

Modbus register map ION7550/ION7650

This table outlines the default data registers available on the ION7550/ION7650 power meters. The v320 framework files are designed for use with the v321 RMICAN approved firmware. This register map is applicable to the following template revisions:

- ◆ 7550_v350_FAC_V3.3.0.0.2
- ◆ 7650_v350_FAC_V3.3.0.0.2
- ◆ 7650_v350_FAC-PQ_V3.3.0.0.1 (power quality framework)

And the following RMICAN approved frameworks:

- ◆ 7550_V320_FAC_V3.1.0.1.1
- ◆ 7650_V320_FAC_V3.1.0.1.1
- ◆ 7650_V320_FAC-PQ_V3.1.0.1.1 (power quality framework)

| Label | Address | Module number | Module label | Number of registers | Format | Scaling | Scaling enabled |
|------------|---------|---------------|----------------|---------------------|--------|---------|-----------------|
| I a | 40150 | 16 | Amp/freq/unbal | 1 | UINT16 | 10 | Yes |
| I b | 40151 | 16 | Amp/freq/unbal | 1 | UINT16 | 10 | Yes |
| I c | 40152 | 16 | Amp/freq/unbal | 1 | UINT16 | 10 | Yes |
| I 4 | 40153 | 16 | Amp/freq/unbal | 1 | UINT16 | 10 | Yes |
| I 5 | 40154 | 16 | Amp/freq/unbal | 1 | UINT16 | 10 | Yes |
| I avg | 40155 | 16 | Amp/freq/unbal | 1 | UINT16 | 10 | Yes |
| I avg mn | 40156 | 16 | Amp/freq/unbal | 1 | UINT16 | 10 | Yes |
| I avg mx | 40157 | 16 | Amp/freq/unbal | 1 | UINT16 | 10 | Yes |
| I avg mean | 40158 | 16 | Amp/freq/unbal | 1 | UINT16 | 10 | Yes |
| Freq | 40159 | 16 | Amp/freq/unbal | 1 | UINT16 | 10 | Yes |
| Freq mn | 40160 | 16 | Amp/freq/unbal | 1 | UINT16 | 10 | Yes |
| Freq mx | 40161 | 16 | Amp/freq/unbal | 1 | UINT16 | 10 | Yes |
| Freq mean | 40162 | 16 | Amp/freq/unbal | 1 | UINT16 | 10 | Yes |
| V unbal | 40163 | 16 | Amp/freq/unbal | 1 | UINT16 | 10 | Yes |
| I unbal | 40164 | 16 | Amp/freq/unbal | 1 | UINT16 | 10 | Yes |
| Phase Rev | 40165 | 16 | Amp/freq/unbal | 1 | UINT16 | 10 | Yes |
| VIn a | 40166 | 17 | Volts | 2 | UINT32 | 10 | No |
| VIn b | 40168 | 17 | Volts | 2 | UINT32 | 10 | No |
| VIn c | 40170 | 17 | Volts | 2 | UINT32 | 10 | No |
| VIn avg | 40172 | 17 | Volts | 2 | UINT32 | 10 | No |
| VIn avg mx | 40174 | 17 | Volts | 2 | UINT32 | 10 | No |

| Label | Address | Module number | Module label | Number of registers | Format | Scaling | Scaling enabled |
|--------------|---------|---------------|----------------|---------------------|--------|---------|-----------------|
| VII ab | 40178 | 17 | Volts | 2 | UINT32 | 10 | No |
| VII bc | 40180 | 17 | Volts | 2 | UINT32 | 10 | No |
| VII ca | 40182 | 17 | Volts | 2 | UINT32 | 10 | No |
| VII avg | 40184 | 17 | Volts | 2 | UINT32 | 10 | No |
| VII avg mx | 40186 | 17 | Volts | 2 | UINT32 | 10 | No |
| VII avg mean | 40188 | 17 | Volts | 2 | UINT32 | 10 | No |
| kW a | 40198 | 18 | kW/kVAr/kVA | 2 | INT32 | 1/1000 | No |
| kW b | 40200 | 18 | kW/kVAr/kVA | 2 | INT32 | 1/1000 | No |
| kW c | 40202 | 18 | kW/kVAr/kVA | 2 | INT32 | 1/1000 | No |
| kW tot | 40204 | 18 | kW/kVAr/kVA | 2 | INT32 | 1/1000 | No |
| kW tot mx | 40206 | 18 | kW/kVAr/kVA | 2 | INT32 | 1/1000 | No |
| kVAR a | 40208 | 18 | kW/kVAr/kVA | 2 | INT32 | 1/1000 | No |
| kVAR b | 40210 | 18 | kW/kVAr/kVA | 2 | INT32 | 1/1000 | No |
| kVAR c | 40212 | 18 | kW/kVAr/kVA | 2 | INT32 | 1/1000 | No |
| kVAR tot | 40214 | 18 | kW/kVAr/kVA | 2 | INT32 | 1/1000 | No |
| kVAR tot mx | 40216 | 18 | kW/kVAr/kVA | 2 | INT32 | 1/1000 | No |
| kVA a | 40218 | 18 | kW/kVAr/kVA | 2 | INT32 | 1/1000 | No |
| kVA b | 40220 | 18 | kW/kVAr/kVA | 2 | INT32 | 1/1000 | No |
| kVA c | 40222 | 18 | kW/kVAr/kVA | 2 | INT32 | 1/1000 | No |
| kVA tot | 40224 | 18 | kW/kVAr/kVA | 2 | INT32 | 1/1000 | No |
| kVA tot mx | 40226 | 18 | kW/kVAr/kVA | 2 | INT32 | 1/1000 | No |
| kWh del | 40230 | 19 | kWh/kVArh | 2 | INT32 | 1/1000 | No |
| kWh rec | 40232 | 19 | kWh/kVArh | 2 | INT32 | 1/1000 | No |
| kVARh del | 40234 | 19 | kWh/kVArh | 2 | INT32 | 1/1000 | No |
| kVARh rec | 40236 | 19 | kWh/kVArh | 2 | INT32 | 1/1000 | No |
| kVAh del+rec | 40238 | 19 | kWh/kVArh | 2 | INT32 | 1/1000 | No |
| PF sign a | 40262 | 20 | PF/THD/Kfactor | 1 | INT16 | 100 | Yes |
| PF sign b | 40263 | 20 | PF/THD/Kfactor | 1 | INT16 | 100 | Yes |
| PF sign c | 40264 | 20 | PF/THD/Kfactor | 1 | INT16 | 100 | Yes |
| PF sign tot | 40265 | 20 | PF/THD/Kfactor | 1 | INT16 | 100 | Yes |
| V1 THD mx | 40266 | 20 | PF/THD/Kfactor | 1 | INT16 | 100 | Yes |
| V2 THD mx | 40267 | 20 | PF/THD/Kfactor | 1 | INT16 | 100 | Yes |
| V3 THD mx | 40268 | 20 | PF/THD/Kfactor | 1 | INT16 | 100 | Yes |