

LAD/HS/T/X/ _ _ _

LAD ARC DETECTOR HIGH SENSITIVITY

Highlights:

- Very high optical sensitivity allow to discriminate arc up to 200m optical fiber length
- Output contact by triac technology
- Very fast response (<1ms) typical 30us
- Suitable to work both with AC or DC loads
- High power output NA triac contact: 25A 600V

Technical features

| | |
|--|--|
| Nominal voltage :..... | 24, 48, 110,220 VCC |
| Input :..... | optical flash red peakvisible light |
| Temperature range :..... | -30°C ÷ 70°C |
| IP degree protection :..... | IP64(*) |
| Triac output features | |
| IT rms :..... | 25A |
| VDRM :..... | 600V |
| Itsm :..... | 250A |
| Response time << 1ms:..... | 30us |
| Maximum load voltage variation:..... | 500V/us |
| Dielectric strength (open contacts) :..... | 600VAC 1min |
| (coil-contacts) :..... | 5000VAC 1min |

(*) output connector IP30

Light arc detector, LAD/HS, has up to three independent channels suitable for fault arc detection. Each channel has a very fast response triac contact for remote control.

Response time is so fast (30us) compared to timing of switchgear opening to be neglected: this feature make it suitable for high voltage installation protection.

On the front of the device you have green leds for local indication of channel ready to react.

Arc detection is made by optical receiver sensible to visible radiation and the arc light is captured by optical plastic fiber inserted into the tank in order to obtain simple link between the part under control and LAD device.

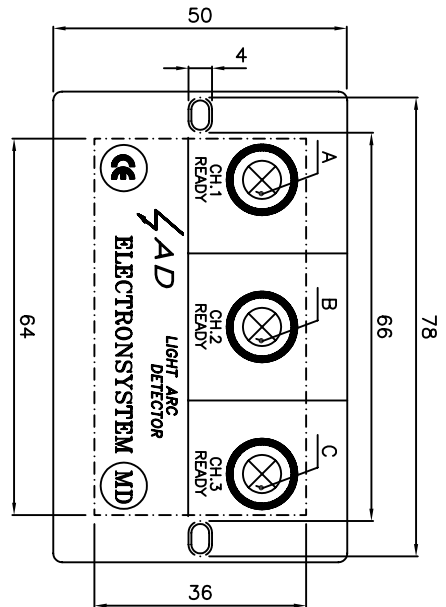
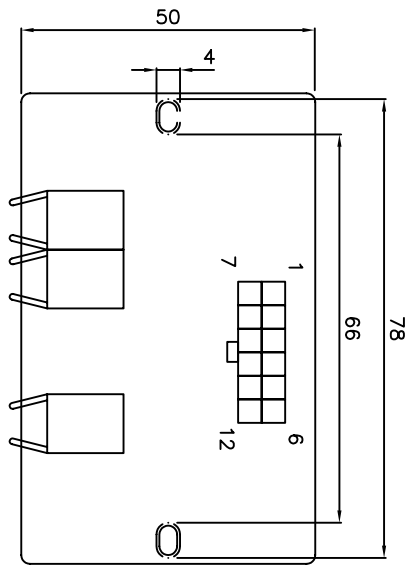
The contact of relay subsequently an arc fault changes its state and remains in that situation for 200ms to allow the switch-gear opening.

The very sensitive optical receiver allows to use this device with very long distances. To get selective arc detection must be used in combination with RHV/A/T.

Material

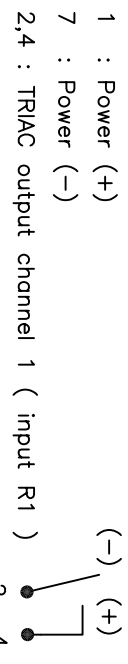
| | |
|-------------------------|-----------------------------------|
| Box :..... | Insulating Material |
| Filling Material :.. | Polyurethan resin (2-component) |
| Connection input :..... | optical fiber |
| Output :..... | MOLEX MINI FIT 12 poles connector |

| | | | | | | | | | |
|--------------------------|------|--------------------------|------|--------------------------|------|--------------------------|------|--------------------------|------|
| Rev./Mod Descrizione: | Data | Rev./Mod Descrizione: | Data | Rev./Mod Descrizione: | Data | Rev./Mod Descrizione: | Data | Rev./Mod Descrizione: | Data |
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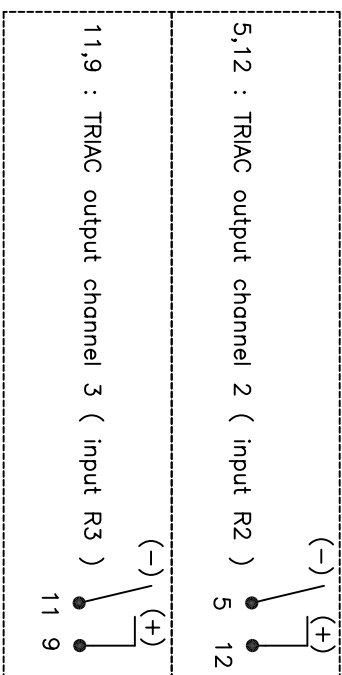
DESCRIPTION:

- A : Green Led - Channel 1 ready
- B : Green Led - Channel 2 ready
- C : Green Led - Channel 3 ready
- R1 : Optical input channel 1
- R2 : Optical input channel 2
- R3 : Optical input channel 3



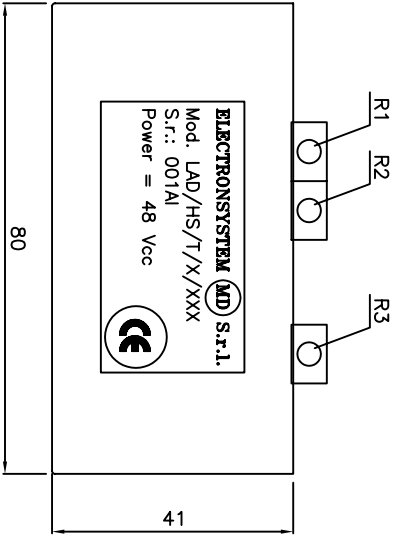
Tab. 1

| GROUP | Auxiliary Power Voltage |
|-------|-------------------------|
| 801 | 110 Vcc |
| 802 | 24 Vcc |
| 803 | 48 Vcc |



Note :

- The triac output contact (NA) can work both with DC or AC load, ITrms=25A VDRM=600V, ITsm=250A
- LAD/HS has very high sensitivity receivers (read peak)
- The duration of arc contact signalation is 200msec
- Operating time is less than 1msec (30us)
- If load is DC connect it respecting polarity indicated
- The contacts are indicated in conditions of power on and with no input arc.
- Dash-dot line indicates the drilling template of front panel



ELECTRONSYSTEM MD S.r.l.
 Mod. LAD/HS/T/X/XXX
 S.r.: 001AI
 Power = 48 Vcc

PURCHASE CODE:

Description : Light arc detector

Code : LAD/HS/T/X/1 2 3

X = 2 type with 2 changeover contacts
 3 type with 3 changeover contacts
 1-2-3 = Auxiliary power voltage (tab.1)

Plano di Componenti (UNI 4842-75)

| LEVELLO | LQA | Quantità | Descrizione |
|---------|-----|----------|-------------|
| L2 | 1 | | |

| | | | |
|---|---|---|--|
| Fig. | Material/Materiale | N° Series / Serie | Finishing / Finitura |
| Filing Room Archivio | Thread quality tolerance Tolleranza filetti qualità* 69-65* UNI 5541-65 | General tolerance for machining / Tolleranze generali per lavorazioni meccaniche: | JS12 JS13 JS15 |
| Coord.Punching N.C. mach. Coord. punzon. a C.N. | JS11 | Quality for linear dimension Qualità per quote lineari | Extra-fine / Fine Medion / Medio Coarse / Grossolana |
| Prep. P. GUIZZETTI Dis. | Resp. Dep. Uff. Resp. | Title Titolo | Apparatus Apparacchio |
| App. P. CIBOLDI | Uff. Tecnico | LIGHT ARC DETECTOR (TRIAC OUTPUT) | HIGH SENSITIVITY |
| Rev./Mod. | 0 15/12/04 : Emissione nuovo disegno | N° Doc. | 43911819 |
| ELECTRONSYSTEM MD S.r.l. | | Scale | 1:1 |
| | | Scale | 1/1 |

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LAD/T

SCHEMATIC OF TEST AND TIMING

