

FRENIC-Lift LM3S Series

Issued on 21th Oct. 2024

Drive power loss data disclosure pursuant to COMMISSION REGULATION (EU) 2019/1781

| FRENIC-Lift LM3S Series |                | (1) Power loss data at operating points according to Commission Regulation (EU) 2019/1781 |                                               |                                               |                                              |                                              |                                              |                                             |                                              |                                             |      | (2)<br>IE class                                                                             | (3)<br>Manufacturer,<br>commercial registration<br>number and address | (4)<br>Product's<br>model<br>identifier <sup>1</sup> | (5)<br>Apparent<br>output power <sup>3</sup><br>[kVA] | (6)<br>Indicative<br>motor rated<br>power output<br>[kW] | (7)<br>Rated output<br>current<br>[A] | (8)<br>Max. operating<br>temperature<br>[°C] | (9)<br>Rated supply<br>frequency<br>[Hz] | (10)<br>Rated supply voltage<br>[V] | Power loss<br>measurement<br>method |
|-------------------------|----------------|-------------------------------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------|----------------------------------------------|----------------------------------------------|----------------------------------------------|---------------------------------------------|----------------------------------------------|---------------------------------------------|------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------|---------------------------------------|----------------------------------------------|------------------------------------------|-------------------------------------|-------------------------------------|
| Type <sup>1</sup>       | Standby<br>[W] | Standby <sup>2</sup><br>[%]                                                               | Partial load <sup>2</sup><br>(90, 100)<br>[%] | Partial load <sup>2</sup><br>(50, 100)<br>[%] | Partial load <sup>2</sup><br>(0, 100)<br>[%] | Partial load <sup>2</sup><br>(90, 50)<br>[%] | Partial load <sup>2</sup><br>(50, 50)<br>[%] | Partial load <sup>2</sup><br>(0, 50)<br>[%] | Partial load <sup>2</sup><br>(50, 25)<br>[%] | Partial load <sup>2</sup><br>(0, 25)<br>[%] |      |                                                                                             |                                                                       |                                                      |                                                       |                                                          |                                       |                                              |                                          |                                     |                                     |
| FRN4.0LM3S-4JO          | 19.7           | 0.3%                                                                                      | 1.6%                                          | 1.4%                                          | 1.4%                                         | 1.2%                                         | 1.2%                                         | 1.1%                                        | 1.1%                                         | 1.0%                                        | IE 2 | Fuji Electric Co., Ltd<br>5520, Minami Tamagaki-cho,<br>Suzuka-city, Mie 513-8633,<br>Japan | FRN4.0LM3S-4JO                                                        | 7.0                                                  | 4.0                                                   | 9.2                                                      | Basic<br>55°C                         | 50Hz, 60Hz                                   | 380 to 480                               | Input-output                        |                                     |
| FRN5.5LM3S-4JO          | 19.7           | 0.2%                                                                                      | 1.6%                                          | 1.3%                                          | 1.3%                                         | 0.9%                                         | 0.9%                                         | 0.8%                                        | 0.7%                                         | 0.7%                                        | IE 2 |                                                                                             | FRN5.5LM3S-4JO                                                        | 11                                                   | 5.5                                                   | 14.8                                                     |                                       |                                              |                                          |                                     |                                     |
| FRN7.5LM3S-4JO          | 19.7           | 0.1%                                                                                      | 1.5%                                          | 1.4%                                          | 1.3%                                         | 0.9%                                         | 0.8%                                         | 0.8%                                        | 0.7%                                         | 0.7%                                        | IE 2 |                                                                                             | FRN7.5LM3S-4JO                                                        | 14                                                   | 7.5                                                   | 18                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN11LM3S-4JO           | 15.2           | 0.1%                                                                                      | 1.4%                                          | 1.2%                                          | 1.1%                                         | 0.9%                                         | 0.8%                                         | 0.7%                                        | 0.6%                                         | 0.6%                                        | IE 2 |                                                                                             | FRN11LM3S-4JO                                                         | 18                                                   | 11                                                    | 24                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN15LM3S-4JO           | 15.1           | 0.1%                                                                                      | 1.4%                                          | 1.2%                                          | 1.1%                                         | 0.8%                                         | 0.7%                                         | 0.7%                                        | 0.6%                                         | 0.6%                                        | IE 2 |                                                                                             | FRN15LM3S-4JO                                                         | 24                                                   | 15                                                    | 31                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN18.5LM3S-4JO         | 17.9           | 0.1%                                                                                      | 1.5%                                          | 1.3%                                          | 1.1%                                         | 0.8%                                         | 0.8%                                         | 0.7%                                        | 0.6%                                         | 0.6%                                        | IE 2 |                                                                                             | FRN18.5LM3S-4JO                                                       | 30                                                   | 18.5                                                  | 39                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN22LM3S-4JO           | 17.6           | 0.1%                                                                                      | 1.5%                                          | 1.2%                                          | 1.1%                                         | 0.8%                                         | 0.7%                                         | 0.7%                                        | 0.6%                                         | 0.5%                                        | IE 2 |                                                                                             | FRN22LM3S-4JO                                                         | 34                                                   | 22                                                    | 45                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN30LM3S-4JO           | 25.2           | 0.1%                                                                                      | 1.4%                                          | 1.3%                                          | 1.1%                                         | 0.8%                                         | 0.7%                                         | 0.7%                                        | 0.5%                                         | 0.5%                                        | IE 2 |                                                                                             | FRN30LM3S-4JO                                                         | 45                                                   | 30                                                    | 60                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN37LM3S-4JO           | 24.9           | 0.0%                                                                                      | 1.4%                                          | 1.2%                                          | 1.1%                                         | 0.8%                                         | 0.7%                                         | 0.7%                                        | 0.5%                                         | 0.5%                                        | IE 2 |                                                                                             | FRN37LM3S-4JO                                                         | 57                                                   | 37                                                    | 75                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN45LM3S-4JO           | 27.9           | 0.0%                                                                                      | 1.5%                                          | 1.3%                                          | 1.1%                                         | 0.8%                                         | 0.7%                                         | 0.7%                                        | 0.5%                                         | 0.5%                                        | IE 2 |                                                                                             | FRN45LM3S-4JO                                                         | 69                                                   | 45                                                    | 91                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN55LM3S-4JO           | 30.0           | 0.0%                                                                                      | 1.5%                                          | 1.3%                                          | 1.1%                                         | 0.9%                                         | 0.7%                                         | 0.7%                                        | 0.6%                                         | 0.5%                                        | IE 2 |                                                                                             | FRN55LM3S-4JO                                                         | 85                                                   | 55                                                    | 112                                                      |                                       |                                              |                                          |                                     |                                     |
| FRN5.5LM3S-2JO          | 8.5            | 0.1%                                                                                      | 1.9%                                          | 1.6%                                          | 1.4%                                         | 1.0%                                         | 0.9%                                         | 0.9%                                        | 0.7%                                         | 0.7%                                        | IE 2 |                                                                                             | FRN5.5LM3S-2JO                                                        | 9.5                                                  | 5.5                                                   | 25                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN7.5LM3S-2JO          | 9.7            | 0.1%                                                                                      | 1.9%                                          | 1.6%                                          | 1.5%                                         | 1.0%                                         | 0.9%                                         | 0.9%                                        | 0.7%                                         | 0.7%                                        | IE 2 |                                                                                             | FRN7.5LM3S-2JO                                                        | 13                                                   | 7.5                                                   | 33                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN11LM3S-2JO           | 9.0            | 0.1%                                                                                      | 1.9%                                          | 1.5%                                          | 1.4%                                         | 1.0%                                         | 0.9%                                         | 0.8%                                        | 0.7%                                         | 0.6%                                        | IE 2 |                                                                                             | FRN11LM3S-2JO                                                         | 18                                                   | 11                                                    | 47                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN15LM3S-2JO           | 10.0           | 0.0%                                                                                      | 2.0%                                          | 1.6%                                          | 1.4%                                         | 1.0%                                         | 0.9%                                         | 0.8%                                        | 0.7%                                         | 0.6%                                        | IE 2 |                                                                                             | FRN15LM3S-2JO                                                         | 23                                                   | 15                                                    | 60                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN18.5LM3S-2JO         | 10.0           | 0.0%                                                                                      | 1.7%                                          | 1.4%                                          | 1.2%                                         | 0.9%                                         | 0.7%                                         | 0.7%                                        | 0.5%                                         | 0.5%                                        | IE 2 |                                                                                             | FRN18.5LM3S-2JO                                                       | 29                                                   | 18.5                                                  | 76                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN22LM3S-2JO           | 10.0           | 0.0%                                                                                      | 2.0%                                          | 1.6%                                          | 1.4%                                         | 1.0%                                         | 0.9%                                         | 0.8%                                        | 0.6%                                         | 0.6%                                        | IE 2 | FRN22LM3S-2JO                                                                               | 34                                                                    | 22                                                   | 90                                                    |                                                          |                                       |                                              |                                          |                                     |                                     |

1. Each symbol in the model code corresponds to the following:  
" \* " represents the destination code. (G: Global / A: India)  
" ○ " represents a variation of the order code. (letters and/or numbers, or spaces)

2. Ratio of loss value to rated output apparent power [kVA] at operating point (x, y) or standby.  
x: Percentage of rated output frequency.  
y: Percentage of rated output torque.

3. Apparent output power is calculated for each input power source with the following conditions:  
Three phase 400V class series (Type code: -4) is 440 V.  
Three phase 200V class series (Type code: -2) is 220 V.

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|------------------------|----------------|-------------------------------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------|----------------------------------------------|----------------------------------------------|----------------------------------------------|---------------------------------------------|----------------------------------------------|---------------------------------------------|------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------|---------------------------------------|----------------------------------------------|------------------------------------------|-------------------------------------|-------------------------------------|
| Type <sup>1</sup>      | Standby<br>[W] | Standby <sup>2</sup><br>[%]                                                               | Partial load <sup>2</sup><br>(90, 100)<br>[%] | Partial load <sup>2</sup><br>(50, 100)<br>[%] | Partial load <sup>2</sup><br>(0, 100)<br>[%] | Partial load <sup>2</sup><br>(90, 50)<br>[%] | Partial load <sup>2</sup><br>(50, 50)<br>[%] | Partial load <sup>2</sup><br>(0, 50)<br>[%] | Partial load <sup>2</sup><br>(50, 25)<br>[%] | Partial load <sup>2</sup><br>(0, 25)<br>[%] |      |                                                                                             |                                                                       |                                                      |                                                       |                                                          |                                       |                                              |                                          |                                     |                                     |
| FRN0009LM3S-4*O        | 19.7           | 0.3%                                                                                      | 1.6%                                          | 1.4%                                          | 1.4%                                         | 1.2%                                         | 1.2%                                         | 1.1%                                        | 1.1%                                         | 1.0%                                        | IE 2 | Fuji Electric Co., Ltd<br>5520, Minami Tamagaki-cho,<br>Suzuka-city, Mie 513-8633,<br>Japan | FRN0009LM3S-4*O                                                       | 7.0                                                  | 4.0                                                   | 9.2                                                      | Basic<br>55°C                         | 50Hz, 60Hz                                   | 380 to 480                               | Input-output                        |                                     |
| FRN0015LM3S-4*O        | 19.7           | 0.2%                                                                                      | 1.6%                                          | 1.3%                                          | 1.3%                                         | 0.9%                                         | 0.9%                                         | 0.8%                                        | 0.7%                                         | 0.7%                                        | IE 2 |                                                                                             | FRN0015LM3S-4*O                                                       | 11                                                   | 5.5                                                   | 14.8                                                     |                                       |                                              |                                          |                                     |                                     |
| FRN0018LM3S-4*O        | 19.7           | 0.1%                                                                                      | 1.5%                                          | 1.4%                                          | 1.3%                                         | 0.9%                                         | 0.8%                                         | 0.8%                                        | 0.7%                                         | 0.7%                                        | IE 2 |                                                                                             | FRN0018LM3S-4*O                                                       | 14                                                   | 7.5                                                   | 18                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN0024LM3S-4*O        | 15.2           | 0.1%                                                                                      | 1.4%                                          | 1.2%                                          | 1.1%                                         | 0.9%                                         | 0.8%                                         | 0.7%                                        | 0.6%                                         | 0.6%                                        | IE 2 |                                                                                             | FRN0024LM3S-4*O                                                       | 18                                                   | 11                                                    | 24                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN0031LM3S-4*O        | 15.1           | 0.1%                                                                                      | 1.4%                                          | 1.2%                                          | 1.1%                                         | 0.8%                                         | 0.7%                                         | 0.6%                                        | 0.6%                                         | 0.6%                                        | IE 2 |                                                                                             | FRN0031LM3S-4*O                                                       | 24                                                   | 15                                                    | 31                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN0039LM3S-4*O        | 17.9           | 0.1%                                                                                      | 1.5%                                          | 1.3%                                          | 1.1%                                         | 0.8%                                         | 0.8%                                         | 0.7%                                        | 0.6%                                         | 0.6%                                        | IE 2 |                                                                                             | FRN0039LM3S-4*O                                                       | 30                                                   | 18.5                                                  | 39                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN0045LM3S-4*O        | 17.6           | 0.1%                                                                                      | 1.5%                                          | 1.2%                                          | 1.1%                                         | 0.8%                                         | 0.7%                                         | 0.6%                                        | 0.5%                                         | 0.5%                                        | IE 2 |                                                                                             | FRN0045LM3S-4*O                                                       | 34                                                   | 22                                                    | 45                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN0060LM3S-4*O        | 25.2           | 0.1%                                                                                      | 1.4%                                          | 1.3%                                          | 1.1%                                         | 0.8%                                         | 0.7%                                         | 0.7%                                        | 0.5%                                         | 0.5%                                        | IE 2 |                                                                                             | FRN0060LM3S-4*O                                                       | 45                                                   | 30                                                    | 60                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN0075LM3S-4*O        | 24.9           | 0.0%                                                                                      | 1.4%                                          | 1.2%                                          | 1.1%                                         | 0.8%                                         | 0.7%                                         | 0.7%                                        | 0.5%                                         | 0.5%                                        | IE 2 |                                                                                             | FRN0075LM3S-4*O                                                       | 57                                                   | 37                                                    | 75                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN0091LM3S-4*O        | 27.9           | 0.0%                                                                                      | 1.5%                                          | 1.3%                                          | 1.1%                                         | 0.8%                                         | 0.7%                                         | 0.7%                                        | 0.5%                                         | 0.5%                                        | IE 2 |                                                                                             | FRN0091LM3S-4*O                                                       | 69                                                   | 45                                                    | 91                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN0112LM3S-4*O        | 30.0           | 0.0%                                                                                      | 1.5%                                          | 1.3%                                          | 1.1%                                         | 0.9%                                         | 0.7%                                         | 0.7%                                        | 0.6%                                         | 0.5%                                        | IE 2 |                                                                                             | FRN0112LM3S-4*O                                                       | 85                                                   | 55                                                    | 112                                                      |                                       |                                              |                                          |                                     |                                     |
| FRN0025LM3S-2*O        | 8.5            | 0.1%                                                                                      | 1.9%                                          | 1.6%                                          | 1.4%                                         | 1.0%                                         | 0.9%                                         | 0.9%                                        | 0.7%                                         | 0.7%                                        | IE 2 |                                                                                             | FRN0025LM3S-2*O                                                       | 9.5                                                  | 5.5                                                   | 25                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN0033LM3S-2*O        | 9.7            | 0.1%                                                                                      | 1.9%                                          | 1.6%                                          | 1.5%                                         | 1.0%                                         | 0.9%                                         | 0.9%                                        | 0.7%                                         | 0.7%                                        | IE 2 |                                                                                             | FRN0033LM3S-2*O                                                       | 13                                                   | 7.5                                                   | 33                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN0047LM3S-2*O        | 9.0            | 0.1%                                                                                      | 1.9%                                          | 1.5%                                          | 1.4%                                         | 1.0%                                         | 0.9%                                         | 0.8%                                        | 0.7%                                         | 0.6%                                        | IE 2 |                                                                                             | FRN0047LM3S-2*O                                                       | 18                                                   | 11                                                    | 47                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN0060LM3S-2*O        | 10.0           | 0.0%                                                                                      | 2.0%                                          | 1.6%                                          | 1.4%                                         | 1.0%                                         | 0.9%                                         | 0.8%                                        | 0.7%                                         | 0.6%                                        | IE 2 |                                                                                             | FRN0060LM3S-2*O                                                       | 23                                                   | 15                                                    | 60                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN0076LM3S-2*O        | 10.0           | 0.0%                                                                                      | 1.7%                                          | 1.4%                                          | 1.2%                                         | 0.9%                                         | 0.7%                                         | 0.7%                                        | 0.5%                                         | 0.5%                                        | IE 2 |                                                                                             | FRN0076LM3S-2*O                                                       | 29                                                   | 18.5                                                  | 76                                                       |                                       |                                              |                                          |                                     |                                     |
| FRN0090LM3S-2*O        | 10.0           | 0.0%                                                                                      | 2.0%                                          | 1.6%                                          | 1.4%                                         | 1.0%                                         | 0.9%                                         | 0.8%                                        | 0.6%                                         | 0.6%                                        | IE 2 | FRN0090LM3S-2*O                                                                             | 34                                                                    | 22                                                   | 90                                                    |                                                          |                                       |                                              |                                          |                                     |                                     |

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" O " represents a variation of the order code. (letters and/or numbers, or spaces)
2. Ratio of loss value to rated output apparent power [kVA] at operating point (x, y) or standby.  
x: Percentage of rated output frequency.  
y: Percentage of rated output torque.
3. Apparent output power is calculated for each input power source with the following conditions:  
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