EN

# 3 and 1/2 DECIMAL DIGIT DISPLAY METERS

- **S310 Display Meter Box 48 x 96**
- **S310A 1 Alarm Display Meter Box 48 x 96**
- **S310AA 2 Alarms Display Meter Box 48 x 96**
- **S320A 2 Alarms Display Meter Box 96 x 96**

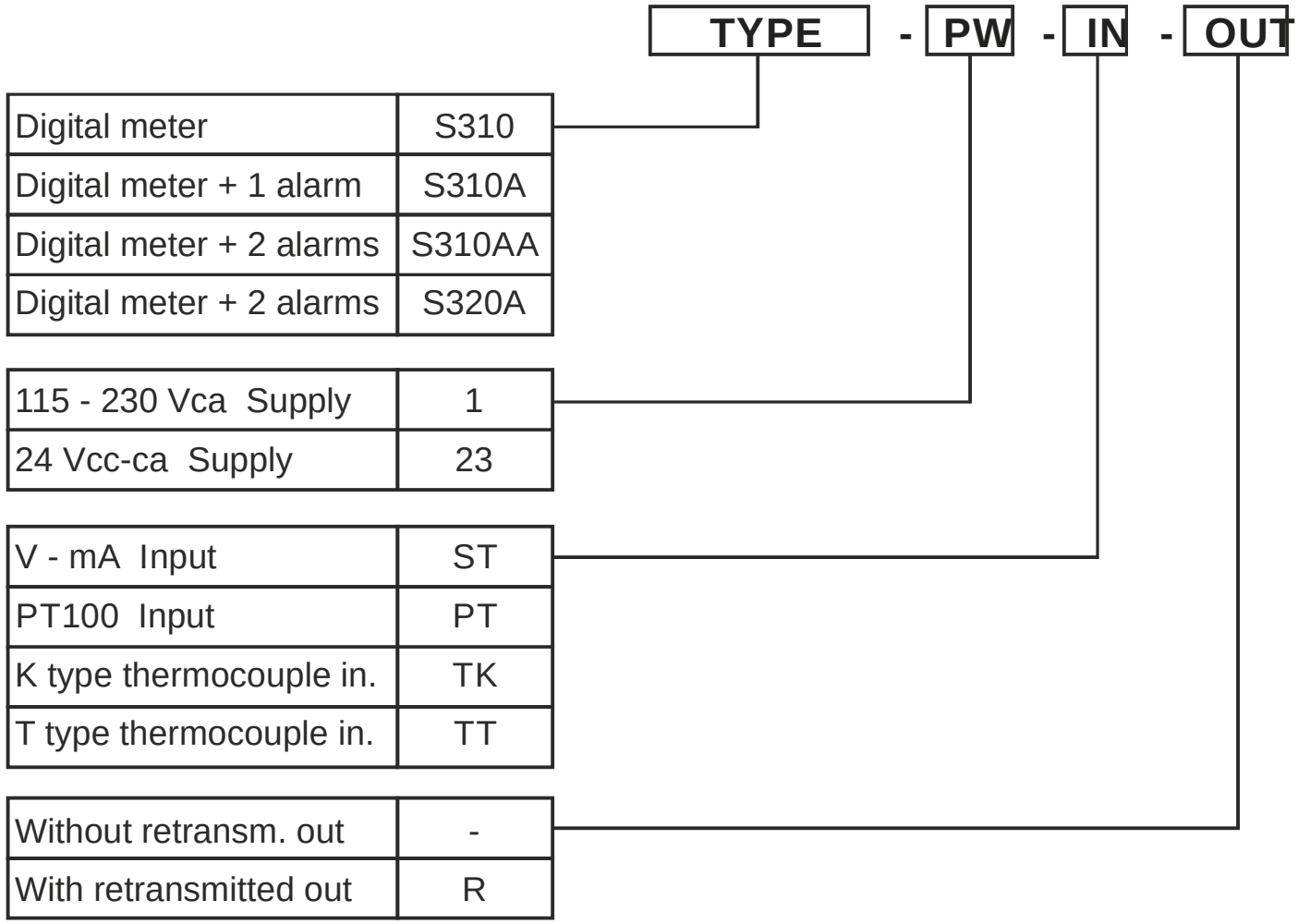
## FEATURES

- 3 and 1/2 decimal digit display (2000 spots), red LEDs high brightness, programmable decimal point in every positions. Double ramp conversion with autozero, 3 readings per second.
- Input :
  Voltage : 0-2 Vdc , 0,4-2 Vdc , 0-5 Vdc , 1-5 Vdc , input impedance >100Kohm.
  Current : 0-20 mA and 4-20 mA active (power loop 24 Vdc) or passive connection , input impedance 100ohm.
- Zero creep better than 1 ppm/°C, SPAN creep better than 50 ppm/°C.
- Optional boards for PT100 thermo resistors' input (0,2 % of the range precision) or for thermocouple K or T type (0,5 % of the range precision)
- Optional board for ritransmitted output galvanically isolated , 0-20 mA and 4-20 mA active and passive connection (power loop 24 Vdc).
- 1 alarm set-point with output wiht relay on S310A type.
  2 alarms set-point with output wiht relay on S310AA and S320A type.
- Manual alarms regulation in the all range by a trimmer and there is also a button to display the value.
- It is also possible to set two threshold alarm levels for maximum and minimum operating value.
- Fixed hysteresis ± 0,5 %. 1 SPDT switch, 5 A 250 Vac (resistive load).
- 2 possible different power supply **(verify label before use)**.
  115 / 230 Vac ± 10 % 50 / 60 Hz 3,5 VA
  24 Vdc-ac ± 10 % isolated dc/dc converter 3,5 VA
- Working temperature from -10 to +50 °C, humidity max 90 % at 40 °C( non condensing).
- ENCLOSURE in"V0" self-extinguishing NORYL, shock-proof cabinet, suitable for front-panel installation .
- Size : S310-S310A-S310AA (hlp) 96 x 96 x 148 mm (DIN 43700)
  S320A (hlp) 96 x 96 x 148 mm (DIN 43700).
- Drill gauge : S310-S310A-S310AA (hl) 92 x 45 mm, S320A (hl) 90 x 91 mm.



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## ORDERING CODE




CE

Complying equipments with prescriptions on electromagnetic compability (standard 89/336/CEE).
Industrial environment, reference standard : EN 50081-2 EMISSION /EN 50082-2 IMMUNITY.

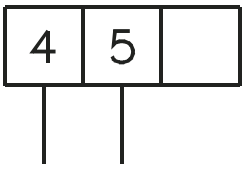


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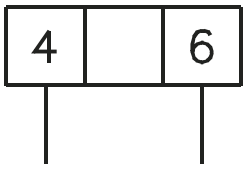
# ELECTRICAL CONNECTIONS

## POWER SUPPLY

115 - 230 Vac
POWER SUPPLY

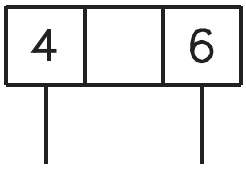



115 Vac




230 Vac

24 Vdc-ac
POWER SUPPLY

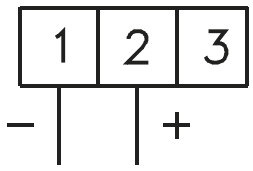



24 Vdc-ac

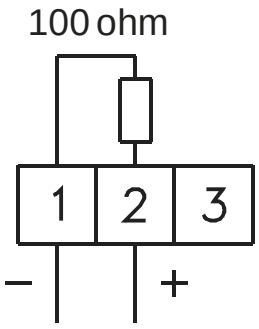
**VERIFY VOLTAGE INDICATE ON EQUIPMENT'S LABEL BEFORE SUPPLY IT.**

## INPUTS

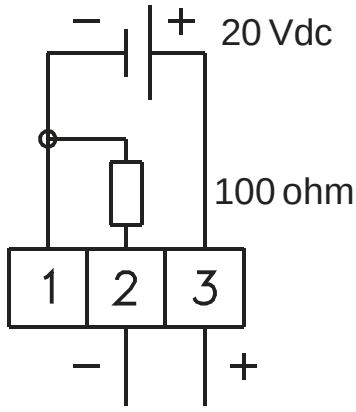
### STANDARD INPUTS




Voltage

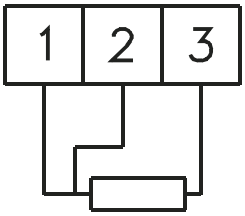



Current

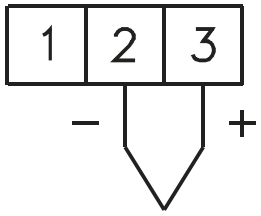



2 wires loop 4 - 20

### OPTIONAL INPUTS




PT100




Thermocouple
K or T type

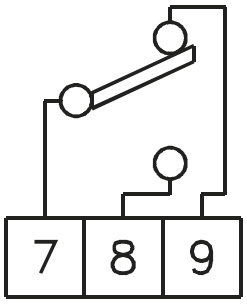


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## ALARM OUTPUTS

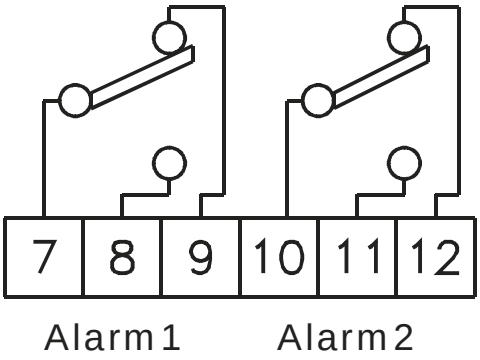
**S310A**

5A 250Vac



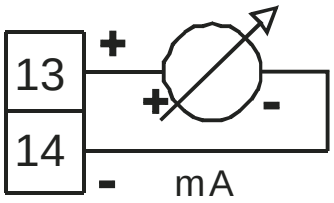

**S310AA - S320A**

2 x 5A 250Vac

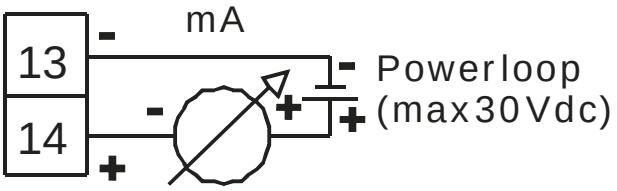



## OPTIONAL RETRANSMITTED OUTPUT

**ACTIVE**




**PASSIVE**




Equipment (if there aren't specific requests) is made for 4-20mA active connection.
To change retransmitted output , read HOW TO PROGRAM RETRANSMITTED OUTPUT page 5.



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## HOW TO SELECT INPUT
### (ONLY FOR CURRENT OR VOLTAGE INPUT EQUIPMENTS) :

Equipment (if not required differenty) made for 4-20mA input.
To select a different input, trim on internal shunts "TIPO INGRESSO" (see page 6) putting them as follows :

### ZERO AND SPAN REGULATION
### (ONLY FOR CURRENT OR VOLTAGE INPUT EQUIPMENTS) :

To access to zero and span trimmers (page 6) , remove red plexiglass front panel from equipment:

- **ZERO REGULATION :**
  Give voltage or current signal corresponding displying zero as input and then trim zero trimmer till the display shows desired value for zero-scale.
- **SPAN REGULATION :**
  As desired displayed full-scale (<1000 or >1000), it will be necessary to program internal shunts "selezione FONDO-SCALA") ( see page 6).
  Give voltage or current signal corresponding displying full-scale as input and then trim span trimmer till the display shows desired value for full-scale.

### AS TO START A DECIMAL POINT

To start a decimal point in every position trim shunts on front panel above the display (page4), remove red plexiglass front panel from equipment.

### PROGRAMMING ALARMS (ONLY S310A - S310AA - S320A)

First thing to do is to choose alarm, you can select for min or max operation by internal shunts (see page 6).
To set SET-POINT alarm's values you have to push front button corresponding alarm to be programmed ( page 6) and trimming its trimmer till you see on display the desired value.

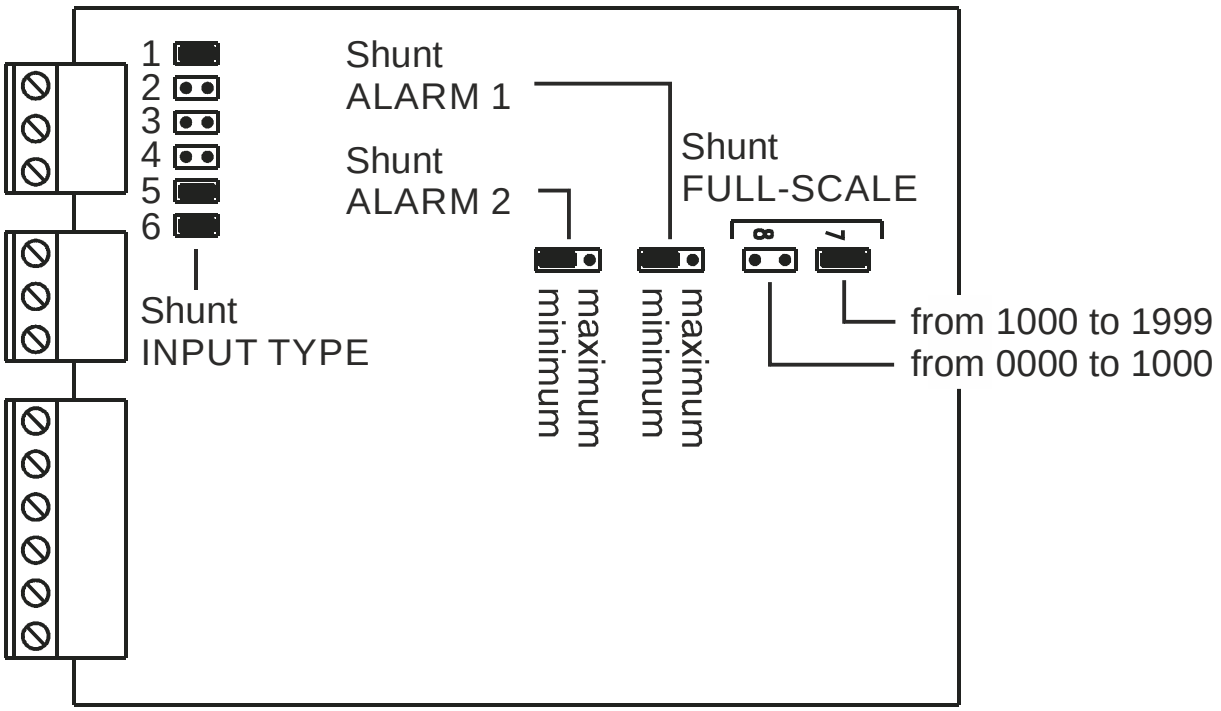
### RETRANSMITTED OUTPUT SET (OPTIONAL)

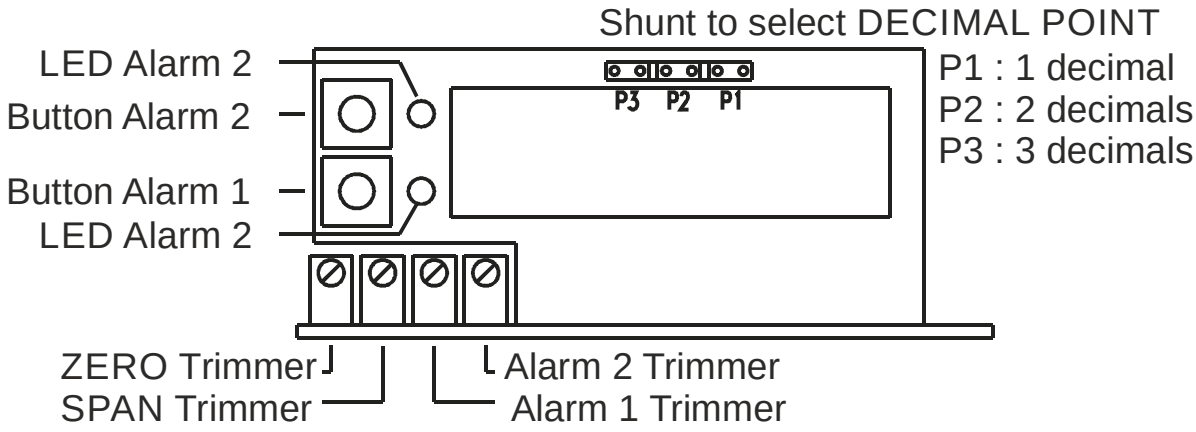
Optoisolated retransmitted output 0-20mA or 4-20mA (only with optional board), can function in an active way (powering loop with a 24Vdc voltage) and in a passive way.
To set retransmitted output signal and connection type work on shunts presents on this board as shown on page 6.



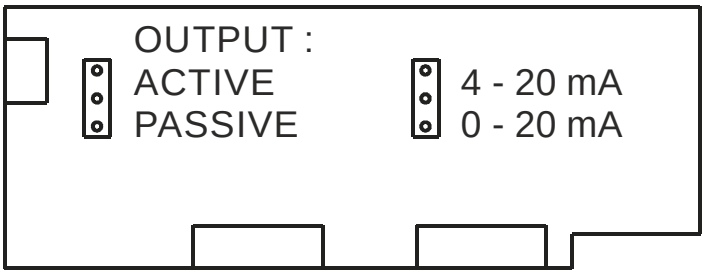
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| INPUT | Shunt 1 | Shunt 2 | Shunt 3 | Shunt 4 | Shunt 5 | Shunt 6 |
|---|---|---|---|---|---|---|
| 0 - 20 mA | closed | closed | open | open | closed | closed |
| 4 - 20 mA | closed | closed | open | closed | closed | closed |
| 0 - 2 Vdc | closed | open | open | open | closed | closed |
| 0,4 - 2 Vdc | closed | open | open | closed | closed | closed |
| 0 - 5 Vdc | closed | open | closed | open | closed | closed |
| 1 - 5 Vdc | closed | open | closed | closed | closed | closed |



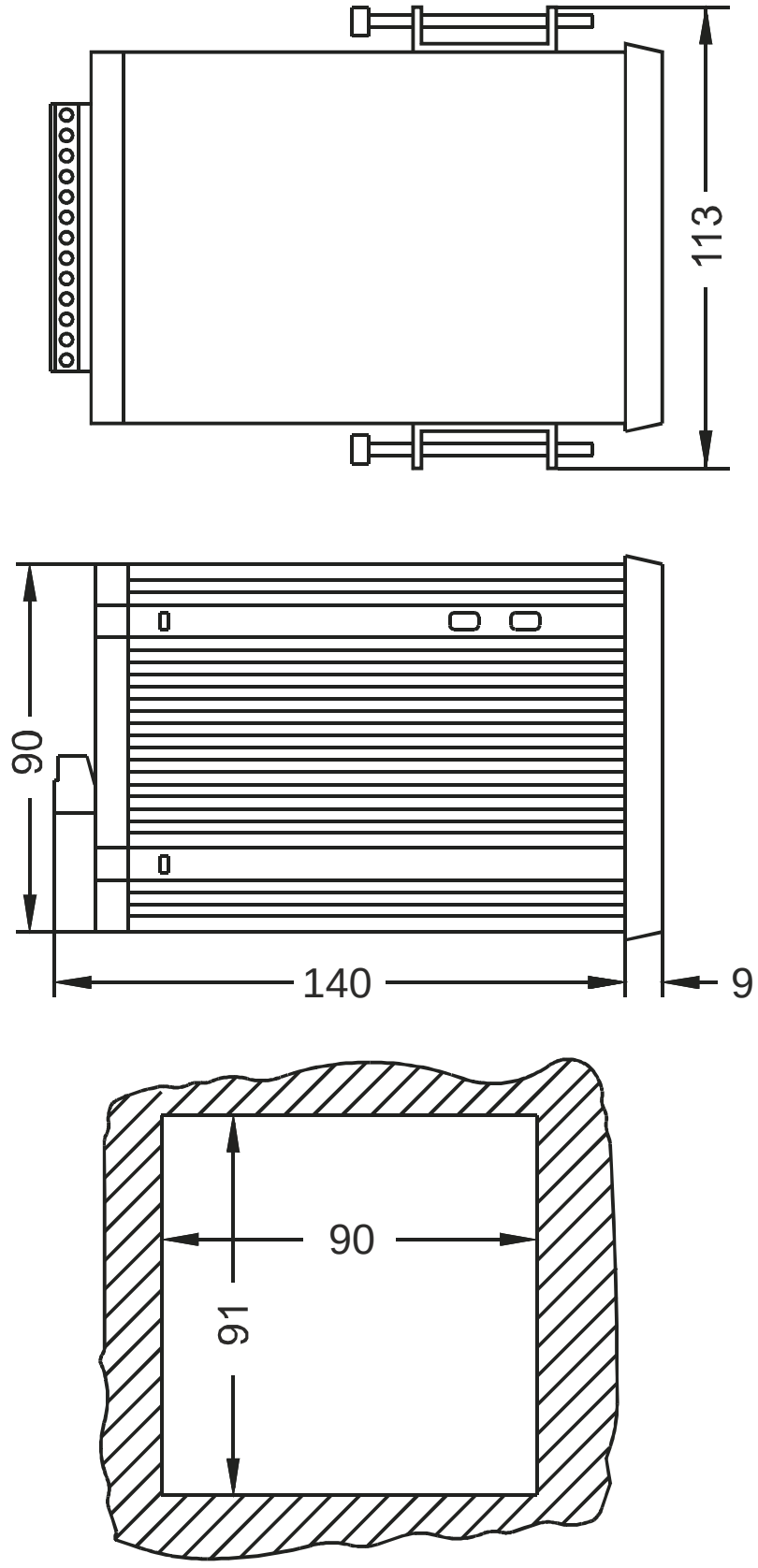

## RETRANSMITTED OUTPUT BOARD






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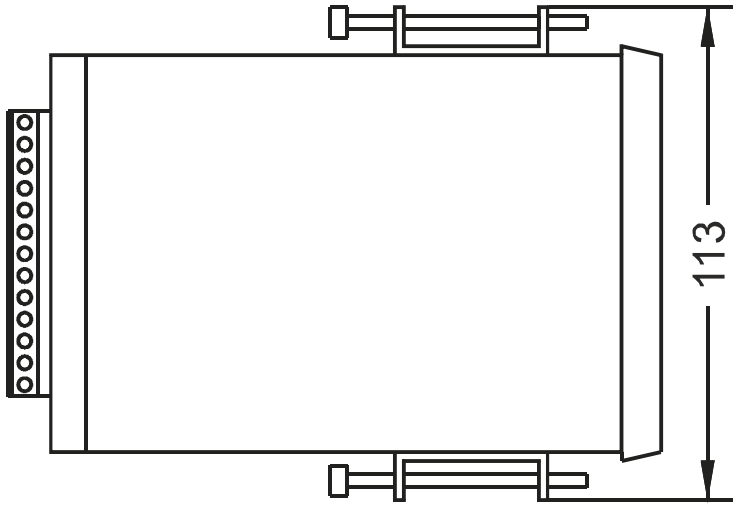
# S320A
# DIMENSIONS AND DRILL GAUGE

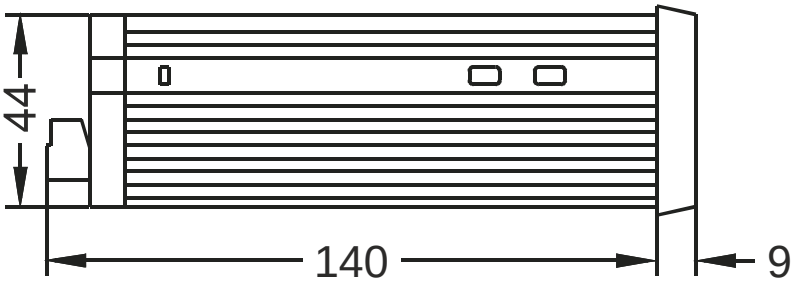


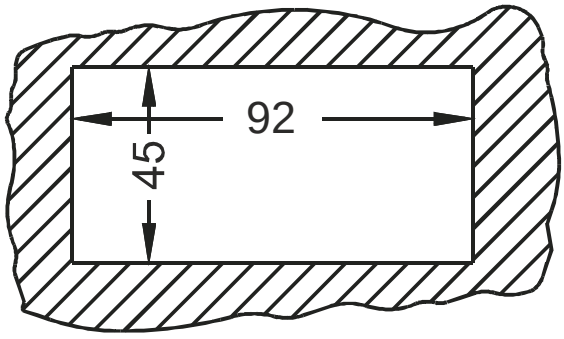



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# S310 - S310A - S310AA
# DIMENSIONS AND DRILL GAUGE




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