

TAX CREDIT TAX CREDIT GOOGO REFER TO PAGES 16117

) DMR[®]

LED TECHNOLOGIES FOR SAFETY SIGNAGE



"Our task not only is to propose led signage, but it also consists in finding the optimal solution for any case that is entrusted to us. In terms of design and as well as of production. Trying to best optimize costs and production processes."



With the support of our technical department we can develop projects and customized solutions



CONSULTING, DESIGN, PRODUCTION

DMR has its own uniqueness: it can provide the end Client a complete project, from carrying out inspections and surveys, to design innovative and efficient solutions, and to the final production of signage. Everything strictly respecting the laws in force in any country for what concerns the safety signage.

DESIGN

DMR technical department, is equipped with the best technologies and managed by highly experienced designers, and it represents the starting point for any development and production process.

PRODUCTION

DMR production department, pursuing technological innovation, has equipped its lines with machineries able to speed up the signage production, increasing its quality and stabilizing its results. The production department is capable of ensuring an efficient production volume, shortening as much as possible the period of time between the ordering phase and the actual production of the material itself.









ROAD CROSSING FOR PROMISCUOUS USE vehicles and pedestrians transit

When forklift trucks get close to the road crossing, they are detected by motion sensors that will activate the LED panels in order to indicate the presence of moving vehicles to other drivers/ pedestrians. In addition, it is also possible to project a pedestrian path that is always visible when there are no moving vehicles. When sensors detect a vehicle, the projected pedestrian path turns off and is replaced by the projection of two STOP signs (one for each crossing side).

LEGEND			
• >))))	MOTION SENSOR		
	PROJECTED AREAS LED		
	LED PANEL TURNED ON		
	LED PANEL TURNED OFF		



Phase 0: ABSENCE OF VEHICLES AND PEDESTRIANS

When there are no moving vehicles and pedestrians, sensors do not detect any transits, led panels are turned off, projector 1 projects a pedestrian crossing.

Phase 1: PEDESTRIAN TRAFFIC

The pedestrian is ready to cross the road crossing, when there are no road crossing moving vehicles, sensors don't activate, led panels (used to signal moving vehicles) stay turned off, projector for the pedestrian crossing is turned on, and the pedestrian is free to cross the road crossing safely.

Phase 2: VEHICLE APPROACHING

When the vehicle is approaching to the road crossing, the sensor installed on the lane activates, led panels used to signal any moving vehicles turn on in order to warn other vehicles/pedestrians, projector 1 (pedestrian crossing) turns off and projectors 2 and 3 (stop) turn on, and pedestrians are not allowed to cross.

Phase 3: VEHICLE GETTING AWAY

The vehicle completes its transit manoeuvre in the road crossing, after the alarm time set (5, 10, 15, 20 seconds) if any other moving vehicles are not detected, led panels turn off, projectors 2 and 3 (stop) turn off, projector 1 turns on, the pedestrian crossing becomes visible again, and the pedestrian is allowed to cross the road crossing.

Phase 4: INSTALLATION RESET

After all vehicles and pedestrians have crossed, the installation goes back to its initial state: sensors don't detect any transit, led panels are turned off, projector 1 projects a pedestrian crossing.







USED TECHNOLOGIES

Code	Characteristics for its use
DMRLED40	Compact and rugged design projector, to project pedestrian crossings and safety pictograms
DMR-SENSLEDSIN	Master sensor for indoors
DMR-SENSLEDSINSL	Slave sensor IP65 for indoors and outdoors
DMR-DSVLED6060PXG	Plexiglass Led Sign: Signalling and indication Dim. 60 x 60 cm / 40 x 40 cm / 30 x 30 cm Indoors+outdoors IP65 backlit



some examples

SOLUTIONS WITH LED TECHNOLOGIES



PEDESTRIAN CROSSING WITH SECURITY GATES

In order to ensure a greater security in crossing roads with high risk of accidents, it is possible to realize a high visibility traffic light system to control vehicles and pedestrians, in support of security barriers and gates.

When there is no pedestrian traffic, led panels facing forklift trucks will have a fixed green light in order to allow pedestrians to cross the road crossing. When a pedestrian opens the security gate to cross the road crossing, the magnetic switch detects the door opening, the light of led panels becomes flashing red to indicate to the forklift operator to stop its vehicle, and at the same time, the led projector turns on in order to project on the floor a high visibility pedestrian crossing. When set time runs out and with both gates closed. the projector turns off, so the pedestrian crossing stops being visible and led panels go back to their initial state with a fixed green light.

P.N.: it is possible to add also two led projectors or panels that, when alarm is not activated (green light for forklift operators) show to pedestrians the danger of forklift trucks crossing or in case that moving vehicles are detected.

LEG	LEGEND			
• >))))	MOTION SENSOR			
	PROJECTED AREAS			
	FIXED GREEN LED PANEL			
	FLASHING RED LED PANEL			

Phase 0: ABSENCE OF VEHICLES AND PEDESTRIANS

When there are no moving vehicles and pedestrians, sensors do not detect any transits, security gates are closed, led panels have a fixed green light, projectors are turned off.

Phase 1: VEHICLE APPROACHING

When the vehicle is approaching to the road crossing, led panels still have a fixed green light, the sensor installed on the lane activates, led projectors used to signal any moving vehicles turn on in order to warn pedestrians that they are not allowed to cross the crossing road safely.

Phase 2: GATE OPENING

The pedestrian is ready to cross the road crossing, the magnetic switch detects the gate opening, led panels become flashing red in order to stop moving vehicles, led projector turns on to project the pedestrian crossing and the pedestrian is free to cross the road crossing safely.

P.N.: forklift trucks crossing danger pictograms keep on being projected for the entire duration of the set alarm (5, 10, 15, 20 seconds) since the last vehicle has been detected. For this reason, if a pedestrian would open the gate when there are still moving vehicles, danger pictograms should be still visible and projected at the same time of the pedestrian crossing.

Phase 3: PEDESTRIAN GETTING AWAY

The pedestrian completes its transit in the road crossing, when gate is closed the installation goes back to phase 1, so led panels have fixed green light, vehicles are allowed to cross the road crossing and forklift trucks crossing danger pictograms are projected.

Phase 4: INSTALLATION RESET

After all vehicles and pedestrians have crossed, the installation goes back to its initial state: sensors don't detect any transit, led panels have fixed green light, projectors are turned off (like in phase 0).



Code	Characteristics for its use
DMRLED40	Compact and rugged design projector, to project pedestrian crossings and safety pictograms
DMR-SENSLEDSIN	Master sensor for indoors
DMR-DSVLED6060PXG	Plexiglass Led Sign DOUBLE COLOURS: Signalling and indication Dim. 60 x 60 cm / 40 x 40 cm / 30 x 30 cm Indoors+outdoors IP65 backlit
DMR-SEGNLEDA	Additional buzzer for Master sensor
DMR-INTMAG	Additional magnetic switch for Master sensor

some examples

USED TECHNOLOGIES

ILLUMINATED SIGNS - LED PANELS

Illuminated devices for safety in the workplace. This panel can be single-sided or double-sided, it is possible to manufacture it for Dibond outdoors or in plexiglass backlit version. Possibility to customize its graphics, letters and led lights. It is possible to light the Led sign by means of a proximity sensor (not included), and to be provided with others sensors in order to achieve a larger functioning area. Light can be flashing, even with different colour lights (ex. red/green). DMR manufactures its signs in Italy, offers warranty and gives its customers the possibility to 100% personalize its products, providing complete assistance.

Everything is made in Italy.

- Item Code
- Item Name
- Function
- Power Supply
- Led Colour
- Dimensions
- Composition
- Thickness
- Weight for
- Packaging
- : White, red, green, blue, amber Ex: fixed green light that becomes red flashing when motion is detected
 : 60 x 60 cm / 40 x 40 cm / 30 x 30 cm
 : Forex (3 or 5 mm) with lighting leds and power supply cable, aluminium edges
 : 2 3 cm
- : 4 Kg

: DMR-DSVLED

: Signalling and indication

: 220 Vac (sensor) - 24 Vdc (panel)

: Led Sign

Code	Sizes	Material	Characteristics for its use	Lighting
DMR-DSVLED3030	30 x 30 cm	Forex	Indoors	frame
DMR-DSVLED3030EST	30 x 30 cm	Dibond	Indoors+outdoors IP65	frame
DMR-DSVLED3030PXG	30 x 30 cm	Plexiglass	Indoors+outdoors IP65	backlit
			·	
Code	Sizes	Material	Characteristics for its use	Lighting
Code DMR-DSVLED4040	Sizes 40 x 40 cm	Material Forex	Characteristics for its use Indoors	Lighting frame

Code	Sizes	Material	Characteristics for its use	Lighting
DMR-DSVLED6060	60 x 60 cm	Forex	Indoors	frame
DMR-DSVLED6060EST	60 x 60 cm	Dibond	Indoors+outdoors IP65	frame
DMR-DSVLED6060PXG	60 x 60 cm	Plexiglass	Indoors+outdoors IP65	backlit

WE CAN MANUFACTURE THIS LED PANEL WITH ANY GRAPHICS OR PICTOGRAM. IT IS ALSO POSSIBLE TO CHANGE THIS LED PANEL GRAPHICS AFTERWARDS (if its destination has changed) REPLACING THE PRINTED VINYL.

LED SIGNS for indoors and outdoors















MASTER AND SLAVE SENSORS

Sensors are independent from the sign and are connected through simple and fast-to-install connections. Slave sensor is a infrared detector compatible with DMR Hi-tech Motion Sensor control system.

MASTER SENSOR









HI TECH Motion sensor is a motion detection sensor, designed for applications in industrial environments and in places mainly dedicated to safety. It is composed of a multifunction main board capable of managing differents inputs and outputs.

The card is capable of managing inputs:

4 Infrared detection sensors, one Master and three slave type, manageable at a maximum distance of 10 metres.

2 Ultrasonic sensors for measuring distances that can be managed at 10 metres.

The card is capable of managing outputs:

Up to 4 with 24V Led panels (connected in parallel on 2 terminals)*.

3 outputs with Relay for connecting LED10 - LED40 projectors and for traffic-light functions (for ex. fixed red light, flashing green light)*.

The card is equipped with a minidip selector from which it is possible to enable or disable functions (buzzer, flashing and Relay) and change the time to take action. The sensor must be supplied with 220V 50Hz.

*depending on the use of the product and of its configuration, some input/output functions may differ from the information mentioned above.

PIR technical specifications (Infrared sensors):

detection range: <140°

maximum detection distance: 7metres.

SLAVE SENSOR

9

This sensor is designed to be hung by means of magnets in order to avoid the perforation of metal shelving, and is equipped with plug-in support for wall fastening with screws and plugs. Optional motion sensor added to MASTER sensor in order to synchronize the switch-on of our LED devices from more areas. It requires to be connected to Master sensor.

Code	Master/Slave Description		
DMR-SENSLEDSIN	Master Sensor for indoors		
DMR-SENSLEDMEST	Master Sensor for outdoors		
DMR-SENSLEDSINSL	Slave Sensor IP65 for indoors and outdoors		

Code	Accessories Description		
DMR-SEGNLEDA	Additional buzzer for Master sensor		
DMR-DSVLEDSTAP	Pair of brackets for flag-like hanging of led panel		
DMR-INTMAG	Additional magnetic switch for Master sensor		



TEMPERATURE MONITOR LED PANEL

Led Panel for body temperature check station. It alerts a client when is his own turn to acces to temperature check station in order to let him then entering to the target structure. It can be manufactured as a single-side or double-sided backlit plexiglass panel, also for outdoor use. Red "STOP" remains switched-on and pressing the button on remote-controller, the green light strip "AVANTI" turns on for the time you have set, and returns then to red fixed light "STOP". Fixed or flashing light function is programmable from the control system.

THIS PRODUCT CAN BE USED FOR A WIDE RANGE OF APPLICATIONS AND CUSTOMIZED ACCORDING TO YOUR NEEDS. DO NOT HESITATE TO CONTACT US



Item Name	TEMPERATURE MONITOR LED PANEL
Item Code	DMR-DSVLEDCT
Function	Signalling and indication
Power Supply	220 Vac (sensor) - 24 Vdc (panel)
Led Colour	White (Backlit: red and green)
Dimension	30 x 30 cm
Composition	Forex/Plexiglass (3 or 5 mm) with led and power supply cable, aluminium frame
Thickness	2,5 cm (variable)
Weight for Packaging	4 Kg (variable)



PEOPLE COUNTING DEVICE

Governements all around the world are imposing restrictions and limitations to the number of people who may stay in the same place, such as supermarkets, shops, casinos, restaurants and other public facilities. Our monitoring system detects the occupancy of structures and it automatically scans the incoming and outgoing traffic, in order to count people in real-time, respecting the rules.



LED DISPLAY Capacity Counter: The sensor enables the counting on the high-visibility Display LED. The colour of the number indicated on LED Display changes from green to yellow when the maximum capacity is getting closer and becomes red when the programmed occupancy limit is achieved.

PERSONNEL PROTECTION: Keeps everybody safe and guarantees that people have enough space for social distancing.

PLUG & PLAY: Easy and quick installation thanks to wireless synchronization of sensor and display.

WIRELESS: The sensor sends a wireless signal to the display updating the counting in real-time.



Code DMR-COPBOX

Including: (1) Passage detection sensor

 LED Display size 60x42 cm
 Power supply 5Vdc (display) and 12Vdc (sensor)

Detection range: Pedestrian passage detection sensor has a 1,8 m detection range from the place it's assembled (adjustable). This sensor sends a wireless signal to Led Display up to 60 m distance. **Use:** For indoor use and covered

Use: For indoor use and covered areas.

How does safety signage projection work:

- 1. In industrial working environments, it is essential to equip the production systems with a proper safety signage and signs concerning the production line. For this purpose, experience in this field has led **DMR** to create an innovative project regarding the projection of this information signage.
- This type of signage is characterized by a lot of advantages, for both its visibility, given that it is not subjected to deterioration and it is visible in illuminated and in very dark environments, and also for time-saving since it's easy to install and long-lasting.
- 3. Projected signage only requires an image projector (called gobo projector) and an image support (called gobo).
- 4. Gobo is positioned inside the projector, completely customizable and included in the supply of projector, it is comparable to a slide, but more resistant and graphically defined because it is manufactured on a laser-marked borosilicate support, for this reason colours won't be subjected to deterioration over time.
- 5. The projector is installed in a confortable space that is adjacent to projection area, such as ceiling, while the selected safety message is projected on the working surface, also allowing to act on different parameters, such as: focal, inclination, rotation and distance; the system guarantees a good margin of modification, even after installation has already been carried out.

PROJECTORS advantages

- long-lasting
- no wear because of walking
- inexpensive use
- no need to repaint
- fast installation
- they never fade
- high-visibility
- they attract more attention
- simple update



DMRLED10



DMR LED10 is a projector with a compact and rugged design, small and lightweight, capable to adapt to any working environment (even dusty), and thanks to the absolute brightness of its led source, it can counteract the normal lighting in industrial infrastructures.

- We reccomend you to use it for signage projection having size from 30 to 120 cm and variable height from 2 to 4 metres.
- The possibility to use interchangeable optics makes the use of this projector versatile, in both very high environments and in environments where mezzanine structures force to use it at maximum 2,5 m height.



Available optics are: 10°, 15°, 20°, 25°.





Our projector is equipped with one optics to be chosen among 4 available versions, together with first gobos included in the supply. The type of projection may be also controlled by means of a sensor, for vehicle or operator passage detection.

LED ILLUMINATED SIGNS PROJECTORS



6000K

- DMR-LED40 is a projector with a compact and rugged design, small and lightweight, capable to adapt to any working environment (even dusty), and thanks to the absolute brightness of its led source, it can counteract the normal lighting in industrial infrastructures.
- We recommend you to use it for signage projection having size from 30 to 180 cm and variable height from 2 to 8 metres.
- The possibility to use interchangeable optics makes the use of this projector versatile, in both very high environments and in environments where mezzanine structures force to use it at maximum 2,5 m height.
- Available optics are: 10°, 15°, 20°, 25°.
- Our projector is equipped with one optics among the available ones and the first two-filters GOBO.
- It is provided with an image rotation mechanism usable to allow the projection to have a greater visual impact, and also to give more indications about rotation.
- The type of projection may be also controlled by means of a sensor, for vehicle or operator passage detection.



Colour temperature

Lamp average rated life

Projection of DMR-LED40 towards door opening with sensor



Example of image opening at different distances with focal (opening 20°) PRODUCT CODE DMRLED compatible with 10,15,20,25° objectives

Protection example of signalling the doors opening direction. This projection is activated by a detection sensor, that every time detects the presence of a pedestrian in the proximity of doors, gives consent to turn on the projector, that will remain activated for a pre-set time.

The possibility to use the accessory presence sensor is useful, since it makes the projection more dynamic, and as a result, it will have a greater visual impact; at the same time, it guarantees a longer durability of the illuminated source over time, as well as it ensures energy saving.

PROJECTORS CONFIGURATION

Since it is about Projection, the size of the projected signage stays within one of those parameters that can be easily managed just acting on one of the three fundamental elements of the system.

This means that in a projection system the projected image size depends on these three factors: FOCAL - GOBOS IMAGE SIZE - PROJECTION DISTANCE.

By varying just one of these three elements, it will be possible to modify the projection size. Naturally, it is important to guarantee some Standards, that can be substitutive or integrative of the signage.

For this reason, as for horizontal self-adhesive and printed signage, DMR suggests some dimensional standards and indicates here below some examples of projectors configuration.

We recommend you to rely on DMR staff for defining the projector configuration right parameters.

EXAMPLES OF PROJECTORS CONFIGURATION

CIRCULAR SIGN

DITRANSITO	Available sizes
	cm 31
	cm 41
	cm 51
ELLI ELEVITORI	cm 60
	cm 81

Project. Sizes	10°	15°	20°	25°
31cm	2 m	1.3 m	0,9 m	0,7 m
41cm	3 m	1.7 m	1,2 m	1 m
51cm	3.5 m	2 m	1,5 m	1,2 m
60cm	4 m	2.5 m	1,8 m	1,4 m
81cm	5,5 m*	3.3 m	2,4 m	1,8 m

RECTANGULAR SIGN

Available sizes cm 24x34 cm 34x49 cm 49x69 cm 69x99



Project. Sizes	10°	15°	20°	25°
24x34 cm	2 m	1.3 m	0,9 m	0,7 m
34x39 cm	3 m	1.7 m	1,2 m	1 m
49x69 cm	3.5 m	2 m	1,5 m	1,2 m
69x99 cm	4 m*	2.5 m	1,8 m	1,4 m

R	ECT	AN	GUL	AR	SIGN	
					01011	

Available sizes	
cm 150x80 cm	
cm 200x80 cm	
cm 270x80 cm	

Project. Sizes	25°
150x80 cm	3,5 m
200x80 cm	4,5 m*
270x80 cm	6 m*

*PROJECTOR DISTANCE IN METRES

PROJECTOR DISTANCE means the distance between projector and the surface that must be projected.

*In conditions marked with an asterisk we recommend to use DMR-LED40 projector.

PLEASE NOTE: Sizes indicated in these tables may differ from actual values with a 10% tolerance.

Naturally, these are just some examples concerning most used signage, but obviously the image to project can be completely customizable in both shape and colours. For images customization, please contact directly DMR.

•	DMR-LED80	Led power 80W. 2 years warranty. 10% image tolerance.	Aluminium Led projector for indoor projection with high luminous efficacy.
•	DMR-LED100	Led power 100W. 2 years warranty. 10% image tolerance.	Aluminium Led projector for indoor projection with high luminous efficacy.
•	DMR-LED300	Led power 300W. 2 years warranty. 10% image tolerance.	Aluminium Led projector for indoor projection with high luminous efficacy.

PLEASE NOTE: For further information, please contact DMR agent in your area



1) Comparison between painted signage, subjected to deterioration because of walking, pallets dragging and dirt, and projected signage not subjected to any wear. In the example have been used 2 LED-40 projectors.

2) Example of horizontal directional signage to manage vehicles traffic. It is also possible to mount the projector on the forklift truck, whose light beam is projected to about 6 m distance from this vehicle, and works as a safety system for pedestrians and also identifies the assembly line to which it belongs.

GOBOS FOR LED PROJECTORS

GOBOS

GOBOS is the name used to indicate a special support on which is printed the image we would like to project.

Our projector is provided with an optics to be chosen among the available ones, the first GOBOS with a colour included in the standard supply (black and/or white are not considered colours).

To demand GOBOS with more colours (maximum 4 different colours with full color photographic resolution), will be applied a special price.

SPECIAL GOBOS

Special GOBOS means all gobos that are customized with more than two colours. To these gobos a different price will be applied.

yellow red orange blue 1 green 1 areen 2 blue 2 purple pink black

Colours table is indicative, for further infomation please contact our technicians

grey dark grey

REGULATION

LEGISLATIVE DECREE n.81 of 9 april 2008

Implementation of article 1 of law n.123 of 3 august 2007, concerning the protection of health and safety in the workplace supplemented by Legislative Decree n.106/2009 • annexes XXIV - XXV LEGISLATIVE DECREE n.81 of 9 april 2008

• Title V • SAFETY AND HEALTH SIGNS AT THE WORKPLACE Legislative Decree n.81 of 9 april 2008, annexes XXIV - XXV -EN1838 - Safety Signs.

Legislative Decree n.81 of 9 april 2008 - Title V - Art. 161-162 annexes XXIV - XXV - XXVII.

Legislative Decree n.106/2009 annex XXV par. 3.4 Safety signs.

Title V SAFETY AND HEALTH SIGNS AT THE WORKPLACE

Chapter II - Sanctions

Art. 165 - Sanctions by the employer and the manager 1. The employer and the manager are punished:

a) by imprisonment from three to six months or a fine between 2.500 and 6.400 euros for the violation of the article 163;

b) by imprisonment from two to four months or a fine between 750 and 4.000 euros for the violation of the article 164.

2. The violation of several preconceptions relating to the homogeneous category of security requirements for the safety signs referred to in Annexes XXIV, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12, XXV, points 1, 2 and 3, XXVI, for the whole, XXVII, for the whole, XXVIII, points 1 and 2, XXIX, points 1 and 2, XXX, points 1 and 2, XXXI, points 1 and 2, and XXXII, points 1, 2 and 3 shall be considered as a single violation and shall be punishable under the penalty provided for in paragraph 1 (a). The supervisory body is obliged to state in any case, in the context of the dispute, the various infringing principles.

Code 0071/size



Gobos can be printed with any signage pictogram in the catalog, and also customized with any graphics and text

that you require.

SOME EXAMPLES OF SIGNAGE PROJECTIONS









MASTER AND SLAVE SENSORS





KEY POINTS:

- INDUSTRY 4.0
- INPUT/OUTPUT MULTI-VOLTAGE SYSTEM
- OLED DISPLAY
- ELECTRONIC SYSTEMS COMPATIBILITY
- 2.4 GHZ RADIO CONNECTIVITY

RADIO SENSOR DESCRIPTION

Our new "Hi Tech Radio Motion Sensor" is an innovative product, made with new generation technologies, able to efficiently manage an input/output multi-voltage system, fully programmable in all its functions thanks to the practical Oled display, even remotely due to its specific webapp and to the Industry 4.0 adjustment. It can be used as standalone or connected to other "Hi Tech Radio Motion Sensor" thanks to its 2.4GHz radio connectivity with proprietary protocol, in order to have a stable and safe signal transmission.

It allows to realize electronic systems for the company security and much more, due to its many multi-voltage inputs and outputs, and it integrates perfectly with already existing systems; in addition, thanks to the radio waves signal transmission, it allows to realize complex installations even within great distances (about 300 m range - variable according to the building structure), enabling considerable useful time and cost savings for the realization of the electrical system.

If you buy HI TECH RADIO MOTION SENSOR you can benefit from a TAX CREDIT EQUAL TO 50% also LED PROJECTORS AND SIGNS are included in the tax credit IF BOUGHT TOGETHER

Who can benefit from this **TAX CREDIT:**

CR*EI*

all companies, regardless of any legal status, of their economic sector, their dimensions and fiscal regime.

7 It integrates perfectly with already existing systems

VC2 VC2 NC1 NC1 NC1 N N N CEAGZ

2 Radio waves transmission

Radio Motion Sensor

Tech

- **3** Remotely programmable
- **4** It allows to realize complex installations



Tel. +39 0871950290 info@dmrleanmanufacturing.it www.dmrleanmanufacturing.it



DMR SRL. Registered Office - Via Piane San Pantaleone, no street number / Administrative Office - C.da Cerreto, 403 - 66010 Miglianico CH - VAT number 02264780699