

# Hall Effect Current Sensors L03S\*\*\*D15 Series



## Features:

- Open Loop type
- Panel mounting
- Molex connector
- Insulated plastic case according to UL94V0

## Advantage:

- Excellent accuracy and linearity
- Low temperature drift
- Wide frequency bandwidth
- No insertion loss
- High Immunity To External Interference
- Current overload capability

## Specifications

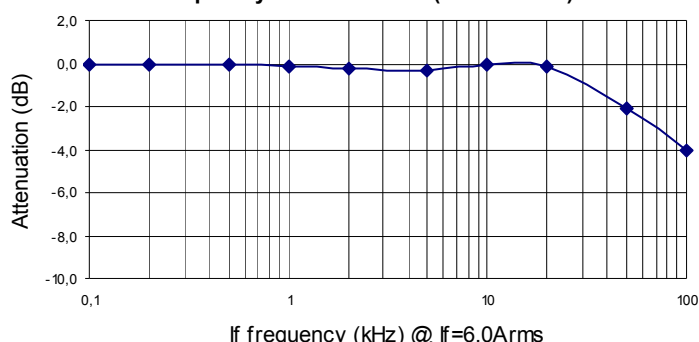
$T_A=25^{\circ}\text{C}$ ,  $V_{CC}=\pm 15\text{V}$ ,  $R_L=10\text{k}\Omega$

| Parameters                                     | Symbol             | L03S050D15                                                                     | L03S100D15                   | L03S200D15 | L03S300D15                     | L03S400D15 | L03S500D15                     | L03S600D15 |
|------------------------------------------------|--------------------|--------------------------------------------------------------------------------|------------------------------|------------|--------------------------------|------------|--------------------------------|------------|
| Rated current                                  | I <sub>f</sub>     | 50AT                                                                           | 100AT                        | 200AT      | 300AT                          | 400AT      | 500AT                          | 600AT      |
| Maximum Current                                | I <sub>fmax</sub>  | ±150AT                                                                         | ±300AT                       | ±600AT     | >±700AT                        |            |                                |            |
| Output Voltage                                 | V <sub>OUT</sub>   | 4V±40mV @ I <sub>f</sub>                                                       |                              |            |                                |            |                                |            |
| Offset Voltage                                 | V <sub>OE</sub>    | ≤±40mV @ I <sub>f</sub><br>= 0A                                                | ≤±30mV @ I <sub>f</sub> = 0A |            |                                |            |                                |            |
| Accuracy <sup>1</sup>                          | X                  | ±1% @ I <sub>f</sub>                                                           |                              |            |                                |            |                                |            |
| Output Linearity <sup>1</sup>                  | ε <sub>L</sub>     | ≤±1% @ I <sub>f</sub>                                                          |                              |            |                                |            |                                |            |
| Power Supply                                   | V <sub>CC</sub>    | ±15V±5%                                                                        |                              |            |                                |            |                                |            |
| Consumption Current                            | I <sub>C</sub>     | < 12mA                                                                         |                              |            |                                |            |                                |            |
| Response Time <sup>2</sup>                     | t <sub>r</sub>     | < 5μs (@ di/dt=50A / μs)                                                       |                              |            |                                |            |                                |            |
| Output Temperature Characteristic <sup>1</sup> | TCV <sub>OUT</sub> | ≤±2mV/°C                                                                       |                              |            |                                |            |                                |            |
| Offset Temperature Characteristic              | TCV <sub>OE</sub>  | < ± 2mV/°C                                                                     | < ± 1.0 mV/°C                |            |                                |            |                                |            |
| Hysteresis error                               | V <sub>OH</sub>    | ±30mV (@ 0A ⇔ I <sub>f</sub> )                                                 |                              |            | ±20mV (@ 0A ⇔ I <sub>f</sub> ) |            | ±10mV (@ 0A ⇔ I <sub>f</sub> ) |            |
| Withstand Voltage                              | V <sub>d</sub>     | AC2500V for 1minute (sensing current 0.5mA), inside of through hole ⇔ terminal |                              |            |                                |            |                                |            |
| Insulation Resistance                          | R <sub>IS</sub>    | > 500MΩ (500V DC), inside of through hole ⇔ terminal                           |                              |            |                                |            |                                |            |
| Frequency Bandwidth <sup>3</sup>               | f                  | DC .. 50kHz                                                                    |                              |            |                                |            |                                |            |
| Operating Temperature                          | T <sub>A</sub>     | -20°C~+80°C                                                                    |                              |            |                                |            |                                |            |
| Storage Temperature                            | T <sub>S</sub>     | -20°C~+85°C                                                                    |                              |            |                                |            |                                |            |

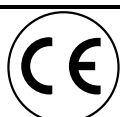
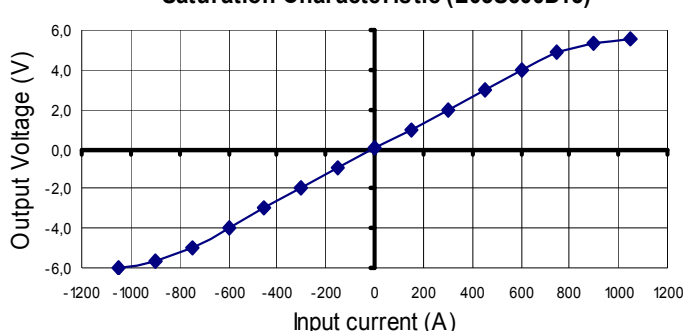
<sup>1</sup> Without offset — <sup>2</sup> Time between 10% input current full scale and 90% of sensor output full scale — <sup>3</sup> Small signal only to avoid excessive heating of magnetic core

## Electrical Performances

Frequency Characteristic (L03S600D15)

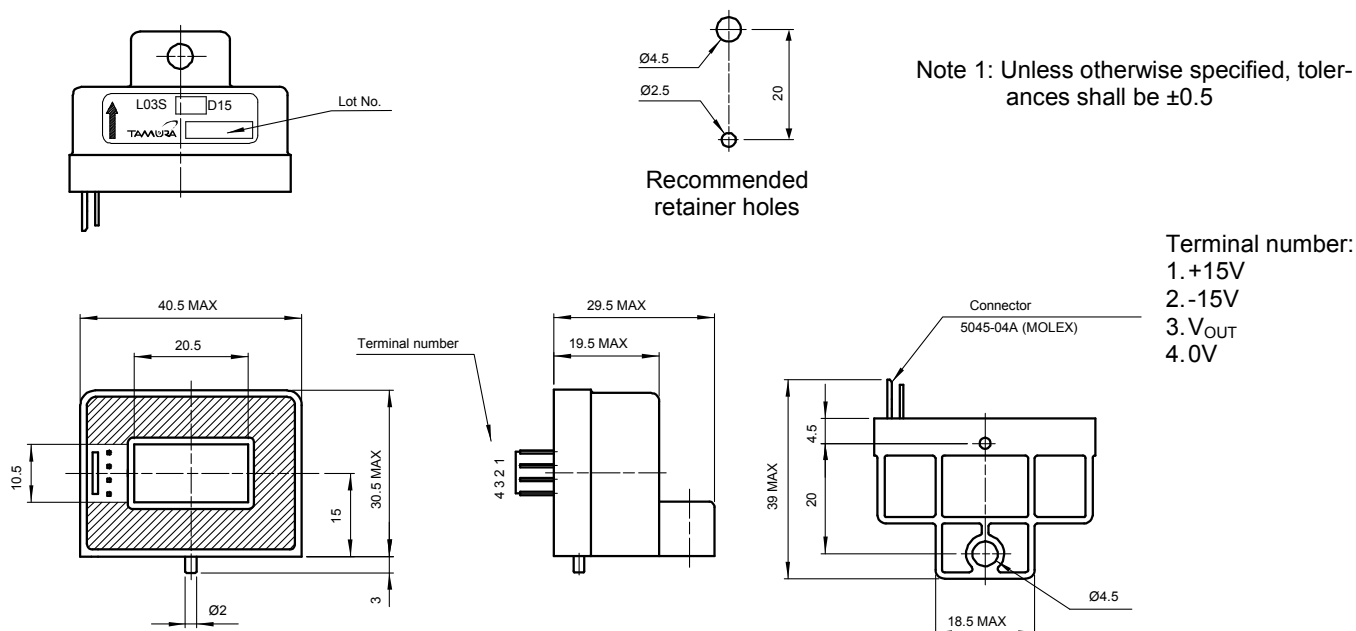


Saturation Characteristic (L03S600D15)

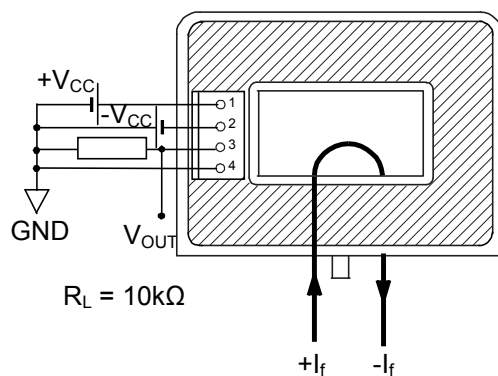


# Hall Effect Current Sensors L03S\*\*\*D15 Series

## Mechanical dimensions in mm



## Electrical connection diagram



## Package & Weight Information

| Weight | Pcs/box | Pcs/carton | Pcs/pallet |
|--------|---------|------------|------------|
| 46g    | 50      | 200        | 2400       |

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Tamura:

[L03S300D15](#) [L03S100D15](#) [L03S600D15](#) [L03S400D15](#) [L03S200D15](#) [L03S500D15](#) [L03S050D15](#)