

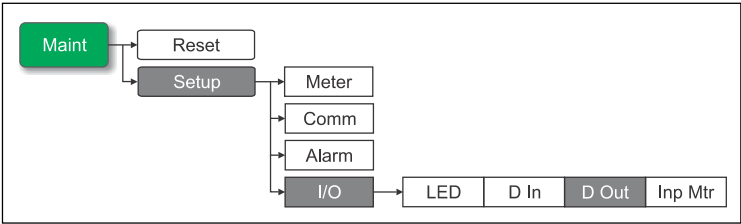
Digital output setup parameters available through ION Setup

Parameter	Values	Description
Label	—	Use this field to change the default label and assign a descriptive name to this digital output.
Control Mode	External, Demand Sync, Alarm	This field displays how the digital output functions. - External: the digital output is controlled remotely either through software or by a PLC using commands sent through communications. - Demand Sync: the digital output is associated with one of the demand systems. The meter sends a pulse to the digital output port at the end of every demand interval. - Alarm: the digital input is associated with the alarm system. The meter sends a pulse to the digital output port when the alarm is triggered.
Behavior Mode	Normal, Timed, Coil Hold	- Normal: this mode applies when control mode is set to External or Alarm. The digital output remains in the ON state until an OFF command is sent by the computer or PLC. - Timed: the digital output remains ON for the period defined by the On Time setup register. - Coil Hold: this mode applies when control mode is set to External or Alarm. For a unary alarm that is associated with a digital output, you must set Behavior Mode to Coil Hold. The output turns on when the “energize” command is received and turns off when the “coil hold release” command is received. In the event of a control power loss, the output remembers and returns to the state it was in when control power was lost.
On Time (s)	0 to 9999	This setting defines the pulse width (ON time) in seconds.
Select Dmd System	Power, Current	Applies when Control Mode is set to Demand Sync. Select the demand system to monitor.
Select Alarms	Over Current, Ph; Under Current, Ph; Over Current, N; Over Current, Gnd; Over Voltage, L-L; Under Voltage, L-L; Over Voltage, L-N; Under Voltage L-N; Over kW; Over kVAR; Over kVA; Lead PF, True; Lag PF, True; Lead PF, Disp; Lag PF, Disp; Over kW Dmd, Pres; Over kW Dmd, Last; Over kW Dmd, Pred; Over kVAR Dmd, Pres; Over kVAR Dmd, Last; Over kVAR Dmd, Pred; Over kVA Dmd, Pres; Over kVA Dmd, Last; Over kVA Dmd, Pred; Over Frequency; Under Frequency; Over Voltage Unbal; Over Voltage THD; Phase Loss	Applies when Control Mode is set to Alarm. Select one or more alarms to monitor.
Associations	—	This field displays additional information if the digital output is already associated with another meter function.

Configuring digital outputs using the front panel

You can use the front panel to configure the digital outputs.

Digital output setup menu tree



1. Navigate to **Maint > Setup**.
 2. Enter the setup password (default is “0”), then press **OK**.
 3. Navigate to **I/O > D Out**.
 4. Move the cursor to point to the digital output you want to set up, then press **Edit**.
 5. Move the cursor to point to the parameter you want to modify, then press **Edit**.
- NOTE:** If **Edit** is not displayed, it means the parameter is either read-only or can only be modified through software.
6. Modify the parameter as required, then press **OK**.
 7. Move the cursor to point to the next parameter you want to modify, press **Edit**, make your changes, then press **OK**.
 8. Press **▲** to exit. Press **Yes** to save your changes.

Digital output setup parameters available through the front panel

Parameter	Values	Description
Label	-----	This can be modified only through software. Use this field to change the default label and assign a descriptive name to this digital output.
Control Mode	External, Demand Sync, Alarm	This displays how the digital output functions. • External: the digital output is controlled remotely either through software or by a PLC using commands sent through communications. • Demand Sync: the digital output is associated with one of the demand systems. The meter sends a pulse to the digital output port at the end of every demand interval. • Alarm: the digital input is associated with the alarm system. The meter sends a pulse to the digital output port when the alarm is triggered.
Behavior Mode	Normal, Timed, Coil Hold	• Normal: this applies when control mode is set to External or Alarm. The digital output remains in the ON state until an OFF command is sent by the computer or PLC. • Timed: the digital output remains ON for the period defined by the On Time setup register. • Coil Hold: this applies when control mode is set to External or Alarm. For a unary alarm that is associated with a digital output, you must set Behavior Mode to Coil Hold. The output turns on when the “energize” command is received and turns off when the “coil hold release” command is received. In the event of a control power loss, the output remembers and returns to the state it was in when control power was lost.
On Time (s)	0 to 9999	This defines the pulse width (ON time) in seconds.

Digital output setup parameters available through the front panel (Continued)

Parameter	Values	Description
Select Dmd System	Power, Current	Applies when Control Mode is set to Demand Sync. Select the demand system to monitor.
Select Alarms	Over Current, Ph; Under Current, Ph; Over Current, N; Over Current, Gnd; Over Voltage, L-L; Under Voltage, L-L; Over Voltage, L-N; Under Voltage L-N; Over kW; Over kVAR; Over kVA; Lead PF, True; Lag PF, True; Lead PF, Disp; Lag PF, Disp; Over kW Dmd, Pres; Over kW Dmd, Last; Over kW Dmd, Pred; Over kVAR Dmd, Pres; Over kVAR Dmd, Last; Over kVAR Dmd, Pred; Over kVA Dmd, Pres; Over kVA Dmd, Last; Over kVA Dmd, Pred; Over Frequency; Under Frequency; Over Voltage Unbal; Over Voltage THD; Phase Loss	Applies when Control Mode is set to Alarm. Select one or more alarms to monitor.

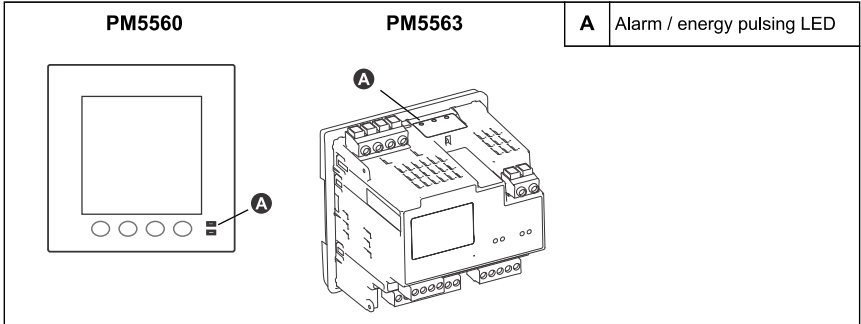
Related topics

- See “Synchronized demand” on page 116 for information on using an external source to synchronize meter demand periods.
- See “Demand setup” on page 40 for details on configuring a digital output to send demand sync pulses to another connected device.

Energy pulsing

You can configure the meter’s alarm / energy LED or one of the digital outputs for energy pulsing applications.

Location of alarm / energy pulsing LED



When set to detect alarms, the LED blinks to indicate an alarm condition. See “Alarm priorities” on page 96 for a description of the LED behavior based on different alarms.

When the LED is set to energy pulsing, the meter sends a readable pulse or signal based on the measured energy. This pulse can be used for accuracy verification or as an input to another energy monitoring system. The meter uses the pulse constant setting in pulses per k_h to determine the frequency and number of pulses sent to the LED (where k_h = kWh, kVARh or kVAh depending on the energy parameter selected).

The LED setup screen allows you to configure the alarm / energy pulsing LED for alarming or energy pulsing applications.