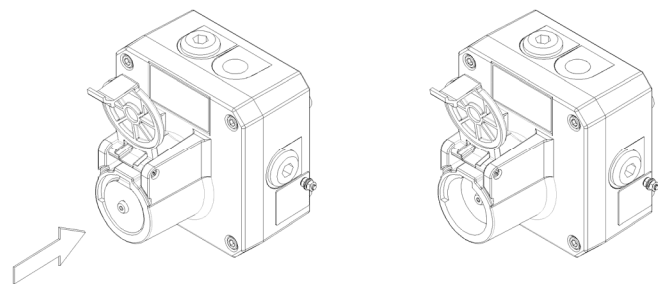


Fig 7 -PM Version Push Action

On -PM versions the operation is momentary and as such the plunger will reset automatically once the pressure on the plunger is released.

PT – Tool Reset Push Button

The -PT needs to have the protective flip lid opened first and then the main plunger pressed in. There will be a click sound to indicate positive engagement and the plunger will stay in place.

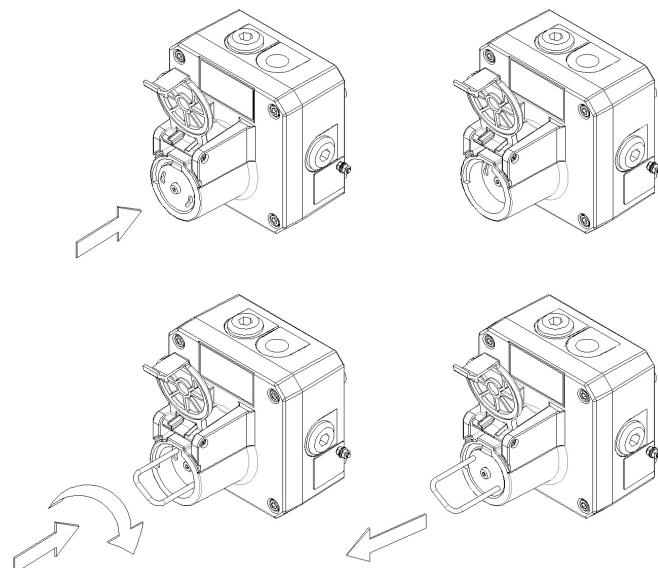


Fig 8a -PT Version Push Action

To reset, insert the reset tool supplied with the unit into the 2-off holes in the button plate, rotate clockwise along the curved slots and then pull the button plate back up. Rotate the tool anti clockwise and remove through the 2-off holes in the button plate.

14) End-of-Line and Series Devices

All models can be fitted with series resistors, end-of-line monitoring resistors, monitoring diodes and zener diodes if supplied with direct current up to 48Vdc and limited to a maximum total power consumption no greater than 6.224W.

Min. resistor values and current limitations must be observed depending on supply voltage and type of components fitted. If a combination of resistors / diodes / zener diodes is used, values for all components must be observed and lowest current limit for either component becomes overall limit.

Current limitation for units fitted with end-of-line resistors, diodes or zener diodes must be ensured by using a current

limited power supply or fitting a current limiting resistor at the control panel (not provided).

The following table 1 shows limitations for all possible variations:

Type of component fitted	Supply voltage 24Vdc		Supply voltage 48Vdc	
	value	Max. current (mA)	value	Max. current (mA)
End-of-Line Resistor *See note	min. 470R/ 2W or min. 2k2/ 0.5W	3000	min. 2k2/ 2W or min. 8k2/ 0.5W	1000
End-of-Line Diode Type 1N5401	2W	59.13	2W	25.26
Series Resistor *See note	min. 470R/ 2W or min. 2k2/ 0.5W	3000	min. 2k2/ 2W or min. 8k2/ 0.5W	1000
Series Diode Type 1N5401	2W	59.13	2W	25.26
Series Zener Diode Type 1N5333B	3.3V	230	3.3V	230
	4.7V	162	4.7V	162
	5.1V	149	5.1V	149
	5.6V	136	5.6V	136
	6.2V	122	6.2V	122
	6.8V	112	6.8V	112
	10V	76	10V	76
	12V	63	12V	63

Note: - The maximum voltage stated must not be exceeded, as the internal resistor modules are rated as compliant with Ex d according to the unit voltage.

If lower value resistors than seen on table are required it may be possible to configure but seek advice from E2S to ensure compliance is still maintained.

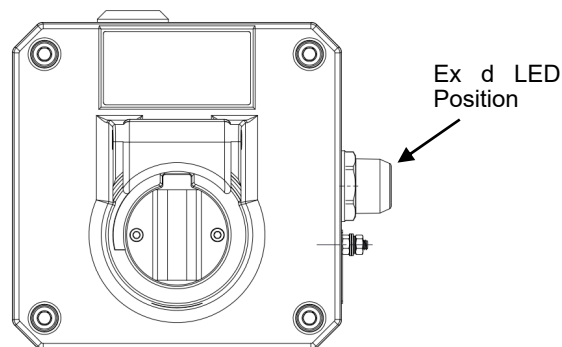
EOL (End of line) device;	Series (In line) device;
• resistor – ExxxR	• resistor – SxxxR
• diode – ED1	• diode – SD1
• zener – ExxxZ	• zener – SxxxZ
	• LED

Microswitch 1 = M/S 1
Microswitch 2 = M/S 2

The unit can be wired with a maximum of 4 module devices – see wiring schematic D202-06-211
When customer is fitting EOL or Series devices, ensure device leads are insulated or routed so as not to create an electrical short.

An optional Ex d LED monitoring module is designated after the model no as either, GNExCP7-BG-S-L or GNExCP7-BG-D-L to include an LED and power limiting resistor
or,
GNExCP7-BG-S-C or GNExCP7-BG-D-C with includes the LED but where the units current must be limited to 20mA.

The optional Ex d LED monitoring module is fitted in the M20 side entry as shown, when the main M20 entries are at the bottom of unit. The wiring is shown as per wiring diagram. D202-06-211 see the various LED configuration options.



15) Maintenance, Overhaul & Repair

Maintenance, repair and overhaul of the equipment should only be carried out by suitably qualified personnel in accordance with the current relevant standards:

EN60079-19/IEC60079-19 Explosive atmospheres - Equipment repair, overhaul and reclamation

EN60079-17/IEC60079-17 Explosive atmospheres - Electrical installations inspection and maintenance

To avoid a possible ELECTROSTATIC CHARGE the unit must only be cleaned with a damp cloth.

Units must not be opened while an explosive atmosphere is present.

16) SIL 2 Reliability Data

Reliability and Functional safety IEC/EN61508 which has been assessed and is considered suitable for use in low demand safety function:

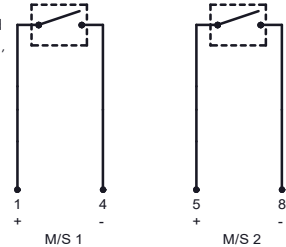
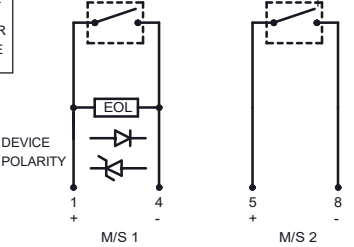
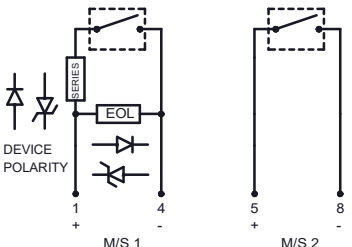
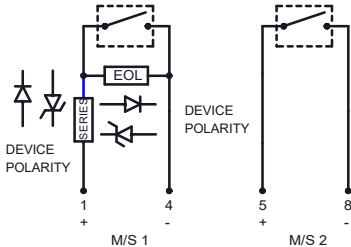
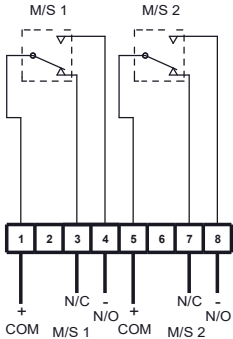
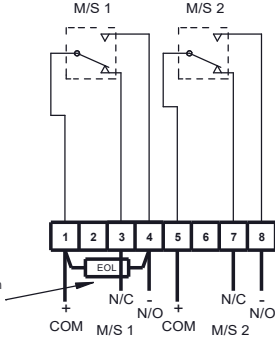
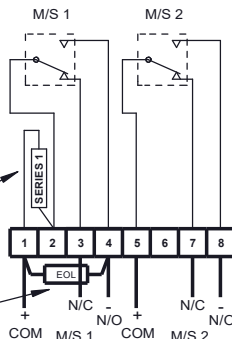
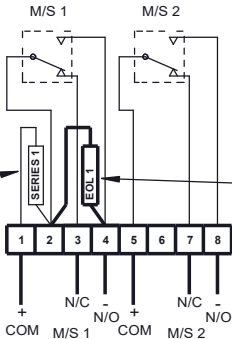
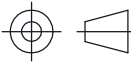
- Random Hardware Failures and Systematic Failures (route 2H)
- As an unvoted item (i.e. hardware fault tolerance of 0) at SIL 2

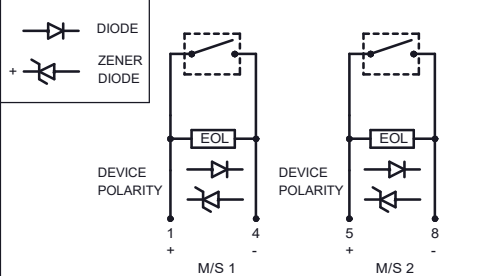
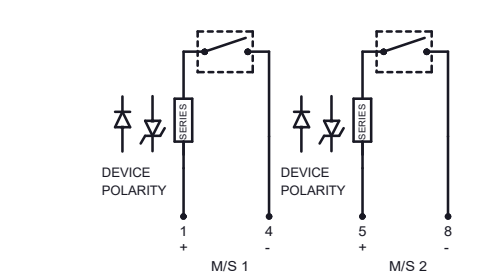
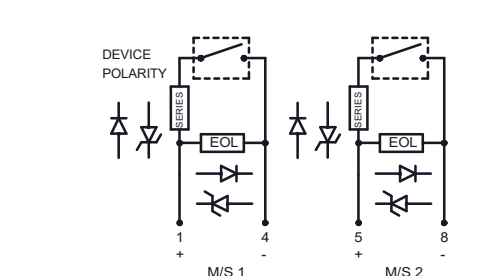
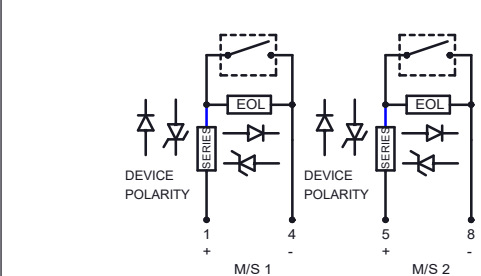
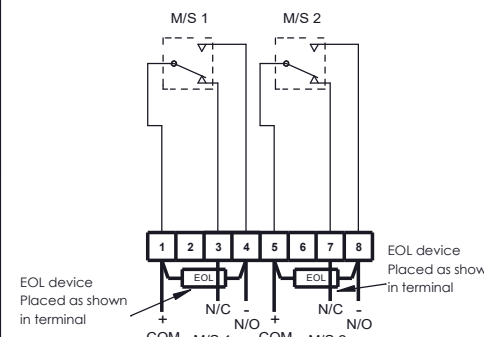
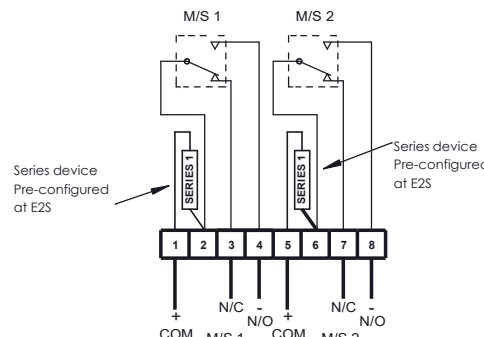
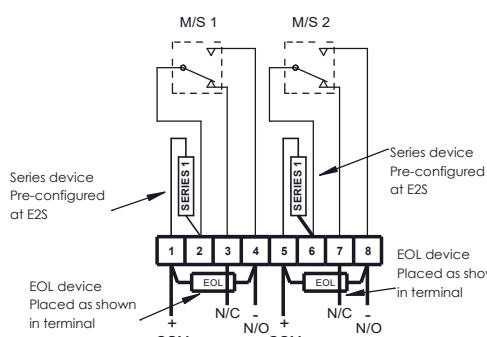
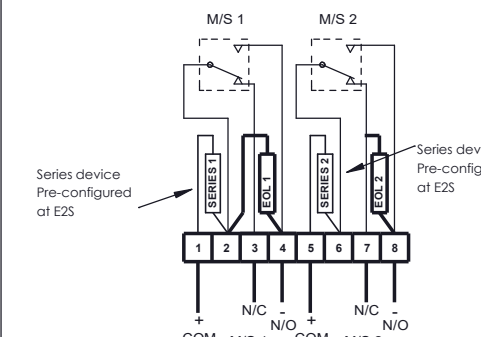
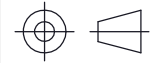
The product was assessed against failure modes:

- Failure to close a contact when the call point is struck with specified force
- Failure to open a contact when the call point is struck with specified force
- Spurious output despite no input

Integrity in respect of failure to close	SIL 2
System Type	A
Hardware Fault Tolerance	0
Safe Failure Fraction (credible claim)	75%
PFD (hazardous failure)	2.3×10^{-3}
Proof Test Interval	Up to 1 year

1										2										3										4										5										6										7										8										9										10																													
SINGLE MICROSWITCH DEVICES										SHEET 1										GNEXCP7-BG[s][t][l][l][e][m][d][v][o][x][u]-[e][s]										LED Indicator [u]										Module Device Codes										ISSUE										MOD No.										REASON - INITIAL - DATE																																																	
Diagram										Sheet										Switch Type [s]										Product Version [v]										Product Option [o]										EOL Module [e]										Resistor										EOL										Series										7										ACN0178										Correction to LED wiring in option W RNP 15-04-2025									
Dual Switch Wiring Configurations										2,3,5,6,7,8										Terminals [t]																																								Diode										ED1										SD1										8										ACN0187										LED put on N/C side of circuit, note on LED LD1 detailed RNP 28-05-2025									
LED Indicator Wiring Configurations										4,5,6,8																																																		Zener Diode										ExxxZ										SxxxZ																																							
Parallel Dual Switch Wiring Configurations										7, 8																																																		LED										N/A										L or C																																							
SINGLE SWITCH										CONFIG. D1-1										SINGLE SWITCH WITH SERIES DEVICE										CONFIG. D1-2										SINGLE SWITCH WITH EOL & SERIES DEVICES										CONFIG. D1-3										SINGLE SWITCH WITH EOL & ALT. SERIES DEVICES										CONFIG. D1-4																																																	
SWITCH TYPE [s]										[S]										Single										SWITCH TYPE [s]										[S]										Single										SWITCH TYPE [s]										[S]										Single										SWITCH TYPE [s]										[S]										Single									
TERMINALS [t]										[D]										DIN Rail										TERMINALS [t]										[D]										DIN Rail										TERMINALS [t]										[D]										DIN Rail										TERMINALS [t]										[D]										DIN Rail									
PRODUCT OPTION [o]										[1]										Default										PRODUCT OPTION [o]										[1]										Default										PRODUCT OPTION [o]										[1]										Default										PRODUCT OPTION [o]										[W]										Alt. EOL Pos'n.									
LED INDICATOR [u]										[N]										NO LED										LED INDICATOR [u]										[N]										NO LED										LED INDICATOR [u]										[N]										NO LED										LED INDICATOR [u]										[N]										NO LED									
SERIES MODULE [s]										[Sxxxx]										Series Device										SERIES MODULE [s]										[Sxxxx]										Series Device										SERIES MODULE [s]										[Sxxxx]										Series Device										SERIES MODULE [s]										[Sxxxx]										Series Device									
Note :- Use when EOL and/or series devices are fitted during installation, or if no series devices are required.																																																																																																																							
Circuit shown in Unoperated condition Unoperated condition (Glass Intact / Standby Condition) Terminals +(4,5) & -(7,8) open Terminals +(4,5) & (6) closed Operated condition (Glass Broken / Button pushed in) Terminals +(4,5) & -(7,8) closed Terminals +(4,5) & (6) open										Circuit shown in Unoperated condition Unoperated condition (Glass Intact / Standby Condition) Terminals +(4,5) & -(7,8) open Terminals +(4,5) & (6) closed Operated condition (Glass Broken / Button pushed in) Terminals +(4,5) & -(7,8) closed Terminals +(4,5) & (6) open										Circuit shown in Unoperated condition Unoperated condition (Glass Intact / Standby Condition) Terminals +(4,5) & -(7,8) open Terminals +(4,5) & (6) closed Operated condition (Glass Broken / Button pushed in) Terminals +(4,5) & -(7,8) closed Terminals +(4,5) & (6) open										Circuit shown in Unoperated condition Unoperated condition (Glass Intact / Standby Condition) Terminals +(4,5) & -(7,8) open Terminals +(4,5) & (6) closed Operated condition (Glass Broken / Button pushed in) Terminals +(4,5) & -(7,8) closed Terminals +(4,5) & (6) open																																																																																									
DRAWING TO BS8888:2000 GEOMETRIC TOLERANCES TO ISO1101:1983 ANGULAR DIMENSIONAL TOLS										DRAWN R.S.RAIT DATE 05-03-2020										SURFACE FINISH										WEIGHT (Kg)										THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS COMMUNICATED IN CONFIDENCE AND IS THE COPYRIGHT PROPERTY OF EUROPEAN SAFETY SYSTEMS LTD. NEITHER THE WHOLE OR ANY EXTRACT MAY BE DISCLOSED, LOANED, COPIED OR USED FOR MANUFACTURING OR TENDERING PURPOSES WITHOUT THEIR WRITTEN CONSENT.										 EUROPEAN SAFETY SYSTEMS LTD IMPRESS HOUSE MANSELL ROAD ACTON LONDON W3 7QH WWW.E2S.COM										ALL DIMENSIONS IN MM IF IN DOUBT, ASK - DO NOT SCALE																				A3																																							
STANDARDS GNExCP7 ; STExCP8 ; WP7 units with DIN Rail										CHECKED B.ISARD DATE 05-03-2020										MATERIAL										ALTERNATIVE MATERIAL										EUROPEAN SAFETY SYSTEMS LTD. AS PER LATEST DATE OF ISSUE SHOWN ABOVE																				TITLE GNExCP7 ; STExCP8 ; WP7 CALL POINT WIRING / CIRCUIT OPERATION DIAGRAM										SCALE NTS										SHEET 1 OF 8										DRAWING NUMBER D202-06-211																													

1		2		3		4		5		6		7		8		9		10											
DUAL MICROSWITCH DEVICES						SHEET 2				GNEXCP7-BG[s][t][l][e][m][d][v][o][x][u]-[e][s]			Module Device Codes			ISSUE		MOD No.		REASON - INITIAL - DATE									
Notes: 1. Other configurations of dual switch units are possible. Contact E2S sales to discuss options.						Switch Type [s]		Product Version [v]		LED Indicator [u]		Resistor		EOL		Series		7		ACN0178		Correction to LED wiring in option W RNP 15-04-2025							
						Terminals [t]				Product Option [o]		Diode		ED1		SD1		8		ACN0187		LED put on N/C side of circuit, note on LED LD1 detailed RNP 28-05-2025							
												Zener Diode		ExxxZ		SxxxZ													
												LED		N/A		L or C													
DUAL SWITCH WITH EOL DEVICE				CONFIG. D2-1		DUAL SWITCH WITH SERIES DEVICES				CONFIG. D2-2		DUAL SWITCH WITH EOL & SERIES DEVICES				CONFIG. D2-3		DUAL SWITCH WITH EOL & SERIES DEVICES				CONFIG. D2-4							
SWITCH TYPE [s]				[D]		SWITCH TYPE [s]				[D]		SWITCH TYPE [s]				[D]		SWITCH TYPE [s]				[D]							
TERMINALS [t]				[D]		TERMINALS [t]				[D]		TERMINALS [t]				[D]		TERMINALS [t]				[D]							
PRODUCT OPTION [o]				[1]		PRODUCT OPTION [o]				[1]		PRODUCT OPTION [o]				[1]		PRODUCT OPTION [o]				[W]							
LED INDICATOR [u]				[N]		LED INDICATOR [u]				[N]		LED INDICATOR [u]				[N]		LED INDICATOR [u]				[N]							
						SERIES MODULE [s]				[Sxxxx]		MODULES [e][s]				[Exxxx][Sxxxx]		MODULES [e][s]				[Exxxx][Sxxxx]							
						Dual				Dual		Dual				Dual		Dual				Dual							
				DIN Rail		DIN Rail Only				DIN Rail Only		DIN Rail Only				DIN Rail Only		DIN Rail Only				Alt. EOL Pos'n.							
				Default		Default				Default		Default				Default		Default				NO LED							
				NO LED		NO LED				NO LED		NO LED				NO LED		NO LED				NO LED							
						Series Device				Series Device		EOL + Series				EOL + Series		EOL + Series				EOL + Series							
Note :- Use when EOL and/or series devices are fitted during installation, or if no series devices are required.						 DIODE						 ZENER DIODE						 DIODE						 ZENER DIODE					
																													
																													
Circuit shown in Unoperated condition						Circuit shown in Unoperated condition						Circuit shown in Unoperated condition						Circuit shown in Unoperated condition											
Unoperated condition (Glass Intact / Standby Condition) Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 open Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 closed						Unoperated condition (Glass Intact / Standby Condition) Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 open Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 closed						Unoperated condition (Glass Intact / Standby Condition) Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 open Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 closed						Unoperated condition (Glass Intact / Standby Condition) Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 open Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 closed											
Operated condition (Glass Broken / Button pushed in) Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 open Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 closed						Operated condition (Glass Broken / Button pushed in) Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 open Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 closed						Operated condition (Glass Broken / Button pushed in) Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 open Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 closed						Operated condition (Glass Broken / Button pushed in) Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 open Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 closed											
DRAWING TO BS8888:2000 GEOMETRIC TOLERANCES TO ISO1101:1983 LINEAR DIMENSIONAL TOLS ANGULAR DIMENSIONAL TOLS				DRAWN D.HOWGILL 05-03-2020		SURFACE FINISH		WEIGHT (Kg)		THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS COMMUNICATED IN CONFIDENCE AND IS THE COPYRIGHT PROPERTY OF EUROPEAN SAFETY SYSTEMS LTD. NEITHER THE WHOLE OR ANY EXTRACT MAY BE DISCLOSED, LOANED, COPIED OR USED FOR MANUFACTURING OR TENDERING PURPOSES WITHOUT THEIR WRITTEN CONSENT.				 EUROPEAN SAFETY SYSTEMS LTD IMPRESS HOUSE MANSELL ROAD ACTON LONDON W3 7QH WWW.E2S.COM		ALL DIMENSIONS IN MM IF IN DOUBT, ASK - DO NOT SCALE				A3									
STANDARDS GNExCP7 ; STExCP8 ; WP7 units with DIN Rail				CHECKED R.N.POTTS 05-03-2020		MATERIAL				EUROPEAN SAFETY SYSTEMS LTD. AS PER LATEST DATE OF ISSUE SHOWN ABOVE						TITLE GNExCP7 ; STExCP8 ; WP7 CALL POINT WIRING / CIRCUIT OPERATION DIAGRAM													
				APPROVED R.N.POTTS 05-03-2020		ALTERNATIVE MATERIAL										SCALE NTS		SHEET 2 OF 8		DRAWING NUMBER D202-06-211									

1		2		3		4		5		6		7		8		9		10							
DUAL MICROSWITCH DEVICES DUPLICATED						SHEET 3						Module Device Codes		ISSUE		MOD No.		REASON - INITIAL - DATE							
Notes: 1. Other configurations of dual switch units are possible. Contact E2S sales to discuss options.						GNEXCP7-BG[s][t][l][e][m][d][v][o][x][u]-[e][s] Switch Type [s] Terminals [t] Product Version [v] LED Indicator [u] Series Module [s] EOL Module [e]		LED Indicator [u]		Resistor EOL Diode ED1 Zener Diode ExxxZ LED N/A		Series SxxxR SD1 SxxxZ L or C		7		ACN0178		Correction to LED wiring in option W RNP 15-04-2025							
														8		ACN0187		LED put on N/C side of circuit, note on LED LD1 detailed RNP 28-05-2025							
DUAL SWITCH WITH EOL DEVICES DUPLICATED				CONFIG. D3-1		DUAL SWITCH WITH SERIES DEVICES DUPLICATED				CONFIG. D3-2		DUAL SWITCH WITH EOL & SERIES DEVICE DUPLICATED				CONFIG. D3-3		DUAL SWITCH WITH EOL & SERIES DEVICE DUPLICATED				CONFIG. D3-4			
SWITCH TYPE [s] TERMINALS [t] PRODUCT OPTION [o] LED INDICATOR [u] EOL MODULE [e]				[D] [D] [2] [N] [Exxxx] Dual DIN Rail Duplicated NO LED EOL Device		SWITCH TYPE [s] TERMINALS [t] PRODUCT OPTION [o] LED INDICATOR [u] SERIES MODULE [s]				[D] [D] [2] [N] [Sxxxx] Dual DIN Rail Only Duplicated NO LED Series Device		SWITCH TYPE [s] TERMINALS [t] PRODUCT OPTION [o] LED INDICATOR [u] MODULES [e][s]				[D] [D] [Y] [N] [Exxxx][Sxxxx] Dual DIN Rail Only Alt. EOL Pos'n. DUP NO LED EOL + Series									
																									
																									
Circuit shown in Unoperated condition						Circuit shown in Unoperated condition						Circuit shown in Unoperated condition						Circuit shown in Unoperated condition							
Unoperated condition (Glass Intact / Standby Condition) Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 open Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 closed						Unoperated condition (Glass Intact / Standby Condition) Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 open Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 closed						Unoperated condition (Glass Intact / Standby Condition) Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 open Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 closed						Unoperated condition (Glass Intact / Standby Condition) Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 open Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 closed							
Operated condition (Glass Broken / Button pushed in) Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 open Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 closed						Operated condition (Glass Broken / Button pushed in) Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 open Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 closed						Operated condition (Glass Broken / Button pushed in) Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 open Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 closed						Operated condition (Glass Broken / Button pushed in) Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 open Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 closed							
DRAWING TO BS8888:2000 GEOMETRIC TOLERANCES TO ISO1101:1983 LINEAR DIMENSIONAL TOLS ANGULAR DIMENSIONAL TOLS				DRAWN D.HOWGILL DATE 05-03-2020		SURFACE FINISH		WEIGHT (Kg)		THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS COMMUNICATED IN CONFIDENCE AND IS THE COPYRIGHT PROPERTY OF EUROPEAN SAFETY SYSTEMS LTD. NEITHER THE WHOLE OR ANY EXTRACT MAY BE DISCLOSED, LOANED, COPIED OR USED FOR MANUFACTURING OR TENDERING PURPOSES WITHOUT THEIR WRITTEN CONSENT. EUROPEAN SAFETY SYSTEMS LTD. AS PER LATEST DATE OF ISSUE SHOWN ABOVE				 EUROPEAN SAFETY SYSTEMS LTD IMPRESS HOUSE MANSELL ROAD ACTON LONDON W3 7QH WWW.E2S.COM				ALL DIMENSIONS IN MM IF IN DOUBT, ASK - DO NOT SCALE						A3	
STANDARDS GNExCP7 ; STExCP8 ; WP7 units with DIN Rail				CHECKED R.N.POTTS DATE 05-03-2020		MATERIAL		TITLE GNExCP7 ; STExCP8 ; WP7 CALL POINT WIRING / CIRCUIT OPERATION DIAGRAM										SCALE NTS		SHEET 3 OF 8		DRAWING NUMBER D202-06-211			
APPROVED R.N.POTTS DATE 05-03-2020						ALTERNATIVE MATERIAL																			

1		2		3		4		5		6		7		8		9		10			
SINGLE MICROSWITCH LED DEVICES						SHEET 4				LED Indicator [u]		Module Device Codes		ISSUE		MOD No.		REASON - INITIAL - DATE			
						GNEXCP7-BG[s][t][l][e][m][d][v][o][x][u]-[e][s]				LED Indicator [u]		Resistor		7		ACN0178		Correction to LED wiring in option W RNP 15-04-2025			
						Switch Type [s] Terminals [t]				Product Version [v]		Product Option [o]		Diode		8		ACN0187		LED put on N/C side of circuit, note on LED LD1 detailed RNP 28-05-2025	
										Product Option [o]		Zener Diode									
										EOL Module [e]		LED									

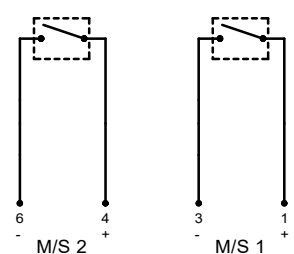
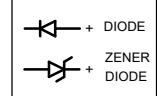
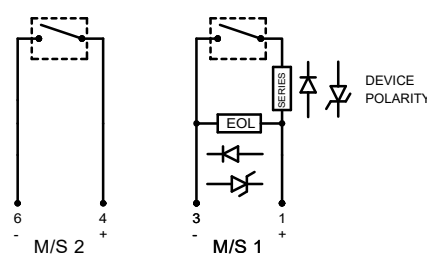
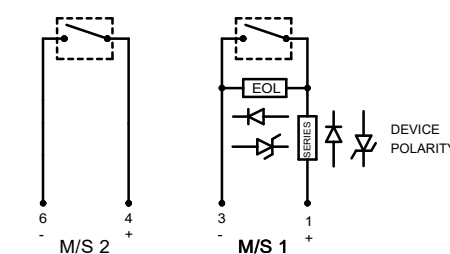
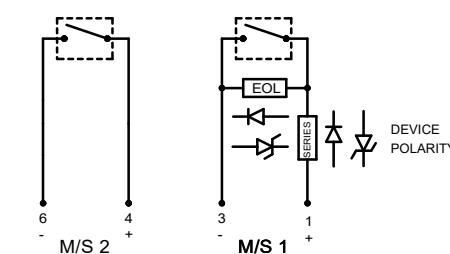
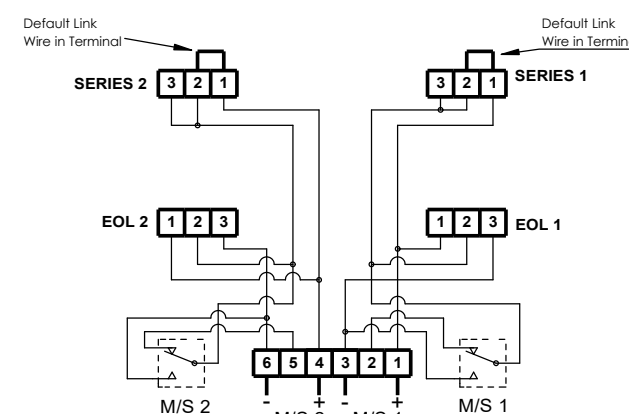
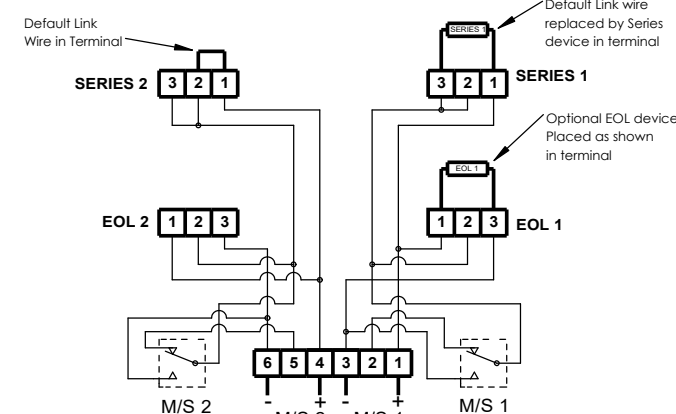
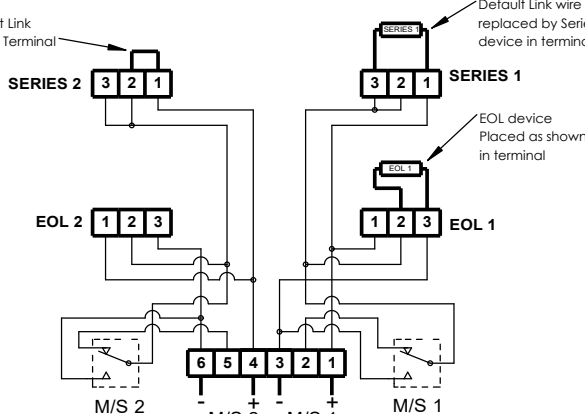
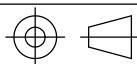
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DUAL MICROSWITCH LED DEVICES						SHEET 5				LED Indicator [u]				Module Device Codes				ISSUE		MOD No.		REASON - INITIAL - DATE	
						GNEXCP7-BG[s][t][l][e][m][d][v][o][x][u]-[e][s]				Resistor				EOL		Series		7		ACN0178		Correction to LED wiring in option W RNP 15-04-2025	
						Switch Type [s] Terminals [t]				Diode				ED1		SD1		8		ACN0187		LED put on N/C side of circuit, note on LED LD1 detailed RNP 28-05-2025	
						Product Version [v]				Zener Diode				ExxxZ		SxxxZ							
						LED				N/A		L or C											
DUAL SWITCH WITH LED		CONFIG. D5-1		DUAL SWITCH WITH LED & EOL DEVICES		CONFIG. D5-2		DUAL SWITCH WITH LED EOL & SERIES DEVICES		CONFIG. D5-3		DUAL SWITCH WITH LED, EOL & ALT. SERIES DEVICE		CONFIG. D5-4									
SWITCH TYPE [s] TERMINALS [t] PRODUCT OPTION [o] LED INDICATOR [u]		[D] Dual [D] DIN Rail Only [1] Default [L] LED with RL1		SWITCH TYPE [s] TERMINALS [t] PRODUCT OPTION [o] LED INDICATOR [u] EOL MODULE [e]		[D] Dual [D] DIN Rail Only [1] Default [L] LED with RL1 [ExxxR] EOL Device		SWITCH TYPE [s] TERMINALS [t] PRODUCT OPTION [o] LED INDICATOR [u] SERIES MODULE [s]		[D] Dual [D] DIN Rail Only [1] Default [L] LED with RL1 [Sxxxx] Series Device		SWITCH TYPE [s] TERMINALS [t] PRODUCT OPTION [o] LED INDICATOR [u] MODULES [e][s]		[D] Dual [D] DIN Rail Only [W] Alt. EOL Pos'n. [L] LED with RL1 [Exxxx][Sxxxx] EOL + Series									
Circuit shown in Unoperated condition				Circuit shown in Unoperated condition				Circuit shown in Unoperated condition				Circuit shown in Unoperated condition											
Unoperated condition (Glass Intact / Standby Condition) Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 open Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 closed				Unoperated condition (Glass Intact / Standby Condition) Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 open Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 closed				Unoperated condition (Glass Intact / Standby Condition) Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 open Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 closed				Unoperated condition (Glass Intact / Standby Condition) Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 open Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 closed											
Operated condition (Glass Broken / Button pushed in) Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 open Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 closed				Operated condition (Glass Broken / Button pushed in) Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 open Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 closed				Operated condition (Glass Broken / Button pushed in) Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 open Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 closed				Operated condition (Glass Broken / Button pushed in) Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 open Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 closed											
DRAWING TO BS8888:2000 GEOMETRIC TOLERANCES TO ISO1101:1983 LINEAR DIMENSIONAL TOLS ANGULAR DIMENSIONAL TOLS		DRAWN D.HOWGILL 05-03-2020		SURFACE FINISH		WEIGHT (Kg)		THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS COMMUNICATED IN CONFIDENCE AND IS THE COPYRIGHT PROPERTY OF EUROPEAN SAFETY SYSTEMS LTD. NEITHER THE WHOLE OR ANY EXTRACT MAY BE DISCLOSED, LOANED, COPIED OR USED FOR MANUFACTURING OR TENDERING PURPOSES WITHOUT THEIR WRITTEN CONSENT.				EUROPEAN SAFETY SYSTEMS LTD. AS PER LATEST DATE OF ISSUE SHOWN ABOVE		e2S warning signals EUROPEAN SAFETY SYSTEMS LTD IMPRESS HOUSE MANSELL ROAD ACTON LONDON W3 7QH WWW.E2S.COM		ALL DIMENSIONS IN MM IF IN DOUBT, ASK - DO NOT SCALE				A3			
STANDARDS		CHECKED R.N.POTTS 05-03-2020		MATERIAL												TITLE GNExCP7 ; STExCP8 ; WP7 CALL POINT WIRING / CIRCUIT OPERATION DIAGRAM							
		APPROVED R.N.POTTS 05-03-2020		ALTERNATIVE MATERIAL												SCALE NTS		SHEET 5 OF 8		DRAWING NUMBER D202-06-211			

1		2		3		4		5		6		7		8		9		10									
DUAL MICROSWITCH LED & DEVICES DUPLICATED						SHEET 6				LED Indicator [u]		Module Device Codes		ISSUE		MOD No.		REASON - INITIAL - DATE									
												Resistor		EOL		Series		7		ACN0178		Correction to LED wiring in option W RNP 15-04-2025					
												Diode		ED1		SD1		8		ACN0187		LED put on N/C side of circuit, note on LED LD1 detailed RNP 28-05-2025					
												Zener Diode		ExxxZ		SxxxZ											
												LED		N/A		L or C											
DUAL SWITCH WITH LED & EOL DEVICE						CONFIG. D6-1		DUAL SWITCH WITH LED & SERIES DEVICE						CONFIG. D6-2		DUAL SWITCH WITH LED, EOL & SERIES DEVICE						CONFIG. D6-3					
SWITCH TYPE [s] TERMINALS [t] PRODUCT OPTION [o] LED INDICATOR [u] EOL MODULE [e]						[D] [D] [2] [L] [ExxxR]		Dual DIN Rail Only Duplicated EOL LED with RL1 EOL Device						SWITCH TYPE [s] TERMINALS [t] PRODUCT OPTION [o] LED INDICATOR [u] MODULES [e][s]						[D] [D] [Y] [L] [Exxxx][Sxxxx]		Dual DIN Rail Only Alt. EOL Pos'n. DUPLICATED LED with RL1 EOL + Series					
Notes - For all LED Options: 1) The LED is configured as LED indicator option 'C' for this version the LED must be protected by a series resistor of a minimum value of 1.5K Ohm or by limiting the systems current to 20mA max 2) Units have the option to add the LED current-limiting resistor RL1 LED indicator option 'L' which is 1.5K Ohms. 3) Note that in both cases the total value of the series resistors and if fitted RL1 will impact the brightness of the LED.																											
Circuit shown in Unoperated condition Unoperated condition (Glass Intact / Standby Condition) Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 open Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 closed Operated condition (Glass Broken / Button pushed in) Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 open Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 closed						Circuit shown in Unoperated condition Unoperated condition (Glass Intact / Standby Condition) Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 open Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 closed Operated condition (Glass Broken / Button pushed in) Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 open Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 closed						Circuit shown in Unoperated condition Unoperated condition (Glass Intact / Standby Condition) Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 open Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 closed Operated condition (Glass Broken / Button pushed in) Terminals +(1) & -(3) M/S 1 & +(5) & -(7) M/S 2 open Terminals +(1) & -(4) M/S 1 & +(5) & -(8) M/S 2 closed															
DRAWING TO BS8888:2000 GEOMETRIC TOLERANCES TO ISO1101:1983 LINEAR DIMENSIONAL TOLS ANGULAR DIMENSIONAL TOLS						DRAWN D.HOWGILL DATE 05-03-2020		SURFACE FINISH		WEIGHT (Kg)		THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS COMMUNICATED IN CONFIDENCE AND IS THE COPYRIGHT PROPERTY OF EUROPEAN SAFETY SYSTEMS LTD. NEITHER THE WHOLE OR ANY EXTRACT MAY BE DISCLOSED, LOANED, COPIED OR USED FOR MANUFACTURING OR TENDERING PURPOSES WITHOUT THEIR WRITTEN CONSENT. EUROPEAN SAFETY SYSTEMS LTD. AS PER LATEST DATE OF ISSUE SHOWN ABOVE						 EUROPEAN SAFETY SYSTEMS LTD IMPRESS HOUSE MANSELL ROAD ACTON LONDON W3 7QH WWW.E2S.COM		ALL DIMENSIONS IN MM IF IN DOUBT, ASK - DO NOT SCALE				A3			
STANDARDS						CHECKED R.N.POTTS DATE 05-03-2020		MATERIAL				TITLE GNExCP7 ; STExCP8 ; WP7 CALL POINT WIRING / CIRCUIT OPERATION DIAGRAM						SCALE NTS		SHEET 6 OF 8		DRAWING NUMBER D202-06-211					
APPROVED R.N.POTTS DATE 05-03-2020						ALTERNATIVE MATERIAL																					

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DUAL MICROSWITCHES IN PARALLEL						SHEET 7						Module Device Codes		ISSUE		MOD No.		REASON - INITIAL - DATE													
Notes: 1. Other configurations of dual switch units are possible. Contact E2S sales to discuss options.						GNEXCP7-BG[s][t][l][e][m][d][v][o][x][u]-[e][s]						Resistor		EOL		Series		7		ACN0178		Correction to LED wiring in option W RNP 15-04-2025									
						Switch Type [s]						Terminals [t]						Product Version [v]		Product Option [o]		LED Indicator [u]		Series Module [s]		8		ACN0187		LED put on N/C side of circuit, note on LED LD1 detailed RNP 28-05-2025	
						LED Indicator [u]						Series Module [s]						Zener Diode		EOL Module [e]		EOL		LED		N/A		L or C			
						Dual Switch with EOL Device						Dual Switch with Series Devices						Dual Switch with EOL & Series Device						Dual Switch with EOL & Series Device							
SWITCH TYPE [s]						TERMINALS [t]						PRODUCT OPTION [o]						LED INDICATOR [u]						SERIES MODULE [s]							
Dual						DIN Rail						Parallel Wiring						No LED						Series Device							
Dual						DIN Rail						Parallel Wiring						No LED						Series Device							
Parallel Wiring						No LED						Series Device						EOL & Series Device						EOL & Series Device							
No LED						Series Device						EOL & Series Device						EOL & Series Device						EOL & Series Device							
Series Device						EOL & Series Device						EOL & Series Device						EOL & Series Device						EOL & Series Device							
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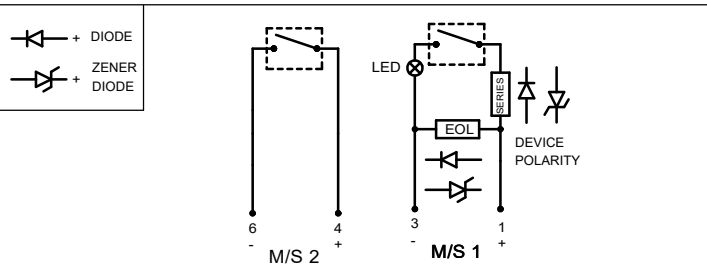
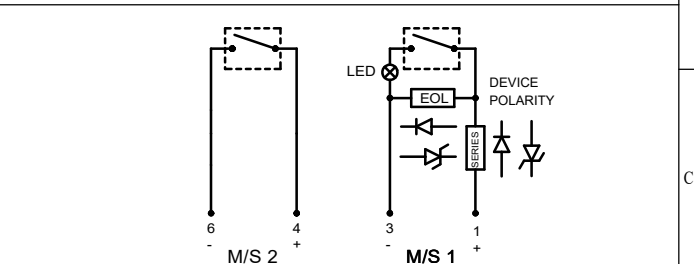
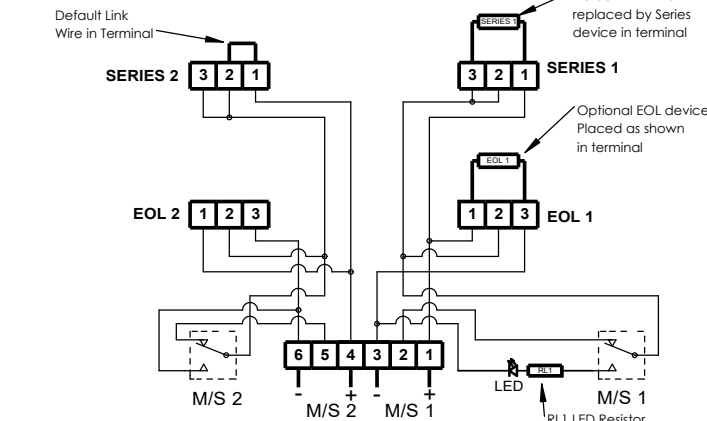
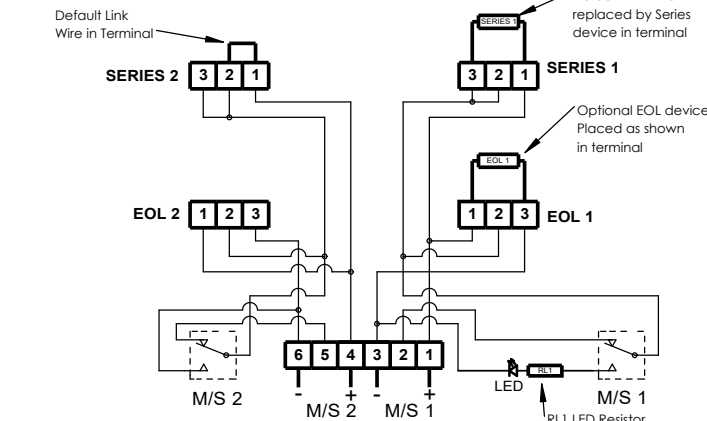
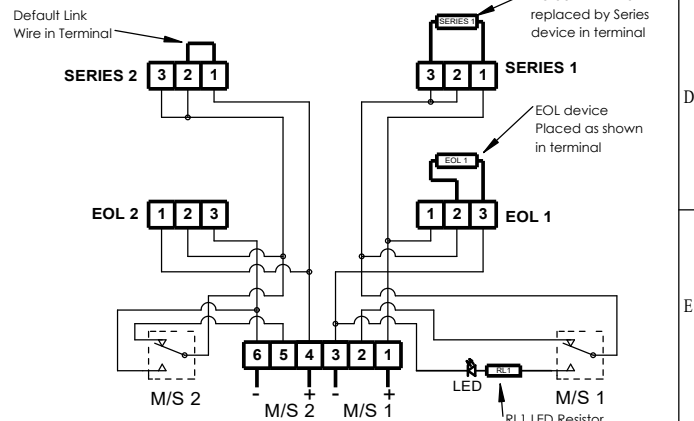
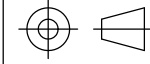
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DUAL MICROSWITCHES IN PARALLEL, LED & DEVICES						SHEET 8				LED Indicator [u]				Module Device Codes				ISSUE		MOD No.		REASON - INITIAL - DATE															
						GNEXCP7-BG[s][t][l][e][m][d][v][o][x][u]-[e][s]				Resistor				EOL		Series		7		ACN0178		Correction to LED wiring in option W RNP 15-04-2025															
						Switch Type [s]				Diode				ED1		SD1		8		ACN0187		LED put on N/C side of circuit, note on LED LD1 detailed RNP 28-05-2025															
						Terminals [t]				Zener Diode				ExxxZ		SxxxZ																					
						LED				LED				N/A		L or C																					
DUAL SWITCH WITH LED				CONFIG. D8-1		DUAL SWITCH WITH LED & EOL DEVICE				CONFIG. D8-2		DUAL SWITCH WITH EOL & SERIES DEVICE				CONFIG. D8-3		DUAL SWITCH WITH EOL & SERIES DEVICE				CONFIG. D8-4															
SWITCH TYPE [s]				[D]		Dual				SWITCH TYPE [s]		[D]		Dual				SWITCH TYPE [s]		[D]		Dual															
TERMINALS [t]				[D]		DIN Rail				TERMINALS [t]		[D]		DIN Rail Only				TERMINALS [t]		[D]		DIN Rail Only															
PRODUCT OPTION [o]				[P]		Parallel Wiring				PRODUCT OPTION [o]		[P]		Parallel Wiring				PRODUCT OPTION [o]		[V]		Parallel Wiring Alt. EOL															
LED INDICATOR [u]				[L]		LED with RL1				LED INDICATOR [u]		[L]		LED with RL1				LED INDICATOR [u]		[L]		LED with RL1															
						EOL MODULE [e]				[Exxxx]		EOL Device				MODULE [e][s]		[Exxxx][Sxxxx]		EOL + Series																	
Notes - For all LED Options:																																					
1) The LED is configured as LED indicator option 'C' for this version the LED must be protected by a series resistor of a minimum value of 1.5K Ohm or by limiting the systems current to 20mA max																																					
2) Units have the option to add the LED current-limiting resistor RL1 LED indicator option 'L' which is 1.5K Ohms.																																					
3) Note that in both cases the total value of the series resistors and if fitted RL1 will impact the brightness of the LED.																																					
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Terminals +(4,5) & -(7,8) closed																																					
Terminals +(4,5) & (6) open																																					
DRAWING TO BS8888:2000						DRAWN		DATE		SURFACE FINISH		WEIGHT (Kg)		THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS COMMUNICATED IN CONFIDENCE AND IS THE COPYRIGHT PROPERTY OF EUROPEAN SAFETY SYSTEMS LTD. NEITHER THE WHOLE OR ANY EXTRACT MAY BE DISCLOSED, LOANED, COPIED OR USED FOR MANUFACTURING OR TENDERING PURPOSES WITHOUT THEIR WRITTEN CONSENT.				2S warning signals EUROPEAN SAFETY SYSTEMS LTD IMPRESS HOUSE MANSELL ROAD ACTON LONDON W3 7QH WWW.E2S.COM				ALL DIMENSIONS IN MM				IF IN DOUBT, ASK - DO NOT SCALE								A3			
GEOMETRIC TOLERANCES TO ISO1101:1983						D.HOWGILL		05-03-2020		MATERIAL		TITLE										GNExCP7 ; STExCP8 ; WP7 CALL POINT															
ANGULAR DIMENSIONAL TOLS						CHECKED		DATE		ALTERNATIVE MATERIAL		WIRING / CIRCUIT OPERATION DIAGRAM																									
STANDARDS						R.N.POTTS		05-03-2020				SCALE										SHEET				DRAWING NUMBER											
GNExCP7 ; STExCP8 ; WP7 units with DIN Rail						APPROVED		DATE				NTS				8 OF 8				D202-06-211																	
R.N.POTTS						05-03-2020																															

	1	2	3	4	5	6	7	8	9	10			
	SINGLE MICROSWITCH DEVICES			SHEET 1									
A	PRODUCTS: GNExCP7, STExCP8 & WP7		Diagram Dual Switch Wiring Configurations LED Indicator Wiring Configurations Parallel Dual Switch Wiring Configurations	Sheet 2,3,5,6,7,8 4,5,6,8 7,8	GNEXCP7-BG[s][t][l][e][m][d][v][o][x]-[u][e][s] Switch Type [s] Terminals [t] Product Version [v] LED Indicator [u] Series Module [s] EOL Module [e]		Module Device Codes Resistor EOL ExxxR Series SxxxR Diode ED1 SD1 Zener Diode ExxxZ SxxxZ LED N/A L or C		ISSUE 1 ACN0127 Addition of LED version ; Options clarified RNP 20-08-2023	MOD No. ACN0178 LED C and L version clarified ; LED mounted in N/O position on switch RNP 04-04-2025			
	SINGLE SWITCH		CONFIG. P1 -1	SINGLE SWITCH WITH SERIES DEVICE		CONFIG. P1-2	SINGLE SWITCH WITH EOL & SERIES DEVICES		CONFIG. P1-3	SINGLE SWITCH WITH EOL & ALT SERIES DEVICES	CONFIG. P1-4		
B	SWITCH TYPE [s] TERMINALS [t] PRODUCT OPTION [o] LED INDICATOR [u]		[S] [P] [1] [N]	Single PCB Version Default NO LED		SWITCH TYPE [s] TERMINALS [t] PRODUCT OPTION [o] LED INDICATOR [u] EOL MODULE [e]	[S] [P] [1] [N] [Exxxx]	Single PCB Version Default NO LED EOL Device		SWITCH TYPE [s] TERMINALS [t] PRODUCT OPTION [o] LED INDICATOR [u] MODULE [e][s]	[S] [P] [W] [N] [Exxxx][Sxxxx]	Single PCB Version Alt. EOL Pos'n. NO LED EOL + Series	
C	Note :- Use when EOL and/or series devices are fitted during installation, or if no series devices are required.												
D													
E	Circuit as shown in Unoperated condition		Circuit as shown in Unoperated condition		Circuit as shown in Unoperated condition		Circuit as shown in Unoperated condition		Circuit as shown in Unoperated condition		Circuit as shown in Unoperated condition		
F	Unoperated Condition (Glass Intact / Standby Condition) Terminals +(1) & -(3) M/S 1 open Terminals +(1) & (2) M/S 1 closed		Unoperated Condition (Glass Intact / Standby Condition) Terminals +(1) & -(3) M/S 1 open Terminals +(1) & (2) M/S 1 closed		Unoperated Condition (Glass Intact / Standby Condition) Terminals +(1) & -(3) M/S 1 open Terminals +(1) & (2) M/S 1 closed		Unoperated Condition (Glass Intact / Standby Condition) Terminals +(1) & -(3) M/S 1 open Terminals +(1) & (2) M/S 1 closed		Unoperated Condition (Glass Intact / Standby Condition) Terminals +(1) & -(3) M/S 1 open Terminals +(1) & (2) M/S 1 closed		Unoperated Condition (Glass Intact / Standby Condition) Terminals +(1) & -(3) M/S 1 open Terminals +(1) & (2) M/S 1 closed		
	Operated Condition (Glass Broken / Button pushes in) Terminals +(1) & (2) M/S 1 open Terminals +(1) & -(3) M/S 1 closed		Operated Condition (Glass Broken / Button pushes in) Terminals +(1) & (2) M/S 1 open Terminals +(1) & -(3) M/S 1 closed		Operated Condition (Glass Broken / Button pushes in) Terminals +(1) & (2) M/S 1 open Terminals +(1) & -(3) M/S 1 closed		Operated Condition (Glass Broken / Button pushes in) Terminals +(1) & (2) M/S 1 open Terminals +(1) & -(3) M/S 1 closed		Operated Condition (Glass Broken / Button pushes in) Terminals +(1) & (2) M/S 1 open Terminals +(1) & -(3) M/S 1 closed		Operated Condition (Glass Broken / Button pushes in) Terminals +(1) & (2) M/S 1 open Terminals +(1) & -(3) M/S 1 closed		
G	DRAWING TO BS8888:2000 GEOMETRIC TOLERANCES TO ISO1101:1983 ANGULAR DIMENSIONAL TOLS		DRAWN R.N.POTTS DATE 20-08-2023		SURFACE FINISH WEIGHT (Kg)		THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS COMMUNICATED IN CONFIDENCE AND IS THE COPYRIGHT PROPERTY OF EUROPEAN SAFETY SYSTEMS LTD. NEITHER THE WHOLE OR ANY EXTRACT MAY BE DISCLOSED, LOANED, COPIED OR USED FOR MANUFACTURING OR TENDERING PURPOSES WITHOUT THEIR WRITTEN CONSENT.		ALL DIMENSIONS IN MM IF IN DOUBT, ASK - DO NOT SCALE		A3		
	STANDARDS GNExCP7 ; STExCP8 ; WP7 units with PCB		CHECKED B.ISARD DATE 20-08-2023		MATERIAL		EUROPEAN SAFETY SYSTEMS LTD. AS PER LATEST DATE OF ISSUE SHOWN ABOVE		TITLE GNExCP7 ; STExCP8 ; WP7 CALL POINT WIRING / CIRCUIT OPERATION DIAGRAM		SCALE NTS		
	APPROVED R.N.POTTS DATE 20-08-2023		ALTERNATIVE MATERIAL		EUROPEAN SAFETY SYSTEMS LTD. ACTON LONDON W3 7QH WWW.E2S.COM		DRAWING NUMBER D202-06-212						

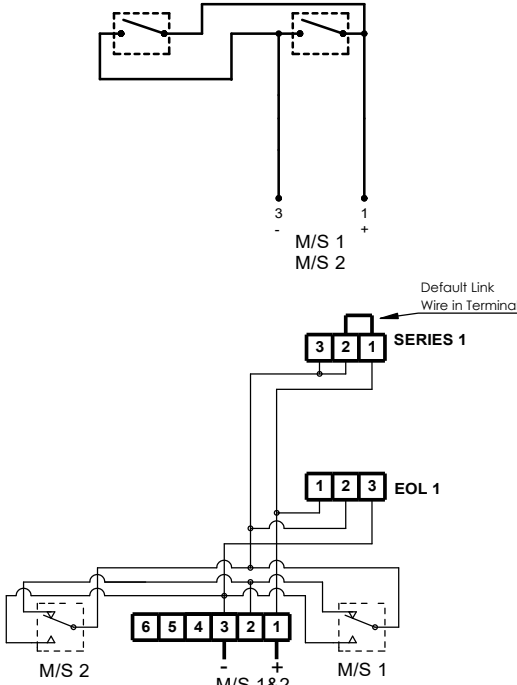
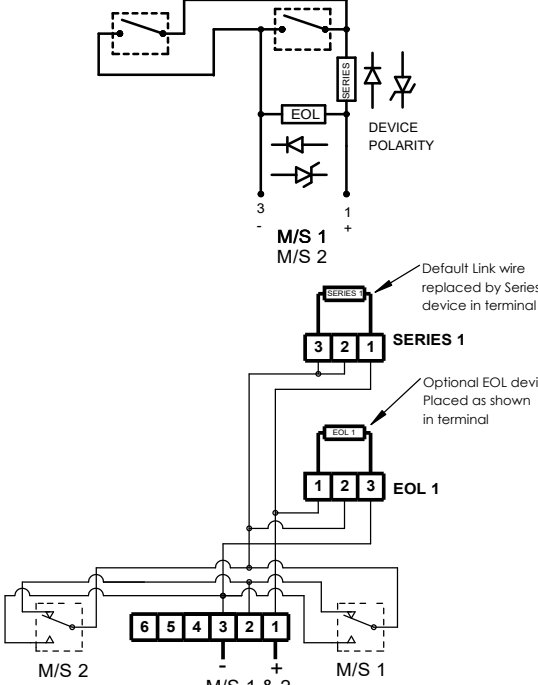
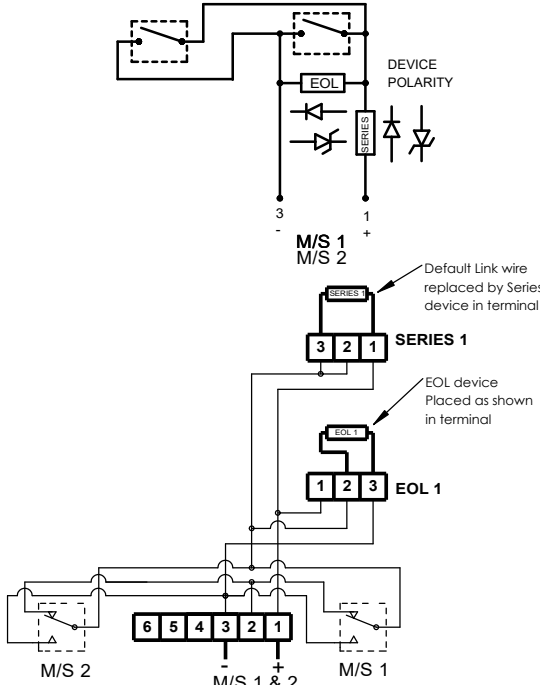
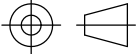
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DUAL MICROSWITCH DEVICES						SHEET 2						Module Device Codes		ISSUE		MOD No.		REASON - INITIAL - DATE																																																																	
Notes: 1. Other configurations of dual switch units are possible. Contact E2S sales to discuss options.						GNEXCP7-BG[s][t][l][e][m][d][v][o][x]-[u][e][s]						EOL		Series		1		ACN0127		INTRODUCTION RNP 20-08-2023																																																															
						Switch Type [s] Terminals [t]						Product Version [v]		Product Option [o]		LED Indicator [u]		Resistor		ExxxR		SD1		LED C and L version clarified ; LED mounted in N/O position on switch RNP 04-04-2025																																																											
						EOL Module [e]						Series		Module [s]		Zener Diode		ExxxZ		SxxxZ																																																															
						LED						N/A		L or C																																																																					
DUAL SWITCH						CONFIG. P2-1						DUAL SWITCH WITH EOL & SERIES DEVICES						CONFIG. P2-2						DUAL SWITCH WITH EOL & ALT. SERIES DEVICES						CONFIG. P2-3																																																					
SWITCH TYPE [s] TERMINALS [t] PRODUCT OPTION [o] LED INDICATOR [u]						[D] [P] [1] [N]						Dual PCB Version Default No LED						SWITCH TYPE [s] TERMINALS [t] PRODUCT OPTION [o] LED INDICATOR [u] MODULES [e][s]						[D] [P] [W] [N]						Dual PCB Version Alt. EOL Pos'n. No LED																																																					
												[Exxxx][Sxxxx]												[Exxxx][Sxxxx]						EOL + Series																																																					
Note :- Use when EOL and/or series devices are fitted during installation, or if no series devices are required. 																																																																																			
																																																																																			
																																																Circuit as shown in Unoperated condition Unoperated Condition (Glass Intact / Standby Condition) Terminals +(1) & -(3) M/S 1 and +(4) & -(6) M/S 2 open Terminals +(1) & (2) M/S 1 and +(4) & (5) M/S 2 closed Operated Condition (Glass Broken / Button pushes in) Terminals +(1) & (2) M/S 1 and +(4) & (5) M/S 2 open Terminals +(1) & -(3) M/S 1 and +(4) & -(6) M/S 2 closed						Circuit as shown in Unoperated condition Unoperated Condition (Glass Intact / Standby Condition) Terminals +(1) & -(3) M/S 1 and +(4) & -(6) M/S 2 open Terminals +(1) & (2) M/S 1 and +(4) & (5) M/S 2 closed Operated Condition (Glass Broken / Button pushes in) Terminals +(1) & (2) M/S 1 and +(4) & (5) M/S 2 open Terminals +(1) & -(3) M/S 1 and +(4) & -(6) M/S 2 closed						Circuit as shown in Unoperated condition Unoperated Condition (Glass Intact / Standby Condition) Terminals +(1) & -(3) M/S 1 and +(4) & -(6) M/S 2 open Terminals +(1) & (2) M/S 1 and +(4) & (5) M/S 2 closed Operated Condition (Glass Broken / Button pushes in) Terminals +(1) & (2) M/S 1 and +(4) & (5) M/S 2 open Terminals +(1) & -(3) M/S 1 and +(4) & -(6) M/S 2 closed																							
DRAWING TO BS8888:2000 GEOMETRIC TOLERANCES TO ISO1101:1983 LINEAR DIMENSIONAL TOLS ANGULAR DIMENSIONAL TOLS						DRAWN R.N.POTTS DATE 20-08-2023						SURFACE FINISH WEIGHT (Kg)						MATERIAL						ALTERNATIVE MATERIAL						THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS COMMUNICATED IN CONFIDENCE AND IS THE COPYRIGHT PROPERTY OF EUROPEAN SAFETY SYSTEMS LTD. NEITHER THE WHOLE OR ANY EXTRACT MAY BE DISCLOSED, LOANED, COPIED OR USED FOR MANUFACTURING OR TENDERING PURPOSES WITHOUT THEIR WRITTEN CONSENT.						EUROPEAN SAFETY SYSTEMS LTD. AS PER LATEST DATE OF ISSUE SHOWN ABOVE						 EUROPEAN SAFETY SYSTEMS LTD IMPRESS HOUSE MANSELL ROAD ACTON LONDON W3 7QH WWW.E2S.COM						ALL DIMENSIONS IN MM IF IN DOUBT, ASK - DO NOT SCALE												A3																							
																																																																		CHECKED B.ISARD DATE 20-08-2023						APPROVED R.N.POTTS DATE 20-08-2023						TITLE GNExCP7 ; STExCP8 ; WP7 CALL POINT WIRING / CIRCUIT OPERATION DIAGRAM					

1		2		3		4		5		6		7		8		9		10															
DUAL MICROSWITCH DEVICES DUPLICATED						SHEET 3				Module Device Codes				ISSUE		MOD No.		REASON - INITIAL - DATE															
Notes: 1. Other configurations of dual switch units are possible. Contact E2S sales to discuss options.						GNEXCP7-BG[s][t][l][e][m][d][v][o][x]-[u][e][s]				LED Indicator [u]		Resistor		EOL		Series		1				ACN0127		INTRODUCTION RNP 20-08-2023									
						Switch Type [s]		Terminals [t]		Product Version [v]		Product		Option [o]		EOL Module [e]		Diode		ED1		SD1		2				ACN0178		LED C and L version clarified ; LED mounted in N/O position on switch RNP 04-04-2025			
						LED Indicator [u]		EOL Module [e]		Zener Diode		ExxxZ		SxxxZ		LED		N/A		L or C													
DUAL SWITCH WITH EOL & SERIES DEVICES DUPLICATED						CONFIG. P3-1		DUAL SWITCH WITH EOL & ALT. SERIES DEVICES DUPLICATED						CONFIG. P3-2																			
SWITCH TYPE [s] TERMINALS [t] PRODUCT OPTION [o] LED INDICATOR [u] MODULES [e][s]						[D] [P] [2] [N] [Exxxx][Sxxxx]		Dual PCB Version Duplicate EOL/Series No LED EOL + Series						SWITCH TYPE [s] TERMINALS [t] PRODUCT OPTION [o] LED INDICATOR [u] MODULES [e][s]						[D] [P] [Y] [N] [Exxxx][Sxxxx]		Dual PCB Version Alt. EOL Pos'n, duplicated No LED EOL + Series											

1		2		3		4		5		6		7		8		9		10																	
SINGLE MICROSWITCH LED DEVICES						SHEET 4				GNEXCP7-BG[s][t][l][e][m][d][v][o][x][-u][e][s] Switch Type [s] Terminals [t] Product Version [v] Product Option [o] LED Indicator [u] Series Module [s] EOL Module [e]				Module Device Codes		ISSUE		MOD No.		REASON - INITIAL - DATE															
												Resistor		EOL		Series		1		ACN0127		Addition of LED version : Options clarified RNP 20-08-2023													
												Diode		ED1		SD1		2		ACN0178		LED C and L version clarified ; LED mounted in N/O position on switch RNP 04-04-2025													
												Zener Diode		ExxxZ		SxxxZ																			
												LED		N/A		L or C																			
SINGLE SWITCH			CONFIG. P4 -1			SINGLE SWITCH WITH SERIES DEVICES			CONFIG. P4-2			SINGLE SWITCH WITH EOL & SERIES DEVICES			CONFIG. P4-3			SINGLE SWITCH WITH EOL & ALT SERIES DEVICES			CONFIG. P4-4														
SWITCH TYPE [s] [S] TERMINALS [t] [P] PRODUCT OPTION [o] [1] LED INDICATOR [u] [L]			Single PCB Version Default LED with RL1			SWITCH TYPE [s] [S] TERMINALS [t] [P] PRODUCT OPTION [o] [1] LED INDICATOR [u] [L] EOL MODULE [e] [Exxxx]			Single PCB Version Default LED with RL1 EOL Device			SWITCH TYPE [s] [S] TERMINALS [t] [P] PRODUCT OPTION [o] [1] LED INDICATOR [u] [L] MODULES [e][s] [Exxxx][Sxxxx]			Single PCB Version Default LED with RL1 EOL + Series			SWITCH TYPE [s] [S] TERMINALS [t] [P] PRODUCT OPTION [o] [W] LED INDICATOR [u] [L] MODULE [e][s] [Exxxx][Sxxxx]			Single PCB Version Alt. EOL Pos'n. LED with RL1 EOL + Series														
Notes - For all LED Options: 1) The LED is configured as LED indicator option 'C' for this version the LED must be protected by a series resistor of a minimum value of 1.5K Ohm or by limiting the systems current to 20mA max 2) Units have the option to add the LED current-limiting resistor RL1 LED indicator option 'L' which is 1.5K Ohms. 3) Note that in both cases the total value of the series resistors and if fitted RL1 will impact the brightness of the LED.																																			
Circuit as shown in Unoperated condition Unoperated Condition (Glass Intact / Standby Condition) Terminals +(1) & -(3) M/S 1 open Terminals +(1) & (2) M/S 1 closed Operated Condition (Glass Broken / Button pushes in) Terminals +(1) & (2) M/S 1 open Terminals +(1) & -(3) M/S 1 closed						Circuit as shown in Unoperated condition Unoperated Condition (Glass Intact / Standby Condition) Terminals +(1) & -(3) M/S 1 open Terminals +(1) & (2) M/S 1 closed Operated Condition (Glass Broken / Button pushes in) Terminals +(1) & (2) M/S 1 open Terminals +(1) & -(3) M/S 1 closed						Circuit as shown in Unoperated condition Unoperated Condition (Glass Intact / Standby Condition) Terminals +(1) & -(3) M/S 1 open Terminals +(1) & (2) M/S 1 closed Operated Condition (Glass Broken / Button pushes in) Terminals +(1) & (2) M/S 1 open Terminals +(1) & -(3) M/S 1 closed						Circuit as shown in Unoperated condition Unoperated Condition (Glass Intact / Standby Condition) Terminals +(1) & -(3) M/S 1 open Terminals +(1) & (2) M/S 1 closed Operated Condition (Glass Broken / Button pushes in) Terminals +(1) & (2) M/S 1 open Terminals +(1) & -(3) M/S 1 closed																	
DRAWING TO BS8888:2000 GEOMETRIC TOLERANCES TO ISO1101:1983 LINEAR DIMENSIONAL TOLS ANGULAR DIMENSIONAL TOLS				DRAWN R.N.POTTS DATE 20-08-2023				SURFACE FINISH				WEIGHT (Kg)				THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS COMMUNICATED IN CONFIDENCE AND IS THE COPYRIGHT PROPERTY OF EUROPEAN SAFETY SYSTEMS LTD. NEITHER THE WHOLE OR ANY EXTRACT MAY BE DISCLOSED, LOANED, COPIED OR USED FOR MANUFACTURING OR TENDERING PURPOSES WITHOUT THEIR WRITTEN CONSENT. EUROPEAN SAFETY SYSTEMS LTD. AS PER LATEST DATE OF ISSUE SHOWN ABOVE				 warning signals EUROPEAN SAFETY SYSTEMS LTD IMPRESS HOUSE MANSELL ROAD ACTON LONDON W3 7QH WWW.E2S.COM				ALL DIMENSIONS IN MM IF IN DOUBT, ASK - DO NOT SCALE								A3			
STANDARDS GNExCP7 ; STExCP8 ; WP7 units with PCB				CHECKED B.ISARD DATE 20-08-2023				MATERIAL				TITLE GNExCP7 ; STExCP8 ; WP7 CALL POINT WIRING / CIRCUIT OPERATION DIAGRAM												SCALE NTS				SHEET 4 OF 8				DRAWING NUMBER D202-06-212			
				APPROVED R.N.POTTS DATE 20-08-2023																															

1		2		3		4		5		6		7		8		9		10			
DUAL MICROSWITCH LED DEVICES						SHEET 5						Module Device Codes		ISSUE	MOD No.	REASON - INITIAL - DATE					
GNEXCP7-BG[s][t][l][e][m][d][v][o][x][u][e][s] Switch Type [s] Terminals [t] Product Version [v] Product Option [o] EOL Module [e] LED Indicator [u] Series Module [s]						Resistor	ExxxR	SxxxR	1	ACN0127	INTRODUCTION RNP 20-08-2023										
						Diode	ED1	SD1	2	ACN0178	LED C and L version clarified ; LED mounted in N/O position on switch RNP 04-04-2025										
						Zener Diode	ExxxZ	SxxxZ													
						LED	N/A	L or C													
DUAL SWITCH WITH LED						DUAL SWITCH WITH LED, EOL & SERIES DEVICES						DUAL SWITCH WITH LED, EOL & ALT. SERIES DEVICES									
CONFIG. P5-1						CONFIG. P5-2						CONFIG. P5-3									
SWITCH TYPE [s] [D] TERMINALS [t] [P] PRODUCT OPTION [o] [1] LED INDICATOR [u] [C] or [L] Dual PCB Version Default C = LED without RL1						SWITCH TYPE [s] [D] TERMINALS [t] [P] PRODUCT OPTION [o] [1] LED INDICATOR [u] [C] or [L] MODULES [e][s] [Exxxx][Sxxxx] Dual PCB Version Default C = LED without RL1 EOL + Series						SWITCH TYPE [s] [D] TERMINALS [t] [P] PRODUCT OPTION [o] [W] LED INDICATOR [u] [C] or [L] MODULES [e][s] [Exxxx][Sxxxx] Dual PCB Version Alt. EOL Pos'n. C = LED without RL1 EOL + Series									
Notes - For all LED Options: 1) The LED is configured as LED indicator option 'C' for this version the LED must be protected by a series resistor of a minimum value of 1.5K Ohm or by limiting the systems current to 20mA max 2) Units have the option to add the LED current-limiting resistor RL1 LED indicator option 'L' which is 1.5K Ohms. 3) Note that in both cases the total value of the series resistors and if fitted RL1 will impact the brightness of the LED. 																					
 Circuit as shown in Unoperated condition Unoperated Condition (Glass Intact / Standby Condition) Terminals +(1) & -(3) M/S 1 and +(4) & -(6) M/S 2 open Terminals +(1) & (2) M/S 1 and +(4) & (5) M/S 2 closed Operated Condition (Glass Broken / Button pushes in) Terminals +(1) & (2) M/S 1 and +(4) & (5) M/S 2 open Terminals +(1) & -(3) M/S 1 and +(4) & -(6) M/S 2 closed						 Circuit as shown in Unoperated condition Unoperated Condition (Glass Intact / Standby Condition) Terminals +(1) & -(3) M/S 1 and +(4) & -(6) M/S 2 open Terminals +(1) & (2) M/S 1 and +(4) & (5) M/S 2 closed Operated Condition (Glass Broken / Button pushes in) Terminals +(1) & (2) M/S 1 and +(4) & (5) M/S 2 open Terminals +(1) & -(3) M/S 1 and +(4) & -(6) M/S 2 closed						 Circuit as shown in Unoperated condition Unoperated Condition (Glass Intact / Standby Condition) Terminals +(1) & -(3) M/S 1 and +(4) & -(6) M/S 2 open Terminals +(1) & (2) M/S 1 and +(4) & (5) M/S 2 closed Operated Condition (Glass Broken / Button pushes in) Terminals +(1) & (2) M/S 1 and +(4) & (5) M/S 2 open Terminals +(1) & -(3) M/S 1 and +(4) & -(6) M/S 2 closed									
DRAWING TO BS8888:2000 GEOMETRIC TOLERANCES TO ISO1101:1983 LINEAR DIMENSIONAL TOLS ANGULAR DIMENSIONAL TOLS		DRAWN R.N.POTTS DATE 20-08-2023		SURFACE FINISH		WEIGHT (Kg)		THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS COMMUNICATED IN CONFIDENCE AND IS THE COPYRIGHT PROPERTY OF EUROPEAN SAFETY SYSTEMS LTD. NEITHER THE WHOLE OR ANY EXTRACT MAY BE DISCLOSED, LOANED, COPIED OR USED FOR MANUFACTURING OR TENDERING PURPOSES WITHOUT THEIR WRITTEN CONSENT. EUROPEAN SAFETY SYSTEMS LTD. AS PER LATEST DATE OF ISSUE SHOWN ABOVE						 warning signals EUROPEAN SAFETY SYSTEMS LTD IMPRESS HOUSE MANSELL ROAD ACTON LONDON W3 7QH WWW.E2S.COM		ALL DIMENSIONS IN MM IF IN DOUBT, ASK - DO NOT SCALE				A3	
STANDARDS GNExCP7 ; STExCP8 ; WP7 units with PCB		CHECKED B.ISARD DATE 20-08-2023		MATERIAL		TITLE GNExCP7 ; STExCP8 ; WP7 CALL POINT WIRING / CIRCUIT OPERATION DIAGRAM															
		APPROVED R.N.POTTS DATE 20-08-2023		ALTERNATIVE MATERIAL		SCALE NTS										SHEET 5 OF 8		DRAWING NUMBER D202-06-212			

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DUAL MICROSWITCH LED & DEVICES DUPLICATED						SHEET 6						Module Device Codes		ISSUE		MOD No.		REASON - INITIAL - DATE									
GNEXCP7-BG[s][t][l][e][m][d][v][o][x][u][e][s] Switch Type [s] Terminals [t] Product Version [v] Product Option [o] LED Indicator [u] Series Module [s] EOL Module [e]						Resistor		E0xxR		S0xxR		1		ACN0127		INTRODUCTION RNP 20-08-2023											
						Diode		ED1		SD1		2		ACN0178		LED C and L version clarified ; LED mounted in N/O position on switch RNP 04-04-2025											
						Zener Diode		E0xxZ		S0xxZ																	
						LED		N/A		L or C																	
DUAL SWITCH WITH LED, EOL & SERIES DEVICES DUPLICATED						CONFIG. P6-1		DUAL SWITCH WITH LED, EOL & ALT. SERIES DEVICES DUPLICATED						CONFIG. P6-2													
SWITCH TYPE [s] TERMINALS [t] PRODUCT OPTION [o] LED INDICATOR [u] MODULES [e][s]						[D] [P] [2] [C] or [L] [Exxxx][Sxxxx]		Dual PCB Version Duplicate EOL/Series C = LED without RL1 EOL + Series						SWITCH TYPE [s] TERMINALS [t] PRODUCT OPTION [o] LED INDICATOR [u] MODULES [e][s]						[D] [P] [Y] [C] or [L] [Exxxx][Sxxxx]		Dual PCB Version Alt. EOL Pos'n duplicated C = LED without RL1 EOL + Series					

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DUAL MICROSWITCH IN PARALLEL, & DEVICES						SHEET 7		GNEXCP7-BG[s][t][l][e][m][d][v][o][x]-[u][e][s] Switch Type [s] Terminals [t] Product Version [v] Product Option [o] LED Indicator [u] Series Module [s] EOL Module [e]										Module Device Codes EOL Series Resistor ExxxR SxxxR Diode ED1 SD1 Zener Diode ExxxZ SxxxZ LED N/A L or C				ISSUE 1 ACN0127 2 ACN0178		MOD No. ACN0127 ACN0178		REASON - INITIAL - DATE INTRODUCTION RNP 20-08-2023 LED C and L version clarified ; LED mounted in N/O position on switch RNP 04-04-2025			
DUAL SWITCH PARALLEL				CONFIG. P7-1		DUAL SWITCH, PARALLEL WITH EOL & SERIES DEVICES						CONFIG. P7-2		DUAL SWITCH, PARALLEL WITH EOL & ALT. SERIES DEVICES						CONFIG. P7-3									
SWITCH TYPE [s] [D] TERMINALS [t] [P] PRODUCT OPTION [o] [P] LED INDICATOR [u] [N]				Dual PCB Version Parallel Wiring No LED		SWITCH TYPE [s] [D] TERMINALS [t] [P] PRODUCT OPTION [o] [P] LED INDICATOR [u] [N] MODULES [e][s] [Exxxx][Sxxxx]						Dual PCB Version Parallel Wiring No LED EOL + Series		SWITCH TYPE [s] [D] TERMINALS [t] [P] PRODUCT OPTION [o] [V] LED INDICATOR [u] [N] MODULES [e][s] [Exxxx][Sxxxx]						Dual PCB Version Parallel Wiring Alt. EOL Pos'n. No LED EOL + Series									
Note :- Use when EOL and/or series devices are fitted during installation, or if no series devices are required. 				Circuit as shown in Unoperated condition Unoperated Condition (Glass Intact / Standby Condition) Terminals +(1) & -(3) M/S 1 and M/S 2 open Terminals +(1) & (2) M/S 1 and M/S 2 closed Operated Condition (Glass Broken / Button pushes in) Terminals +(1) & (2) M/S 1 and M/S 2 open Terminals +(1) & -(3) M/S 1 and M/S 2 closed								Circuit as shown in Unoperated condition Unoperated Condition (Glass Intact / Standby Condition) Terminals +(1) & -(3) M/S 1 and M/S 2 open Terminals +(1) & (2) M/S 1 and M/S 2 closed Operated Condition (Glass Broken / Button pushes in) Terminals +(1) & (2) M/S 1 and M/S 2 open Terminals +(1) & -(3) M/S 1 and M/S 2 closed								Circuit as shown in Unoperated condition Unoperated Condition (Glass Intact / Standby Condition) Terminals +(1) & -(3) M/S 1 and M/S 2 open Terminals +(1) & (2) M/S 1 and M/S 2 closed Operated Condition (Glass Broken / Button pushes in) Terminals +(1) & (2) M/S 1 and M/S 2 open Terminals +(1) & -(3) M/S 1 and M/S 2 closed									
DRAWING TO BS8888:2000 GEOMETRIC TOLERANCES TO ISO1101:1983 LINEAR DIMENSIONAL TOLS ANGULAR DIMENSIONAL TOLS				DRAWN R.N.POTTS 20-08-2023		DATE		SURFACE FINISH		WEIGHT (Kg)		THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS COMMUNICATED IN CONFIDENCE AND IS THE COPYRIGHT PROPERTY OF EUROPEAN SAFETY SYSTEMS LTD. NEITHER THE WHOLE OR ANY EXTRACT MAY BE DISCLOSED, LOANED, COPIED OR USED FOR MANUFACTURING OR TENDERING PURPOSES WITHOUT THEIR WRITTEN CONSENT.						e2S warning signals EUROPEAN SAFETY SYSTEMS LTD IMPRESS HOUSE MANSELL ROAD ACTON LONDON W3 7QH WWW.E2S.COM				ALL DIMENSIONS IN MM IF IN DOUBT, ASK - DO NOT SCALE				A3			
STANDARDS GNExCP7 ; STExCP8 ; WP7 units with PCB				CHECKED B.ISARD 20-08-2023		DATE		MATERIAL		ALTERNATIVE MATERIAL						TITLE GNExCP7 ; STExCP8 ; WP7 CALL POINT WIRING / CIRCUIT OPERATION DIAGRAM				SCALE NTS		SHEET 7 OF 8		DRAWING NUMBER D202-06-212					
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EU Declaration of Conformity



Manufacturer: European Safety Systems Ltd.
Impress House, Mansell Road, Acton
London, W3 7QH
United Kingdom

Authorised Representative: E2S Warnsignaltechnik UG
Charlottenstrasse 45-51
72764 Reutlingen
Germany

Equipment Type: GNExCP7-BG-S, GNExCP7-BG-D, GNExCP7-BG-S-L or C, GNExCP7-BG-D-L or C
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Directive 2014/34/EU: Equipment and Protective Systems for use in Potentially Explosive Atmospheres (ATEX)

Notified Body for EU type Examination (Module B):	UL International Demko A/S Notified Body No.: 0539 Borupvang 5A, 2750 Ballerup, Denmark
EU-type Examination Certificate (Module B):	DEMKO 19 ATEX 2101X
Notified Body for Quality Assurance Notification / Conformity to EU-type based on quality assurance of the production process (Module D):	Sira Certification Service Notified Body No.: 2813 CSA Group Netherlands B.V, Utrechtseweg 310, 6812 AR, Arnhem, Netherlands
Quality Assurance Notification (Module D):	SIRA 05 ATEX M342
Provisions fulfilled by the equipment:	II 2G Ex d IIC T6...T4 Gb II 2D Ex tb IIIC T100°C....T80°C Db
Standards applied:	EN 60079-0:2018 EN 60079-1:2014 EN 60079-31:2014 IP6X Dust Protection to EN60079-0 / EN60079-31

Directive 2014/30/EU: Electromagnetic Compatibility Directive (EMC)

Standards applied:	EN 61000-6-1:2007 EN 61000-6-2:2005 EN 61000-6-3:2007 / A1:2011 / AC: 2012 EN 61000-6-4:2007 / A1: 2011
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Directive 2011/65/EU: Restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

The product and all the components contained within it are in accordance with the restriction of the use of hazardous substances in electrical and electronic equipment, including amendment by Directive 2015/863/EU.

Regulation (EC) 1907/2006: Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

The product and all the components contained within it are free from substances of very high concern.

Other Standards and Regulations

EN 60529:1991 + A1:2000 + A2:2013. - Degrees of protection provided by enclosures (IP code) – enclosure rated IP66/67/68

Martin Streetz
Quality Assurance Manager

Document No.: DC-078_Issue_F
Date and Place of Issue: London, 14/09/2023

EU Declaration of Conformity



On behalf of European Safety Systems Ltd., I declare that, on the date the equipment accompanied by this declaration is placed on the market, the equipment conforms with all technical and regulatory requirements of the above listed directives, regulations and standards.

This Declaration is issued under the sole responsibility of the manufacturer.

A handwritten signature in blue ink, appearing to read 'Martin Streetz'.

Martin Streetz
Quality Assurance Manager

Document No.:
Date and Place of Issue:

DC-078_Issue_F
London, 14/09/2023



UKCA Declaration of Conformity



Manufacturer: European Safety Systems Ltd.
Impress House, Mansell Road, Acton
London, W3 7QH
United Kingdom

Equipment Type: GNExCP7-BG-S, GNExCP7-BG-D, GNExCP7-BG-S-L or C, GNExCP7-BG-D-L or C
GNExCP7-PB-S, GNExCP7-PM-S, GNExCP7-PT-S,
GNExCP7-PB-S-L or C, GNExCP7-PM-S-L or C, GNExCP7-PT-S-L or C,
GNExCP7-PB-D, GNExCP7-PM-D, GNExCP7-PT-D
GNExCP7-PB-D-L or C, GNExCP7-PM-D-L or C, GNExCP7-PT-D-L or C

Directive UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1 : Product or Protective System Intended for use in Potentially Explosive Atmospheres (UKCA)

Notified Body for UK type Examination (Module B):	UL International (UK) Ltd Notified Body No.: 0843 Unit 1-3 Horizon Kingsland Business Park, Wade Road, Basingstoke, Hampshire RG24 8AH UK
UK-type Examination Certificate (Module B):	UL21UKEX2134X
Notified Body for Quality Assurance Notification / Conformity to EU-type based on quality assurance of the production process (Module D):	Sira Certification Service Notified Body No.: 0518 Rake Lane, Eccleston, Chester CH4 9JN, UK
Quality Assurance Notification (Module D):	CSAE 22UKQAN0046
Provisions fulfilled by the equipment:	II 2G Ex d IIC T6...T4 Gb II 2D Ex tb IIIC T100°C... T80°C Db
Standards applied:	EN 60079-0:2018 EN 60079-1:2014 EN 60079-31:2014 IP6X Dust Protection to EN60079-0 / EN60079-31

Directive 2014/30/EU: Electromagnetic Compatibility Directive (EMC)

Standards applied:	EN 61000-6-1:2007 EN 61000-6-2:2005 EN 61000-6-3:2007 / A1:2011 / AC: 2012 EN 61000-6-4:2007 / A1: 2011
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Directive 2011/65/EU: Restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

The product and all the components contained within it are in accordance with the restriction of the use of hazardous substances in electrical and electronic equipment, including amendment by Directive 2015/863/EU.

Regulation (EC) 1907/2006: Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

The product and all the components contained within it are free from substances of very high concern.

Other Standards and Regulations

EN 60529:1991 + A1:2000 + A2:2013. - Degrees of protection provided by enclosures (IP code) – enclosure rated IP66/67/68

On behalf of European Safety Systems Ltd., I declare that, on the date the equipment accompanied by this declaration is placed on the market, the equipment conforms with all technical and regulatory requirements of the above listed directives, regulations and standards.

This Declaration is issued under the sole responsibility of the manufacturer.


Martin Streetz
Quality Assurance Manager

Document No.: DC-099_Issue_B
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