

520 Series Ancillary Equipment

Features:

- Communications and control interface to Minerva Fire Controllers
- High Systems Integrity
- Allows remote sounder circuits
- Allows loop powering of sounders and/or beam detector units.
- Monitoring of external equipment e.g. smoke dampers.
- Reduced installation costs
- Removes the need for separate plant control circuits

An extensive range of ancillary modules has been specifically designed for use with the Minerva 8, 16E and 80 range of Fire Controllers. The 520 range of ancillary modules provide the Minerva Fire Controller with a wide degree of systems application flexibility. This allows the field addressable loop from the control panel to both receive inputs to the system and control outputs from it. This broad range of modules allows the scope of the fire detection system to be significantly extended beyond a simple fire detector - alarm sounder based alarm system.

a vital part of your world

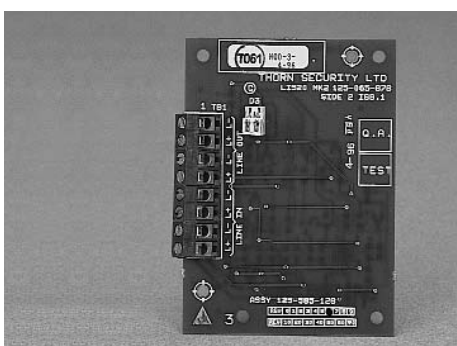
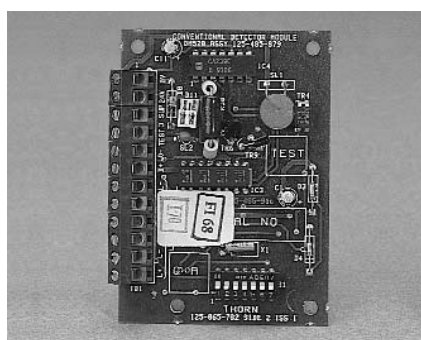
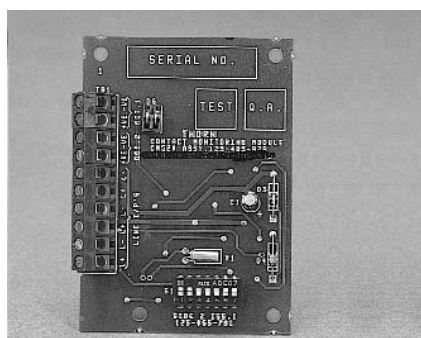
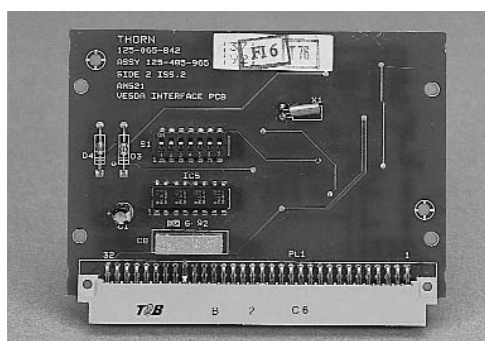
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*Fire & Integrated
Solutions*

520 Series Ancillary Equipment

AM52 1 & AM92 1 Addressable Aspirating

The command modules enable fire doors to be closed, fire dampers to be controlled, plus provide an interface to shut down HVAC and other plant control equipment. Other applications include an interface between shopping centre tenants' premises and the landlords' central control system. With the high systems integrity offered on the Minerva Controller the command modules can also be used to control a public address based building evacuation system.



AM52 1 & AM92 1 Addressable Aspirating

The AM52 1 module is used as an interface between the Minerva control panel and an aspirating VESDA detector type E70D. The module is fitted inside the VESDA detector housing and also takes its power from the VESDA unit. The AM52 1 will provide alarm, pre-alarm, and fault status signals for use in the Minerva panel. The module is addressable and will therefore take one address on the loop. The AM92 1 is a variation of the AM52 1 which plugs into the 7 relay output header board of the VESDA Laserplus detectors (VLP) and scanners (VLS).

CM520 - Contact Monitoring Module

The CM520 module provides the facility to monitor an external contact, e.g. fire door monitor. This monitored point can then be used as a control input for the Minerva panel which is activated when the monitored contact is either open or closed. A delay between the monitored contact opening/closing and the activation of the control input can be specified within the control panel settings. The CM520 takes its operating power from the Minerva loop. The module is addressable and will therefore take one address on the loop.

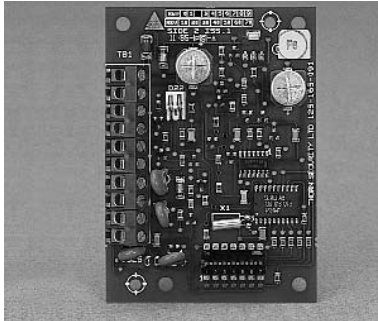
DM520 - Conventional Detector Module

The DM520 is used to interface a single zone of conventional detectors onto the Minerva analogue addressable loop. This provides a cost effective and easy method of extending existing conventional systems or a future upgrade path for new conventional systems. The DM520 is also fitted with a red LED to indicate locally when the associated conventional zone has entered an alarm condition. The DM520 requires a separate 24V DC supply to operate. The module is addressable and will therefore take one address on the loop.

LI520 Mk2- Line Isolator Module

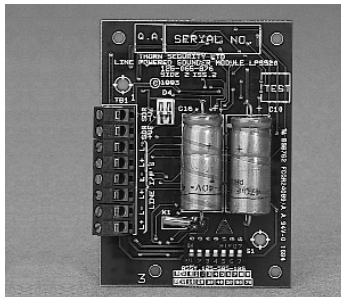
The LI520 Mk2 line isolator is used to ensure that a short circuit fault on the addressable loop will not cause a total systems failure. LI520 Mk2's effectively contain the fault to specific areas of the loop. Line isolators should be used at the boundary of each zone so that no more than a single zone is made inoperative during a short circuit condition. This feature is a requirement of BS5839 Part 1 1988. The LI520 Mk2 is also fitted with a red LED to indicate locally when the isolator has been tripped. The maximum number of line isolators per Minerva loop is 12, plus there are two isolator circuits built into the Minerva control panel loop drivers (one for each end of the loop). The LI520 Mk2 takes its operating power from the Minerva loop. The module is not addressable and will therefore not take an address on the loop.

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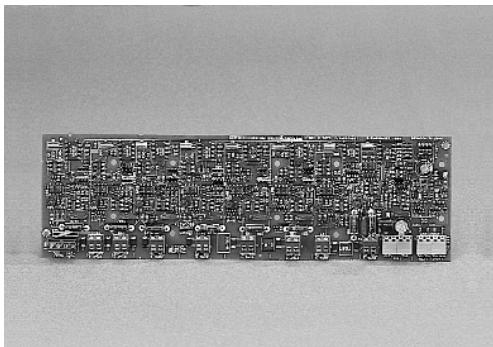
LPBD521 Loop Powered Beam Detectors

The LPBD521 module is used to drive the Fireray 2000 beam detector units directly from the Minerva loop. A single LPBD521 can be used to power the analyser unit, the beam receiver unit and the transmitter unit. Alternatively, two separate LPBD521's can be used with one to power the analyser unit and receiver units and the second to drive the transmitter separately, either from the same loop or a different loop. Up to 8 LPBD521's can be used per loop. The module is addressable and will therefore take one address on the loop.



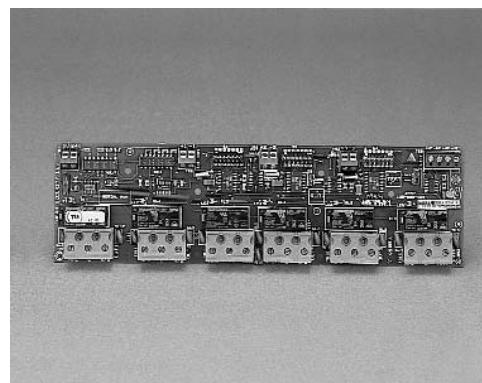
LPS520 - Loop Powered Sounder Module

The LPS520 module provides control outputs for alarm sounders in the same way as the SM520 module, except that no external power supply is required as the sounders draw their power directly from the addressable loop. A maximum of 5 LPS520 modules can be used per loop, each driving a maximum of 6 banshee sounders each. The LPS520 takes its operating power from the Minerva loop. The module is addressable and will therefore take one address on the loop.



MDM521 - Multi-DM Module

The MDM521 module is used to interface conventional detection zones onto the Minerva analogue addressable loop in a similar way to the DM520. The MDM521, however, can be configured to interface up to 8 zones of conventional detectors rather than the DM520's single zone. The module has an LED for each of the 8 zones which will show red when the zone is in alarm and yellow if the zone is in fault. This module provides a cost effective method of interfacing several conventional zones onto an addressable loop. The MDM521 requires a separate 24V DC supply to operate. The module is addressable and will take as many addresses as there are zones being monitored (i.e. between 1 and 8).



PI521 - Plant Interface Module

The Plant Interface module is an addressable, multi input/output device that is used to interface plant equipment to the Minerva control panel. Inputs can be used for plant monitoring whilst the outputs can be driven from the Minerva control panel as required. The module is available in three configurations:

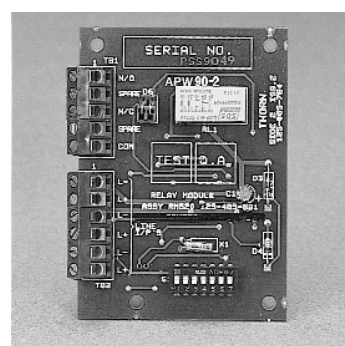
PI521/2 2 inputs and 2 outputs (Takes 4 addresses on the loop; max per loop is 24)

PI521/4 4 inputs and 4 outputs (Takes 8 addresses on the loop; max per loop is 12)

PI521/6 6 inputs and 6 outputs (Takes 12 addresses on the loop; max per loop is 8)

All outputs are rated at 240V 5A.

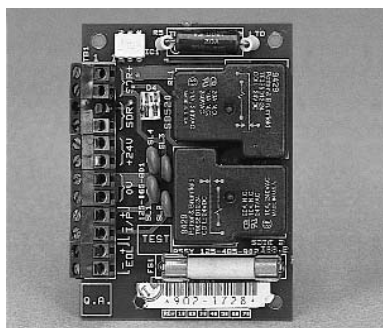
The PI521 requires a separate 24V DC supply to operate.



RM520 - Relay Module

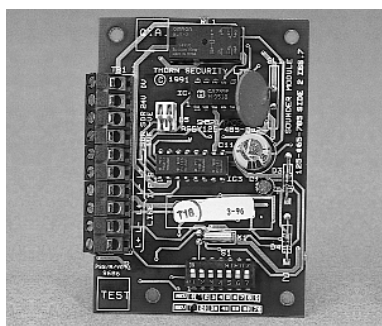
The RM520 provides one volt-free change-over relay contact rated at 1A @ 24V DC. Command signals to drive the relay are configured in the Minerva control panel software with the trigger point being defined as a detector or other event programmed into the system. The relay contacts are monitored and the state (activated/de-activated) is reported back to the control panel. The RM520 is also fitted with a red LED to indicate locally when the relay is operated. Typical applications for the RM520 include fire door control or lift control. The RM520 takes its operating power from the Minerva loop. The module is addressable and will therefore take one address on the loop.

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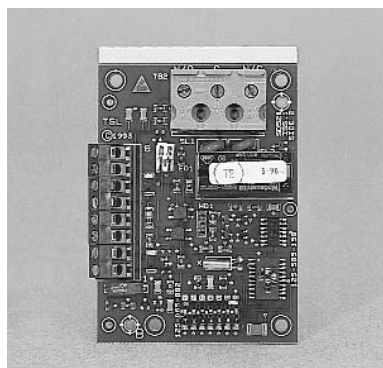
SB520 - Sounder Booster Module

The SB520 sounder booster module is used in conjunction with the standard SM520 to drive one or more alarm sounder devices from the addressable loop rather than directly from control panel outputs. The SB520 is required when the alarm sounder load to be driven from the SM520 is greater than 500mA. Using the SB520 increases the sounder load capacity to 15A. The SB520 requires a separate 24V DC supply to operate. The module is not addressable and will therefore not take an address on the loop.



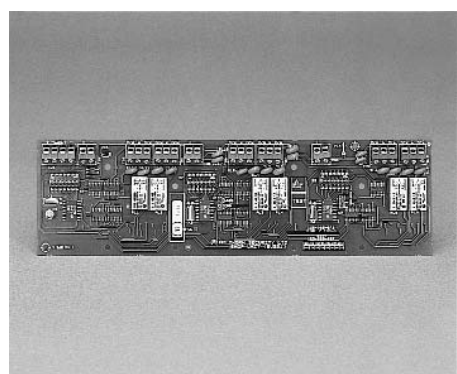
SD520 - Smoke Damper Interface Module

The SD520 provides two monitored inputs and one relay output rated at 240V @ 5A. The SD520 is ideally suited to driving smoke damper units directly from the Minerva loop. One of the inputs can optionally be used to monitor the action of the module relay externally, i.e. at the smoke damper unit. The SD520 is fitted with a red LED to indicate locally when the relay is operated. The SD520 requires a separate 24V DC supply to operate. The module is addressable and will therefore take one address on the loop.



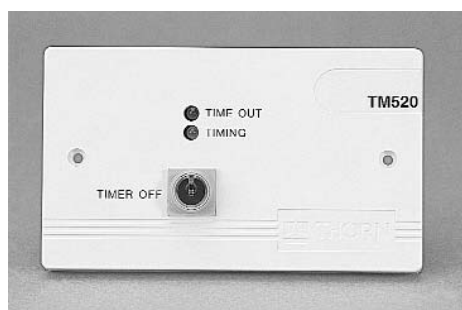
SM520 - Sounder Driver Module

The SM520 module is used to provide an output to alarm sounders or visual warning devices in response to a control signal from the control panel. The devices are controlled directly from the SM520 on the addressable loop rather than from outputs on the control panel, thereby significantly reducing wiring costs. The output wiring to the alarm devices is fully monitored and the module has the capability to drive up to a maximum of 500mA alarm device load. If higher alarm device loads are required then an SB520 sounder booster module must be used in conjunction with the SM520. The SM520 requires a separate 24V DC supply to operate. The module is addressable and will therefore take one address on the loop..



SU521 - Shop Interface Module

The SU251 is an addressable, multi input/output device that is used to interface other fire or security systems into the Minerva control panel. Inputs can be used for taking signals from other systems (e.g. taking individual shop security systems into the central shopping centre system) whilst the outputs can be used to send control signals from the Minerva back to the individual tenant's system. The SU251 is available in three formats:
SU521/2 2 inputs and 2 outputs (Takes 4 addresses on the loop; max per loop is 24)
SU521/4 4 inputs and 4 outputs (Takes 8 addresses on the loop; max per loop is 12)
SU521/6 6 inputs and 6 outputs (Takes 12 addresses on the loop; max per loop is 8)
All outputs are change-over contacts rated at 24V 1A.
The SU521 takes its operating power from the Minerva loop.



TM520 - Timer Module

The TM520 provides an output that can be activated based on a delay time. If either the keyswitch on the module is activated, or a predefined event within the control panel occurs then a timed delay (set between 10 minutes and 2 hours 10 minutes) is started. When the delay reaches zero the TM520 output is activated. The unit sounds an internal buzzer and shows a red LED when the output is active, and shows a yellow LED when the timer is counting down. To provide a warning that the delay is nearly over, the red LED and the buzzer will pulse 5 minutes before the end of the delay. The TM520 requires a separate 24V DC supply to operate. The module is not addressable and will therefore not take an address on the loop.

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Minerva Ancillary Module Technical Look-Up
Table

Module	No.of Inputs	No.of Outputs	Output Rating	No. of Addresses Used	Powered From	Operating Tempreture	Operating Humidity	Dimensions (mm)
AM521	N/A	N/A	-	1	Loop	-10°C to 70°C	>95% RH	77 x 100 x 15
AM921	N/A	N/A	-	1	Loop	-10°C to 70°C	>95% RH	Fits in VLS/VLP
CM520	1	0	-	1	Loop	-10°C to 70°C	>95% RH	60 x 84 x 14
DM520	N/A	1	-	1	24V dc PSU	-10°C to 70°C	>95% RH	60 x 84 x 14
LI520 Mk2	N/A	N/A	-	-	Loop	-10°C to 70°C	>95% RH	60 x 84 x 14
LPBD521	N/A	N/A	-	1	Loop	-10°C to 70°C	>95% RH	60 x 84 x 14
LPS520	N/A	1	Power For > 6 Sounders	1	Loop	-10°C to 70°C	>95% RH	60 x 84 x 14
MDM521	1-8	1	-	2-8	24V dc PSU	-10°C to 70°C	>95% RH	60 x 84 x 14
PI521/2	2	2	240V 5A	4	24V dc PSU	-10°C to 70°C	>95% RH	72 x 245 x 23
PI521/4	4	4	240V 5A	8	24V dc PSU	-10°C to 70°C	>95% RH	72 x 245 x 23
PI521/6	6	6	240V 5A	12	24V dc PSU	-10°C to 70°C	>95% RH	72 x 245 x 23
RM520	0	1	24V dc 1A	1	Loop	-10°C to 70°C	>95% RH	60 x 84 x 14
SB520	N/A	N/A	15A for sounders	-	24V dc PSU	-10°C to 70°C	>95% RH	60 x 84 x 14
SD520	1/2	1/0	240V 5A	1	24V dc PSU	-10°C to 70°C	>95% RH	60 x 84 x 14
SM520	N/A	1	500mA for sounders	1	24V dc PSU	-10°C to 70°C	>95% RH	60 x 84 x 14
SU521/2	2	2	24V 1A	4	Loop	-10°C to 70°C	>95% RH	72 x 245 x 17
SU521/4	4	4	24V 1A	8	Loop	-10°C to 70°C	>95% RH	72 x 245 x 17
SU521/6	6	6	24V 1A	12	Loop	-10°C to 70°C	>95% RH	72 x 245 x 17
TM520	1	1	24V 1A	-	24V dc PSU	-10°C to 70°C	>95% RH	87 X 148 X 14

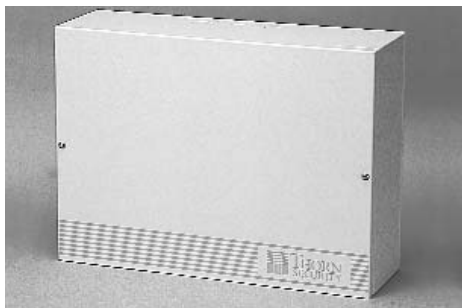
SPECIFICATIONS



Double Gang Mounting Cover

The double gang mounting cover allows any of the 520 module range (apart from the MDM521, SU521 and the PI521) to be mounted individually onto a standard electrical double gang back-box.

The mounting cover allows either surface or flush mounting.



Ancillary Housing 8

The Ancillary Housing 8 can incorporate:

8 x standard 520 Ancillary modules

OR

2 x SU521 Shop Interface Units

OR

2 x PI521 Plant Interface Units

OR

2 x MDM521 Multi-DM Module

OR

4 x standard 520 modules PLUS 1 x MDM521/SU521/PI521.

Additionally a stacking kit is available that doubles the number of modules that can be accommodated within the Ancillary 8 housing.



Ancillary Housing 3

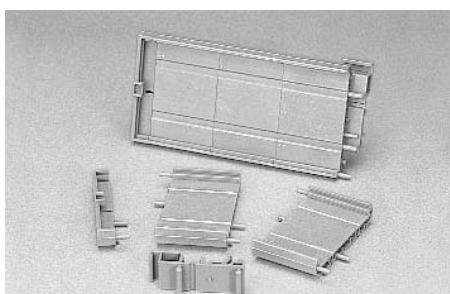
The Ancillary Housing 3 is a low cost plastic housing that can incorporate: 3 x standard 520 Ancillary modules

OR

1 x MDM521 Multi-DM Module OR 1 x SU521 Shop Interface Units

OR

1 x PI521 Plant Interface Units



DIN Rail Mounting Kit

If the ancillary housings are not used, a DIN rail mounting kit is available for mounting the following equipment:

1 x SU521 Shop Interface Unit

OR

1 x PI521 Plant Interface Unit

OR

1 x MDM521 Multi-DM Module