UNIVERSITY OF Southampton

ESTATES & FACILITIES

Document Title

Briefing Notes for

M&E Equipment Responsibility Matrix and Asset Labelling

Document Number

ES/ 022 / A

11/08/2015

University of Southampton Asset Reference Number [code] System

1. Wherever new works are completed (Capital Projects, LTM Projects, Client Projects, etc) all new key Building Services Plant will be identified by Planon Asset Reference stickers.
2. An important part of this exercise, that must be instigated by the appointed M&E Designer (Whether this be a Consulting Engineer or an internal Design Engineer) is to identify, for each category of equipment, which team or teams within the University will become responsible for a) operating the equipment b) maintaining the equipment and c) paying for the maintenance of the equipment. In some instances this may be a split responsiblity eg 60% of the cost may be one Department and 40% another and there may be certain aspects of the operation that are under the control of the end user - eg operating a 'boost control' where as all other aspects of operation fall under the control of the mechanical operations team. All of this information shall be agreed with all stake holders by the appointed M&E Designer and recorded in a Responsibilities Matrix using the attached template. This shall be kept up to date throughout the Project. Should it not be possible to negotiate and agree the split of responsibilities, this shall be referred to the Project Manager and failing this to the Head of Engineering Services for adjudication.

3. Using the above Responsibility Matrix and taking free issue from the University Planon Team a sufficient quantity of uniquely numbered Asset Stickers*, the appointed Contractor shall then be responsibile for labeling all items of plant and equipment that will be installed as part of the Project. Each shall be assinged to an appropriate category (defined by a group, sub-group etc number) as applicable described on the attached sheets with the selected Group aligning with the team responsible for carrying out the maintenance of the equipment as identified in the Responsibility Matrix.

4. The appointed Contractor shall take 'free issue' from the University Planon Team receipt a standard Upload Spreadsheet (UOS_DIT_Assets_Temp[late_V3.xls).
5. The appointed Contractor shall complete the standard Upload Spreadsheet to incorporate each plant item that falls within each of the categories shown on the following sheets. Instructions for the completion of this upload spreadsheet are given in subsequent pages of this document.
6. The appointed Contractor shall affix an Asset Sticker to each of the items of plant and equipment shown on the populated upload spreadsheet using the most appropriate method (See suggestions on following sheets)

7. The appointed Contractor shall add the Asset Sticker number to the Upload Spreadsheet against the item concerned.
8. The populated spreadsheet and any of the Asset Stickers not used shall be returned to the university Estates and Facilities Planon Team.
9. The University Planon Team will upload the completed data from the Upload Spreadsheet to be used for Scheduled Planned Preventative Maintenance and Unscheduled and Maintenance Repair on the installed equipment.

* Example of Asset Stickers with unique number or 'code':

Schedule of Responsibilities Related to E&F Maintained Plant

Date:

Revision: 0

E&F Asset Group	Building/ Room (as defined in Planon)	Description of Type of Equipment	Team(s) responsible for Operation	Team(s) Responsible for Carrying Out Maintenance	Team(s) Responsible for Paying for Mainteannce	Notes
EXAMPLES 04.04	Building 25, Rooms 3004, 3037, 4017, 4034	Heat pump DX unit for heating and cooling of rooms	iSolutions team via wall mounted controller contained in key accessible box. iSolutions and Air Condiitioning Teams to hold keys	o4 - Air conditioning Team	50% iSolutions and 50% E&F	

Completing the Upload Spreadsheet

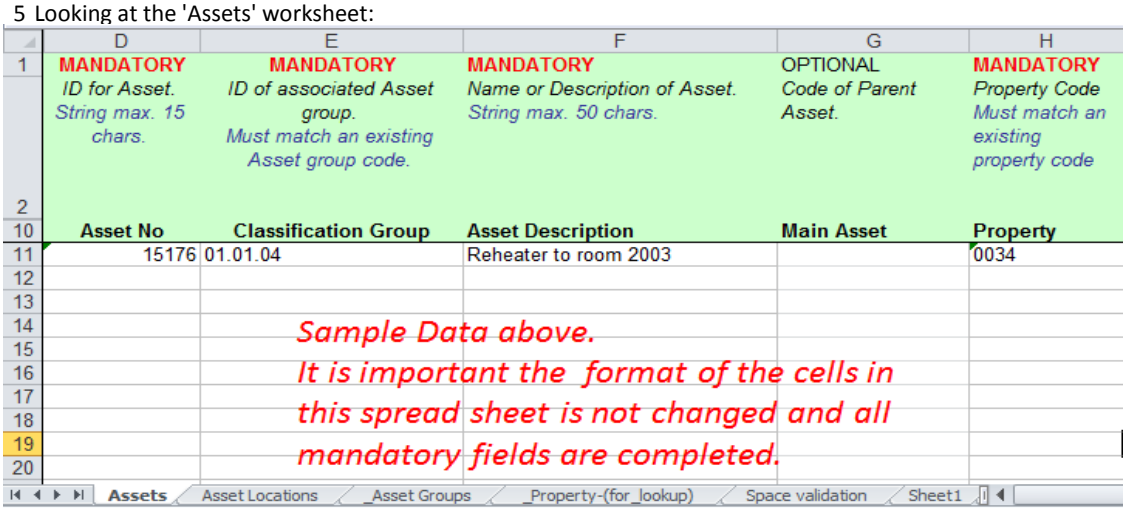
1 The Upload Spreadsheet is Excel Document UOS_DIT_Assets_Template_V2.xls

2 Each item of equipment that falls into one of the categories identified in the following worksheets shall be identified on the Upload Spreadsheet

3 The Upload spreadsheet format shall NOT be altered in any way as this may cause the upload into the Planon system to fail.

4 Only the first two worksheets in the Upload Spreadsheet need to be completed, ie the worksheet titled 'Assets' and the worksheet titled 'Asset Locations'

5 Looking at the 'Assets' worksheet:



Column D should be the asset code number printed on the sticker that is attached to the asset in question

Column E should be the relevant Asset Group as identied in the remainder of this document

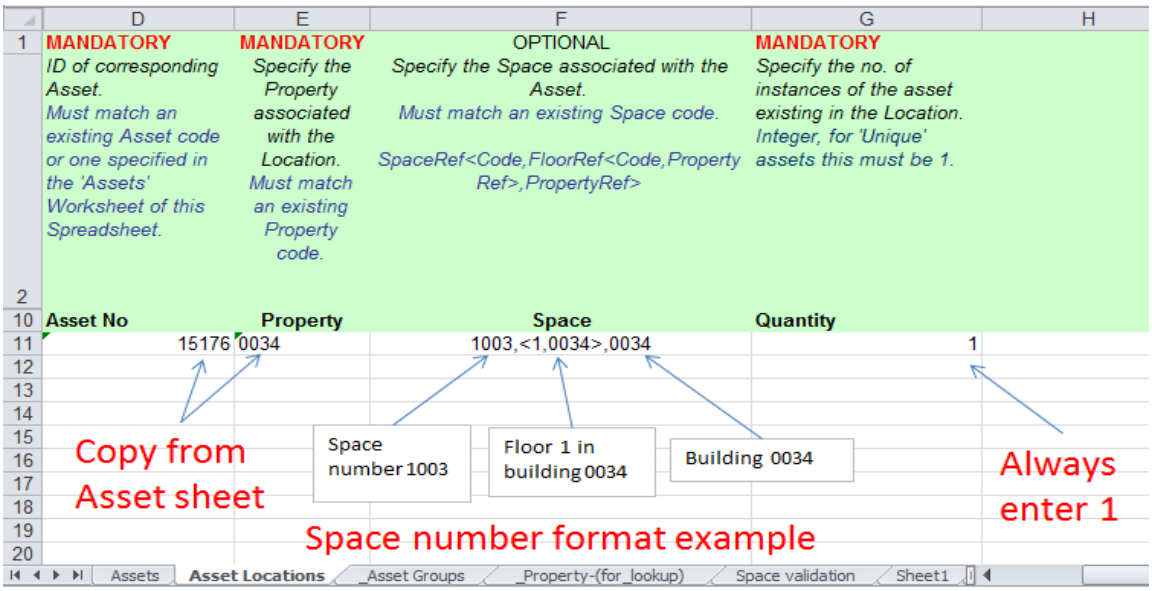
Column F should be a description of the particular asset - NOT a repeat of the asset category description

Column G need not be completed

Column H should be the property number exactly as defined in the space sections of Planon. If this is incorrect the upload will not work

None of the remaining categories need be completed.

6 Looking at the Asset Locations worksheet:



Column D should be a direct copy of column A on the Assets Worksheet

Column E should be a direct copy of column H on the Assets Worksheet

Column F should be the room number exactly as defined in the space sections of Planon followed by symbols ,< followed by floor number as defined in the space sections of Planon followed by symbol , followed by property number as defined in the space sections of Planon followed by symbols >, followed by property number as defined in the space sections of Planon. If not completed in this exact format the upload will not work.

Group		Sub Group		SubSubGroup		SubSubSubGroup		Detailed Description of components that form a single asset	Preferred Tag Location and Means of Attachment NOTE: this may need to be amended to suit particular circumstances
Mechanical	01	Ventilation	01	Air Handling Unit	01			Packaged air handling units all components in supply and/or extract side as applicable and within the same casing	Sticker adjacent to fan isolator
Mechanical	01	Ventilation	01	Ducted Extract Fan	02			Single or twin fan units centrifugal, axial or mixed flow. Includes roof extract fan units	Sticker adjacent to fan isolator
Mechanical	01	Ventilation	01	Panel Extract Fan				Panel Extract fan controlled directly from Trend BEMS panel (NOTE: locally fed small extract fans in kitchens, toilets, equipment rooms etc. are to be recorded under 02.0	
Mechanical	01	Ventilation	01	In duct reheat (Electric)	04			Staged or thyristor controlled reheat batteries that are not located within a packaged AHU	Sticker adjacent to terminal re-heater isolator
Mechanical	01	Ventilation	01	In duct reheat (LPHW)	05			LPHW heater batteries that are not located within a packaged AHU	Sticker on tag attached by chain to alpha flow adjacent to re-heater
Mechanical	01	Ventilation	01	In duct motorised damper	06			Motorised volume control or shut off damper that is not located with a packaged AHU	Sticker on tag attached to chain on stem to damper actuator
Mechanical	01	Ventilation	01	In duct balancing damper	07			Damper used for volume control locked and marked at time of commissioning	Sticker on tag attached to chain on stem to damper
Mechanical	01	Ventilation	01	Fire Damper	08			Fusible link type fire damper	Sticker adjacent to access door used to reset fire damper or on frame of removable grille used to reset fire damper
Mechanical	01	Ventilation	01	Fire & Smoke Damper	09			Motorised type fire and smoke damper	Sticker on tag attached by chain to stem to damper actuator
Mechanical	01	Ventilation	01	VAV Unit	10			Passive or active type of VAV unit	Sticker on side of unit
Mechanical	01	Ventilation	01	Displacement unit	11			Packaged displacement ventilation unit	Sticker on side of unit
Mechanical	01	Closed Hydraulic system	02	Pump	01			Electrically driven pump that is not incorporated into a packaged unit (eg packaged pressurisation unit or combi boiler)	Sticker on side of pump casing
Mechanical	01	Closed Hydraulic system	02	F&E Tank	02			Feed and Expansion tanks associated with closed heating or cooling systems including double check valve, float operated or other type of fill valve, vent, overflow, sealed lid, inspection hatches, strainers etc	Sticker on tag attached by chain to cold feed pipe.
Mechanical	01	Closed Hydraulic system	02	Packaged pressurisation unit	03			Pressurisation unit incorporating break tank with double check valve, float operated or other type of fill valve, vent, overflow, sealed lid, strainers etc, charge pump, NRV, pressure vessel, pressure switches, control panel with BEMS interfaces, electrical isolator etc.	Sticker on control panel face
Mechanical	01	Closed Hydraulic system	02	Safety Valve				Spring lift type safety valve on or adjacent to boilers, chillers, plate heat exchangers etc.	Sticker on tag attached by chain to adjacent pipe.
Mechanical	01	Closed Hydraulic system	02	Air and dirt separator	04			Combined dirt and air separator - Spirotech or similar	Sticker on tag attached by chain to adjacent pipe.
Mechanical	01	Closed Hydraulic system	02	Dosing pot	05			Manual type dosing pot including valves, funnel and drain	Sticker on tag attached by chain to inlet funnel
Mechanical	01	Closed Hydraulic system	02	Water treatment unit	06			Enwa or other type of automatic water treatment plant	Sticker on face of unit adjacent to control panel where applicable.
Mechanical	01	Closed Hydraulic system	02	Buffer vessel/Thermal storage vessel	07			Buffer vessel for controlling rapid cycling of or lopping peak demand on packaged boiler or chiller plant incorporating safety valves, drain valves etc and as/where applicable electric immersion heaters etc.	Sticker attached to vessel in prominent place
Mechanical	01	Closed Hydraulic system	02	Calorifier	08			Non storage type heat exchanger between two closed water systems or one closed water system and one open water system with or without electric immersion heater.	Sticker attached in prominent place
Mechanical	01	Closed Hydraulic system	02	Plate Heat Exchanger	09			Plate heat exchanger between two closed water systems or one closes water system and one open water system	Sticker on tag attached by chain to pipe adjacent to primary control valve
Mechanical	01	Closed Hydraulic system	02	Pressure Vessel	10			Stand alone pressure vessel for F&E purposes that is not incorporated into a packaged unit (eg packaged pressurisation unit or combi boiler)	Sticker attached in prominent place.
Mechanical	01	Closed Hydraulic system	02	Under floor heating manifold	11			Manifold and, where applicable, associated pump, control valve and control system	Sticker attached in prominent place.
Mechanical	01	Closed Hydraulic system	02	Packaged Chiller	12			Packaged water chiller including as/where applicable incorporated shunt pump, pressure vessel, controls system	Sticker attached to control panel face
Mechanical	01	Closed Hydraulic system	02	Dry air cooler	13			Dry air cooler including heat exchanger, fans, controls system as/where applicable	Sticker attached in prominent place.
Mechanical	01	Closed Hydraulic system	02	Adiabatic air cooler	14			Adiabatic air cooler including heat exchanger, fans, water spray system, controls system as/where applicable.	Sticker attached in prominent place.
Mechanical	01	Closed Hydraulic system	02	Wet cooling tower	15			Wet cooling tower complete system including as/where applicable incorporated pumps, fans, water treatment etc.	Sticker attached to control panel face
Mechanical	01	Closed Hydraulic system	02	LPHW Boiler	16			Packaged LPHW boiler condensing, high efficiency etc including flue system and as/where applicable incorporated shunt pump, pressure vessel, controls system	Sticker attached to control panel face

Group		Sub Group		SubSubGroup		SubSubSubGroup		Detailed Description of components that form a single asset	Preferred Tag Location and Means of Attachment NOTE: this may need to be amended to suit particular circumstances
Mechanical	01	Closed Hydraulic system	02	CHP Generator	17			Packaged unit including engine, alternator, packaged controls, modem or other means of control monitoring and as/where applicable acoustic enclosure and attenuators, anti-vibration control measures, gas booster, plate heat exchanger etc.	Sticker attached to control panel face
Mechanical	01	Compressed Air	03	Air compressor	01			Packaged plant including compressor, control panel, filtration and as/where applicable safety valves, receivers etc.	Sticker attached to control panel face
Mechanical	01	Compressed Air	03	Safety valves				Safety valves INCLUDING those that are a component of a packaged unit.	Sticker on tag attached by chain to pipe
Mechanical	01	Compressed Air	03	Receiver	02			Receivers not part of the packaged compressor including drain valves safety valves etc.	Sticker attached in prominent place.
Mechanical	01	Compressed Air	03	Dryer	03			Packaged unit including dehumidifier and controls sytem	Sticker attached in prominent place.
Mechanical	01	Compressed Air	03	Pressure/flow controller	04			Pressure reduction and flow control valve with direct acting controls	Sticker attached in prominent place.
Mechanical	01	Compressed Air	03	Filter	05			In line filter unit	Sticker attached in prominent place.
Mechanical	01	Compressed Air	03	Filter/regulator/lubricator	06			In line flow regulator with oil lubrication and reservoir for use with equipment requiring oil lubrication.	Sticker on tag attached by chain to adjacent compressed air pipe.
Mechanical	01	Direct Gas Fired Plant	04	Radiant Panel - Indirect Gas	01			Packaged indirect gas fired radiant panel including fan, connection to flue, gas valve, controls etc.	Sticker on tag attached by chain to gas supply at main isolation valve.

Group		Sub Group		SubSubGroup		SUBSUBSUBGroup	Detailed Description of components that form a single asset	Preferred Tag Location and Means of Attachement NOTE: this may need to be amended to suit particular circumstances
Electrical	02	Hand Drier	01				Electric hand drier in washrooms	On face of hand drier
Electrical	02	CCTV Control	05	Camera	01			On side of camera
Electrical	02	CCTV Control	05	Recorder	02			On top of recorder
Electrical	02	Emergency light	06	Emergency light inverter			Packaged inverter associated with emergency lighting	On or imediately visible when looking at control panel of inverter
Electrical	02	Emergency light	06	Network Unit			Eg P4 controller	On side of box
Electrical	02	Ventilation Systems						
Electrical	02	Ventilation Systems	07	Extract Fan	01		Locally switched and/or controlled extract fan either not ducted or, if in duct, of less than 70W motor rating (NOTE: larger ducted extract fans and fans controlled directly from the Trend BEMS are to be recorded under category 01.01.02)	In visible location on casing of extract fan
Electrical	02	Ventilation Systems	07	Heat Recovery Ventilation Unit	02		Packaged heat recovery unit including supply and extract fans, supply and extract filters, supply/extract air heat exchanger and packaged controls. This does not include plant fully controlled by the Trend nor does it include air handling units with LPHW and/or ChW coils.	In visible location on front or side of unit
Electrical	02	Lighting	08	Scene Controller	01		Eg Helvar/Questron	On or immiediately visible when looking at controller.
Electrical	02	Tea boilers	11				Hydroboil' type plumbed in type of instantaneous water heaters for tea and coffee making in local kitchenettes and similar	On faceof tea boiler
Electrical	02	Fire curtain	13				Motorised fire or smoke curtains or smoke ventilators	In visible location on motor enclosure.
Electrical	02	Emergency Generator	14				Standby emergency generators	On control panel fo generator
Electrical	02	Electric Heater	15				Local oil filled, fan or natural electric convector type of heater NOT one an electic heater associated with ducted mechancal system which should be logged under category 01.01.04	On side of unit close to power supply
Electrical	02	Power	17	LV Switchboards	01			On outside of main door to switchboard
Electrical	02	Power	17	LV Distribution Board	02			On outside fo main door to distribution board
Electrical	02	Power	17	UPS	03			On face of unit
	02	Power	17	Power Factor Correction Unit	04			On face of unit
Electrical	02	Alarm	18	Fire Alarm Panel	01		One on each main Fire alarm panels and one on each repeater panel	On face of fire alarm panel in visible location not obscuring any other relevant information about FAP
Electrical	02	Alarm	18	Security Alarms	02		One on each security alarm panel	On face of alarm panel in visible location not obscuring any other relevant information about panel
Electrical	02	Automatic Door	19	Controllers	01			On casing of controller.
Electrical	02	Access Control	20	Doors with Access Control	01		If not covered under doors generally.	On side of one of the access control units only (on external doors this should be the one inside the building)
Electrical	02	Evacuation Lift	21	Changeover Unit	01		Automatic changeover unit for secondary power supply in event of primary power failure (where applicable)	On face of casing to changeover unit.

Group		Sub Group		SubSubGroup		Detailed Description of components that form a single asset	Preferred Tag Location and Means of Attachment NOTE: this may need to be amended to suit particular circumstances
Plumbing Systems	03	DHWS Direct Fired Water Heater	01			Packaged direct fired water heater	Sticker On face of water heater
Plumbing Systems	03	Cold water storage tank	02			One piece or sectional cold water storage tank including float operated or other type of fill valve, vent, overflow, warning pipe, inspection hatches, strainers etc	Sticker on tag attached by chain to fill pipe adjacent to tank connection.
Plumbing Systems	03	Electric water heater	03			Packaged electric water heater, instantaneous or semi instantaneous	Sticker on case of water heater
Plumbing Systems	03	Domestic Hot Water Buffer Vessel of Cylinder	04			Buffer vessel for storage of domestic hot water without indirect coil but with or without electric immersion heater	Sticker on tag attached by chain to cold feed pipe.
Plumbing Systems	03	Temperature regulating valve	05			Temperature regulating mixing valve serving single or range of WHBs or showers (not single showers)	Sticker on tag attached by chain to pipe connecting to mixer valve
Plumbing Systems	03	Urinal flush control valve	06			Flush control valve including PIR sensor, solenoid valve, battery or mains power supply as applicable.	Sticker on tag attached by chain to pipe connecting to solenoid valve
Plumbing Systems	03	RPZ valve	07			Reduced Pressure Zone valves to prevent backflow contamination	Sticker on tag attached by chain to pipe connecting to RPZ valve
Plumbing Systems	03	Water softener (salt)	08			Water softener including mineral tank, brine tank and control valve	Sticker on water softener control valve
Plumbing Systems	03	Water softener (Magnetic)	09			Static or electro magnetic treatment device	Sticker on tag attached by chain to pipe connecting to water softener

Group		Sub Group		SubSubGroup		Detailed Description of components that form a single asset	Preferred Tag Location and Means of Attachement NOTE: this may need to be amended to suit particular circumstances
Air conditioning	04	DX unit	04			Individual DX cooling only or heat pumps Unitary or Split systems. Complete system including indoor unit, outdoor unit, condensate pump and interconnecting pipework, condensate drainage and controller as applicable.	On external unit adjacent to main power supply.
Air conditioning	04	Multi split	05			Multi split air conditioning systems including two pipe and three pipe VRF units and heat pumps. Complete system with all components including indoor units, outdoor unit, condensate pumps, interconnecting pipework, condensate drainage and controllers.	On external unit adjacent to main power supply.

Group		Sub Group		SubSubGroup		Detailed Description of components that form a single asset	Preferred Tag Location and Means of Attachment NOTE: this may need to be amended to suit particular circumstances
Controls	06	Control Panels	01			HVAC Control panels with a Power Section containing mains voltage single and three phase circuit protection starters overload protection etc.	Sticker on face of control panel
Controls	06	Outstations	02			BEMS outstations (generally Trend) either in Controls section of a Control Panel as described above, within a Controls enclosure or stand alone. Connected to current loop BEMS network or (on newer systems) connected into ISolutions TCP/IP RJ11 computer network point with static IP address. including DI and AI from all sensors, stats, physical knobs and switches, actuators and signals to starters.	Sticker on face of outstation
Controls	06	Gas leak Detection Systems	03			Gas leak detection panels either in Controls section of a Control Panel as described above, within a separate enclosure or stand along complete with all associated detectors, knockoff buttons, gas valve and interfaces with any remote alarm system or BEMS.	Sticker on face of panel
Controls	06	Variable Speed Drives	04			Variable speed drive (inverter or speed controller)	Sticker on face of unit
Controls	06	Window, vent, blind systems	05			Control panels dedicated to automatic opening of smoke or temperature control natural ventilation systems including all associated actuators, sensors and interface with FAP and/or BEMS.	Sticker on face of control panel

Group		Sub Group		SubSubGroup		Detailed Description of components that form a single asset	Preferred Tag Location and Means of Attachment NOTE: this may need to be amended to suit particular circumstances
Automatic Metering	08	Dataloggers	01			Packaged Data logger receiving pulse or comms signals via cables connected from a number of meters in the field and connected into ISolutions TCP/IP RJ11 computer network point with static IP address provided	Sticker on face of data logger
Automatic Metering	08	Electricity Meters	02			Pulse output or comms output electricity meter including fitted CT coils.	Sticker on face of meter or, if not possible, on adjacent panel or enclosure.
Automatic Metering	08	Gas Meters	03	Gas Meter Flow section	01	Gas meter with or without pulse output	Sticker on meter
Automatic Metering	08	Gas Meters	03	Intrinsically safe device	02	eg Chatterbox or Cello including enclosure and junction box if/where applicable with pulse input and output	Sticker on face of device
Automatic Metering	08	Gas Meters	03	Corrector	03	Pressure and temperature corrector device associated with a large gas meter with or without pulse output	Sticker on face of corrector
Automatic Metering	08	Water Meters	04			Water Meter with or without pulse output	Sticker on tag attached by chain to pipe connecting to water meter
Automatic Metering	08	Heat Meters	05	Flow Section	01	Water flow meter mechanical or ultrasonic including electronic calculator with pulse output	Sticker on tag attached by chain to pipe connecting to water meter
Automatic Metering	08	Heat Meters	05	Integrator and temperature sensors	02	Integrator device (normally Kamstrup) including flow and return temperature sensors and input from flow section.	Sticker on face of integrator.
Automatic Metering	08	Radio Systems	06	Radio Receivers	01	Radio receiver including remote aerial and booster as/where applicable receiving signals from a number of transmitters in the field and incorporating data logger connected into ISolutions TCP/IP RJ11 computer network point with static IP address.	Sticker on face of receiver.
Automatic Metering	08	Radio Systems	06	Radio Transmitters	02	Radio transmitter connected by wire to a pulse output from a meter in the field and transmitting to associated receiver.	Sticker on chain attached to cable from transmitter.