Class A1 CERTIFIED

ARM-IoT INSIDE

x86-PC INSIDE

PCAP TOUCH

FORTEC
GROUP

BLO-Line®

Information and Comparison

One partner, unlimited technology solutions

Preventive Fire Protection creates Security

Protection against fire hazard and the assessment of fire behaviour of building materials is a basic presumption when planning and constructing buildings. Public areas, which are also marked emergency exit routes within buildings must be accessible in case of fire. Flammable materials with high risk of smoke gas development must not be used or installed in those areas.

Requirements for fire prevention often conflict the demand of using monitors in public areas of builings as visitor guiding systems, guest or employee information systems and for advertising purposes. Usually the places of installation are also part of sign-posted emergency exit routes.

Fire safety regulations avoid the installation of devices which are supposed to increase fire load and to promote development of smoke gas. FORTEC Ingetrated designed and developed a monitor series optimized in the contribution to fire and smoke gas emission for usage in public areas and buildings. BLO monitors are available with two different reaction to fire classification levels.

BLO-Line® and POS-BLO monitors: Safety first

The European Standard DIN EN13501-1 enables the classification of building materials and components in terms of fire behavior and fire resistance. Additional criteria take a product's tendency to produce smoke and flaming droplets or particles into consideration. Since there is no such classification procedure for electronic devices, monitors are tested in compliance with the

SBI method according to DIN EN 13823 standard, which specifies a method of test in order to determine the behaviour of fire performance of construction products when exposed to thermal attack by a single burning item (SBI).

The required fire test was conducted in accordance with the above mentioned standards on the premises of the Leipzig Institute for Materials Research and Testing, a recognised, notified and accredited testing, inspection and certification body in Germany. The results have been verified and certified by an independent expert. The results of the fire tests allow Distec to offer fire load optimized monitors in accordance with both the classifications B (combustible materials with limited contribution to a fire) -s1 (little or no smoke gas emission), d0 (no production of flaming droplets) and even A1 (non-combustible materials - no contribution to fire).

The new BLO-Line® is A1 classified and certified. Consequently, it meets the respective fire safety regulations. BLO-Line monitors may be also equipped with an optional extinguishing device or even engineered for a higher IP rating. Thus, our BLO-Line® monitors are most suitable for installation as information systems in public buildings, such as hospitals, universities, schools, airports and other public areas in buildings. They are available as common monitors or as an independent system with integrated PC. Hence, there is no need for additional fire resistant housings which are both heavy in weight and more expensive. Therefore, our BLO-Line® monitors are cost-effective and allow for an easy installation and handling.

Designed, developed and made in Germany

Fördermitglied im
FORTEC Integrated is supporting member of Bundesverband Brandschutz-Fachbetriebe e.V.

bvbf

Besuchen Sie uns im Internet:
www.brandschutzmonitore.de

BLO-Line® 46 monitor
backside

Fire Protection Classes

German Classification	Additional classification		Building material class DIN EN 13501-1	Building material class DIN 4102-1 (Germany)
	no smoke production	no flaming droplets/ particles		
non combustible (**without** burning elements)	X	X	A1	A1
non combustible (**with** parts of burning elements)	X	X	A2-s1 d0	A2
flame resistant	X	X	B,C - s1 d0	B1
		X	A2, B, C - s2 d0	
		X	A2, B, C - s3 d0	
	X		A2, B, C - s1 d1	
	X		A2, B, C - s1 d2	
			A2, B, C - s3 d2	
normally flammable	X	X	D - s1 d0	B2
		X	D - s2 d0	
		X	D - s3 d0	
	X		D - s1 d2	
			D - s2 d2	
			D - s3 d2	
		X	E	
			E - d2	
easily flammable			F	B3

COMPARISON European and German norm

Note:

Electrical appliances cannot strictly be classified according to the standard DIN EN 13501-1 for building materials. Since an appropriate standard for electrical appliances is not available, was carried out the flammability test following DIN EN 13501-1 as a basis for comparison with building products.

Overview Fire Protection Monitors of Distec GmbH

Fire protection class (EN13501-1)	A1	B-s1, d0
non combustible	X	—
flame resistant	—	X
No/ hardly any flue gas development	X	X
No dripping of combustible parts	X	X
Fire protection glass	X	X
Integrated thermal fuse	X	X
Blaze load certificate	X	X
Extinguishing cartridge (optional)	X	—
PCAP Touch, 10 Touchpoints	X	—
24" screen size	X	—
31.5" screen size	X	X
43" screen size - 4K under development	X	—
46" screen size	X	X
54.6" screen size	X	—
54.6" screen size - 4K under development	X	—
64.5" screen size	X	—
PME (1 x VGA, 1 x HDMI, 1 x DP, 1 x Audio Line out, 1 x USB Remote)	X	X
IQ (PC: Intel® Atom™)	X	—
IQ (PC: Intel® Celeron®)	—	X
VideoPoster	X	—
IoT (Raspberry® PI CM3+/ CM4)	X	—

What is the difference between BLO-Line® monitors with fire protection class A1 and POS-Line BLO monitors with fire protection class B-s1, d0?
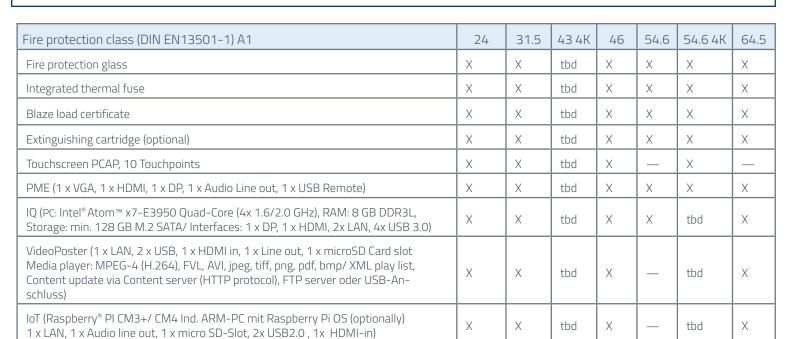
The BLO-Line® monitor series achieves fire protection class A1(non-flammable, no smoke emission, no burning dripping) according to DIN EN13501-1 while the POS-Line BLO monitors achieve fire protection class B-s1, d0 (flame-retardant, no smoke emission and no burning dripping).
The POS-Line BLO Monitors are equipped with a VESA mount. BLO-Line® monitors can be mounted on a wall with a wall mount included in the delivery.

The POS-Line BLO monitors are available in sizes from 31.5" to 54.6". The BLO-Line® monitors are available in sizes from 24" to 64.5". A touch version is only available for the BLO-Line®. It is available in sizes from 24" to 54.6". Exclusively for the BLO-Line® an integrated extinguishing capsule is optionally available.
The POS-Line BLO monitors are available with our video card PME and with an integrated IQ Atom PC. The BLO-Line® monitors are also available with our video card PME and integrated IQ Atom PC and furthermore with our IoT solution with Raspberry Compute Module and our VideoPoster.

BLO-Line® certified for A1

Fire protection class (DIN EN13501-1) A1	24	31.5	43 4K	46	54.6	54.6 4K	64.5
Fire protection glass	X	X	tbd	X	X	X	X
Integrated thermal fuse	X	X	tbd	X	X	X	X
Blaze load certificate	X	X	tbd	X	X	X	X
Extinguishing cartridge (optional)	X	X	tbd	X	X	X	X
Touchscreen PCAP, 10 Touchpoints	X	X	tbd	X	—	X	—
PME (1 x VGA, 1 x HDMI, 1 x DP, 1 x Audio Line out, 1 x USB Remote)	X	X	tbd	X	X	X	X
IQ (PC: Intel® Atom™ x7-E3950 Quad-Core (4x 1.6/2.0 GHz), RAM: 8 GB DDR3L, Storage: min. 128 GB M.2 SATA/ Interfaces: 1 x DP, 1 x HDMI, 2x LAN, 4x USB 3.0)	X	X	tbd	X	X	tbd	X
VideoPoster (1 x LAN, 2 x USB, 1 x HDMI in, 1 x Line out, 1 x microSD Card slot Media player: MPEG-4 (H.264), FVL, AVI, jpeg, tiff, png, pdf, bmp/ XML play list, Content update via Content server (HTTP protocol), FTP server oder USB-Anschluss)	X	X	tbd	X	—	tbd	X
IoT (Raspberry® PI CM3+/ CM4 Ind. ARM-PC mit Raspberry Pi OS (optionally) 1 x LAN, 1 x Audio line out, 1 x micro SD-Slot, 2x USB2.0 , 1x HDMI-in)	X	X	tbd	X	—	tbd	X

The BLO-Line® series is certified according to fire protection class A1 and complies with the relevant fire protection regulations. In addition, we can optionally equip the new monitors with a fire extinguishing cartrige and/ or 10 points touch screen. This makes them ideal for displaying information in areas with high fire safety regulations in hospitals, universities, schools, airports and public areas of buildings. They are available as simple monitors or as a stand-alone system with integrated PC. Expensive and heavy fireproof housings are not required for the BLO-Line® monitors. This makes them cost effective and easy to assemble (integrated wall mount) and handle.
Each monitor comes with a certificate for fire protection class A1.

POS-Line BLO certified for B-s1,d0

Fire protection class (DIN EN13501-1) B-s1,d0	31.5	46
Fire protection glass	X	X
Integrated thermal fuse	X	X
Blaze load certificate	X	X
PME (1 x VGA, 1 x HDMI, 1 x DP, 1 x Audio Line out, 1 x USB Remote)	X	X
IQ IQ (PC: Intel® Celeron® J3455 (1,5GHz/2,3GHz), RAM: 4 GB DDR3L, Storage: min. 120 GB mSATA/ Interfaces: 2 x Gigabit LAN, 4 x USB 3.0, 1 x HDMI, 1 x RS232/422/485)	X	X

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FAQ BLO-Line® zertifiziert nach A1

Can the BLO-Line® A1 be hung tilted forward?
To comply with fire protection class A1 according to DIN EN13501-1, this monitor must be mounted directly and flat on a wall so that flames cannot get behind the monitor in the event of a fire.

Can the BLO-Line® A1 be hung from the ceiling?
To comply with fire protection class A1 according to DIN EN13501-1, this monitor must be mounted directly and flat on a wall so that flames cannot get behind the monitor in the event of a fire.

How the monitor is connected?
Basically, the best solution for fire protection is to place the connections behind the monitor. Power connection and Internet access are thus covered and protected by the monitor. For cases in which this is not possible for structural reasons, Distec offers the option of cable duct to also lead the connections from outside to the monitor.

How long is the cable duct connection that protrudes from the housing?
The cable duct connection that protrudes from the monitor has a length of 100.5 mm and is used to connect a fire-proof cable duct. The cable duct is installed right up to the monitor via the connection on the monitor.

Does the BLO-Line® A1 have an IP classification?
The monitor is mounted flush to a wall and has no slots or openings when mounted. It can be assumed that it will achieve protection class IP 40 or higher when installed.

Are BLO-Line® monitors protected against vandalism?
The monitors have a robust metal housing and a 6.5 mm (with touch) or 7 mm (without touch) thick fire protection glass, so that the monitors are protected against rough external influences. Furthermore, it is protected against unintentional unhooking by two safety screws each.

Is there a WLAN interface for the BLO-Line® monitors?
For the devices with IQ and IoT solution, a WLAN or LTE stick can optionally be plugged into one of the existing USB interfaces.

Can the BLO-Line® A1 monitors be protected against theft?
The monitors are protected against theft by safety screws, so that it is not possible to remove the monitors from the wall mount without big effort.

Can the device also be hung up outdoors?
The device has no increased IP protection and can therefore not be hung outside.

How much installation effort is needed compared to a fire protection enclosure?
The BLO-Line® A1 is supplied complete with a wall mount that allows the monitor to be flush with the wall. This wall mount only needs to be fixed, the monitor hung in and secured against theft with the security screws. This requires little effort, comparable to the installation of a consumer TV.
With a fire protection enclosure, on the other hand, a large amount of work is required for the installation of a monitor. This is due to the complex assembly and installation of the various individual parts, some of which even have to be glued together, the much higher weight of the monitor enclosure and, of course, the fact that a monitor with mounting must also be installed in the enclosure.

Which screw size can be used for the BLO-Line® wall mount?

The diameter of the holes for mounting the wall mount is 5 mm for sizes 24" to 46" and 9 mm for sizes 54.6" and 64.5". The customer must select a suitable mounting according to the construction of the wall.

Can the cable duct be used to install external sensors?

Which cables can be put through the cable duct is at the decision of the customer.

On which side of the monitor is the position of the cable duct connection in the BLO-Line® series?

The cable duct connection is always located on the bottom side of the monitors. The only exception is the version in 54.6 ". This can also be delivered with a cable duct connection on the top.

From which diagonal upwards can the monitors be opened from above or below?

The BLO-Line® monitors can be opened from 24" to 42" from the bottom and from 46" to 64.5" from the top. More detailed information about the assembly can also be found in our assembly instructions, which can be found on our homepage distec.de.

Is the device suitable for F90?

The fire resistance classes F30, F60, F90 are tested according to the previous German standard DIN4102. Here, the code letter F stands for walls, ceilings, but also fire protection glasses with shielding effect. The identification number behind this code letter means that the component fulfils its function for at least 30 minutes, for example. Our devices are tested according to the European standard for building products DIN EN13501-1. Here the fire load is evaluated, this means the fire behaviour, the smoke gas development and burning dripping.
This is a different test method in which it is not the functional integrity that is assessed, but the danger that the device poses in the event of a fire. We still use fire protection glass. With the BLO-Line® monitors without touch, this fulfills class E30 (room closure) according to DIN EN13501-1 and with those with touch EW30 (room closure with additional radiation reduction).

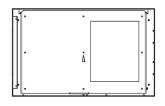# Decisions to make before purchaising the BLO-Line®

ALIGNMENT

When ordering, please indicate whether the monitor should be installed in portrait or landscape mode. Both versions are priced the same. The construction is adapted to the respective type of installation (here front view of the mounting plate).
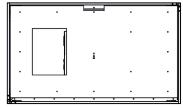
CONNECTIONS CABLES

The monitor is attached to the mounting plate in such a way that the sockets/connections are in the area of the recess in the wall bracket. If this is not possible, you can order our optional cable duct connection suitable for the respective screen diagonal. This gives you the option of mounting a fireproof cable cable up to the monitor and laying the required cables, for example for power or video signals, into the monitor. The cable duct connection is 47 mm wide, 100.5 mm long and 30 mm deep. The position varies depending on the size in landscape format. A suitable fire protection cable duct up to your connection option should be selected so that it covers our cable duct.
You will find the dimensions of the recesses, the cable duct connection and the monitor in the drawings of the respective screen diagonal on our homepage in the download area. https://www.fortec-integrated.de/en/service/downloads/monitore-downloads/
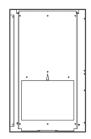
LANDSCAPE
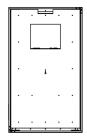
BLO-Line® 24 - 42 Landscape

BLO-Line® 46 - 64.5 Landscape

PORTRAIT

BLO-Line® 24 - 42 Portrait

BLO-Line® 46 -64.5 Portrait

Unser Unternehmensnetzwerk unterstützt Sie weltweit mit Niederlassungen in Deutschland, Österreich, der Schweiz, Großbritannien und den USA.
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