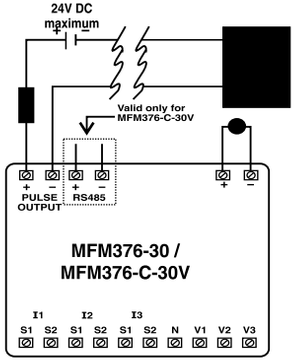
● PROCESS INTEGRATION

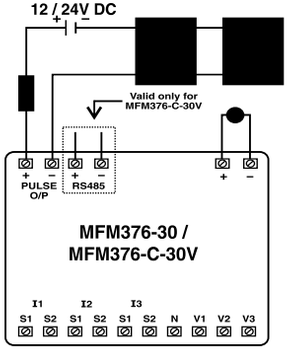


Pulse output from MFM376-C-30V/MFM376-30V meter can be interfaced into a process through a PLC for on line control of energy content in the process.

If the PLC has a self excited digital input, external DC supply is not needed.

The kWh pulse is also used to derive average kWh information at the PLC.

● ENERGY CONTROLLER



Pulse output from MFM376-30V/ MFM376-C-30V meter can be used as alarm generator or total energy controller by interfacing it with Pre-settable counter and control circuits (Contactors, Relay, Trip Circuit).

The counter is loaded with the maximum energy consumption. When count reaches setpoint it provides output to control circuit to take appropriate action.

Address	Hex Address	Parameter
30000	0x00	Voltage V1N
30002	0x02	Voltage V2N
30004	0x04	Voltage V3N
30006	0x06	Average Voltage LN
30008	0x08	Voltage V12
30010	0x0A	Voltage V23
30012	0x0C	Voltage V31
30014	0x0E	Average Voltage LL
30016	0x10	Current I1
30018	0x12	Current I2
30020	0x14	Current I3
30022	0x16	Average Current
30024	0x18	kW1
30026	0x1A	kW2
30028	0x1C	kW3
30030	0x1E	kVAr1
30032	0x20	kVAr2
30034	0x22	kVAr3
30036	0x24	kVA1
30038	0x26	kVA2
30040	0x28	kVA3
30042	0x2A	PF 1
30044	0x2C	PF 2
30046	0x2E	PF 3
30048	0x30	Average PF
30050	0x32	Frequency
30052	0x34	Total kW
30054	0x36	Total kVAr
30056	0x38	Total kVA
30058	0x3A	MAX Active Power
30060	0x3C	MIN Active Power
30062	0x3E	MAX Reactive Power
30064	0x40	MIN Reactive Power
30066	0x42	MAX Apparent Power
30068	0x44	MAX Instantaneous voltage V1N
30070	0x46	MAX Instantaneous voltage V2N
30072	0x48	MAX Instantaneous voltage V3N
30074	0x4A	MAX Instantaneous voltage V12
30076	0x4C	MAX Instantaneous voltage V23
30078	0x4E	MAX Instantaneous voltage V31
30080	0x50	MAX Instantaneous current I1
30082	0x52	MAX Instantaneous current I2
30084	0x54	MAX Instantaneous current I3
30086	0x56	Import Active energy
30088	0x58	Export Active energy
30090	0x5A	Total Active energy
30092	0x5C	Import Reactive energy
30094	0x5E	Export Reactive energy
30096	0x60	Total Reactive energy
30098	0x62	Total Apparent energy
30100	0x64	Run Hour
30102	0x66	Auxillary Interrupts
		Total Harmonic Distortion(THD)
30124	0x7C	THD of Voltage V1N
30126	0x7E	THD of Voltage V2N
30128	0x80	THD of Voltage V3N
30130	0x82	THD of Voltage V12
30132	0x84	THD of Voltage V23
30134	0x86	THD of Voltage V31
30136	0x88	THD of Current I1
30138	0x8A	THD of Current I2
30140	0x8C	THD of Current I3
30684	0x2AC	Serial number of unit

0	Voltage V1N
1	Voltage V2N
2	Voltage V3N
3	Voltage V12
4	Voltage V23
5	Voltage V31
6	Current I1
7	Current I2
8	Current I3

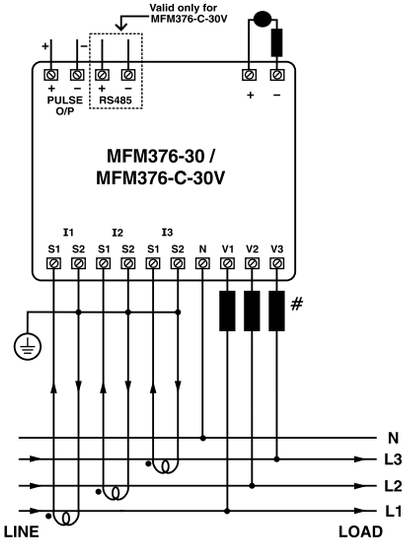
{143 + [(Harmonic no-2) x 2] + 60 x Constant Parameter }

For Example,
To find the 14th Harmonic address of Voltage V31.
Following formula can be used :

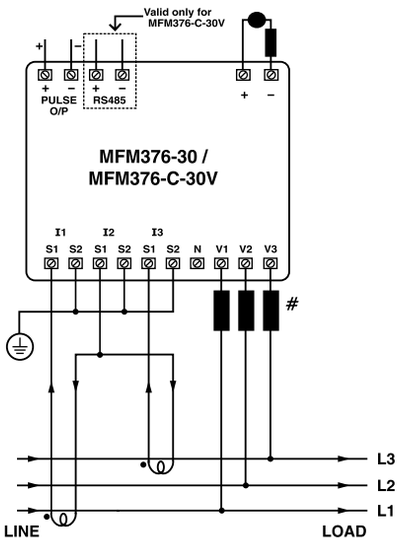
Formula with the parameter :
{143 + [(Harmonic no-2) x 2] + 60 x C P}
Eg. {143 + [(14-2) x 2] + 60 x 5} = 467
So, Check the 14th Harmonic of Voltage V31 at 467 address.

Address	Hex Address	Parameter	Range		Length (Register)	Data Structure
40000	0x00	Password	Min value : 0	Max value : 9998	1	Integer
40001	0x01	N/W selection	Value : 0	Meaning : 3P-4W	1	Integer
			Value : 1	Meaning : 3P-3W	1	Integer
			Value : 2	Meaning : 1P2W-P1	1	Integer
			Value : 3	Meaning : 1P2W-P2	1	Integer
			Value : 4	Meaning : 1P2W-P3	1	Integer
40002	0x02	CT Secondary (A)	Min Value : 1	Max Value : 5	1	Integer
40003	0x03	CT primary (CT Secondary = 5) (A)	Min Value : 5	Max Value : 10000	1	Integer
		CT primary (CT Secondary = 1) (A)	Min Value : 1	Max Value : 10000		
40004	0x04	PT Secondary (V)	Min Value : 100	Max Value : 500	1	Integer
40005	0x05	PT primary (V)	Min Value : 100	Max Value : 500000	2	Integer
40007	0x07	Demand Interval Method	Value : 0x0000	Meaning : Sliding	1	Integer
			Value : 0x0001	Meaning : Fixed	1	Integer
40008	0x08	Demand Interval Length(min)	Min Value : 1	Max Value : 30	1	Integer
40009	0x09	Demand Interval Duration	Min Value : 1	Max Value : 30	1	Integer
40010	0x0A	Pulse Weight	Min Value : 0.01	Max Value : 99.99	1	Integer
40011	0x0B	Pulse Duration	Min Value : 0.1	Max Value : 2.0	1	Integer
40012	0x0C	Run Hour Selection	Min Value : 0	Max Value : 10	1	Integer
40013	0x0D	Slave ID	Min Value : 1	Max Value : 255	1	Integer
			Value	**Meaning**		
40014	0x0E	Baud rate	0x0000	300	1	Integer
			0x0001	600		
			0x0002	1200		
			0x0003	2400		
			0x0004	4800		
			0x0005	9600		
			0x0006	19200		
40015	0x0F	Parity	0x0000	None	1	Integer
			0x0001	Odd		
			0x0002	Even		
40016	0x10	Stop bit	0x0000	1	1	Integer
			0x0001	2		
40017	0x11	Factory Default	1	Set to factory setting range	1	Integer
40018	0x12	Reset kWh	1	Reset Total Active Energy	1	Integer
40019	0x13	Reset kVAh	1	Reset Total Apparent Energy	1	Integer
40020	0x14	Reset kVArh	1	Reset Total Reactive Energy	1	Integer
40021	0x15	Reset MAX Demand	1	Reset Maximum Demand	1	Integer
40022	0x16	Reset Run Hour	1	Reset Run Hour	1	Integer
40023	0x17	Reset Interrupts Count	1	Reset Auxillary Interrupt Count	1	Integer

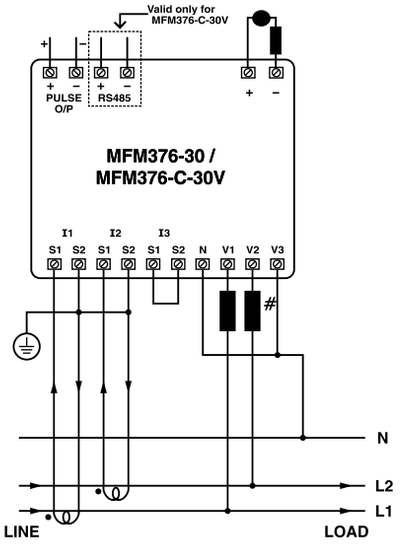
3 Ø - 4 WIRE, 3 CT'S



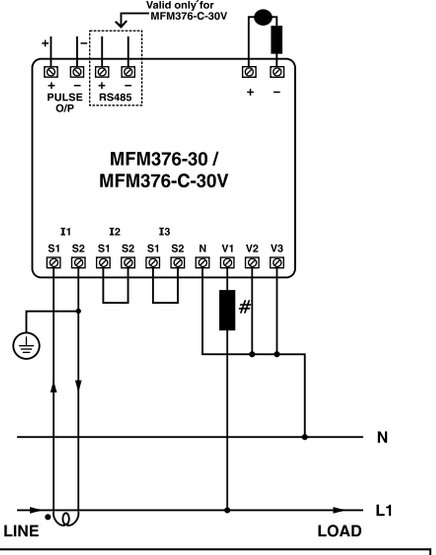
3 Ø - 3 WIRE, 2 CT'S



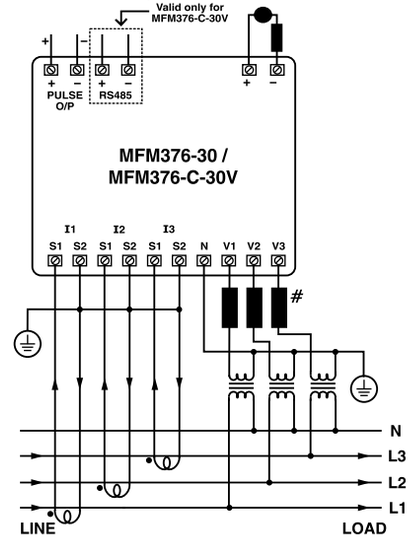
2 Ø - 3 WIRE, 2 CT'S



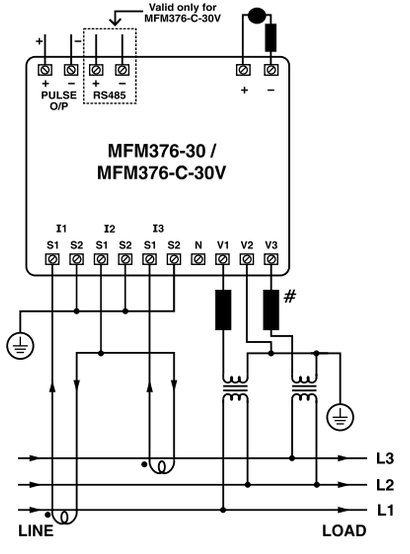
1 Ø - 2 WIRE, 1 CT



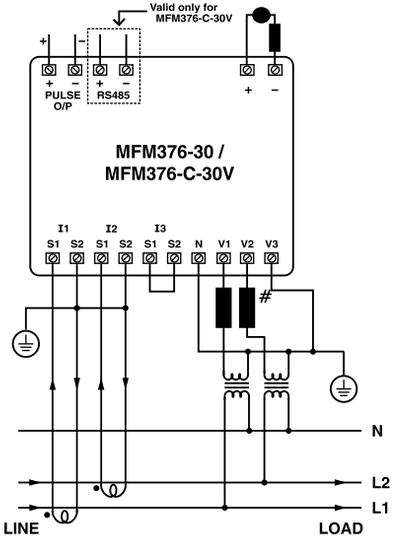
3 Ø - 4 WIRE, 3 CT'S and 3 PT'S



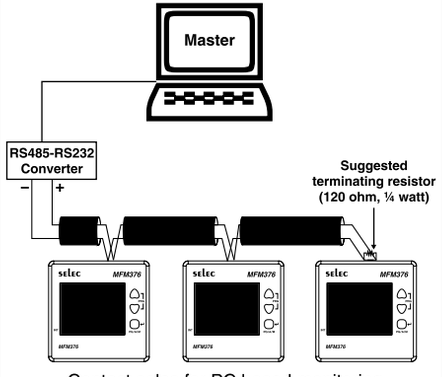
3 Ø - 3 WIRE, 2 CT'S and 2 PT'S



2 Ø - 3 WIRE, 2 CT'S and 2 PT'S



CONNECTION DIAGRAM FOR COMMUNICATION VALID ONLY FOR MFM376-C-30V



Contact sales for PC based monitoring software to communicate with the meters.

Note : + and - is applicable only for MFM376-C-30V

All fuse types: 0.5A class CC UL type
0.5A fast acting 600V

(Specifications are subject to change, since development is a continuous process.)

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