

STARLOG

Quick Link «SQL» System

Model 6603

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INSTRUMENTS WITH «SQL» CONNECTORS**

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STANDARD INSTRUMENT CONNECTIONS**

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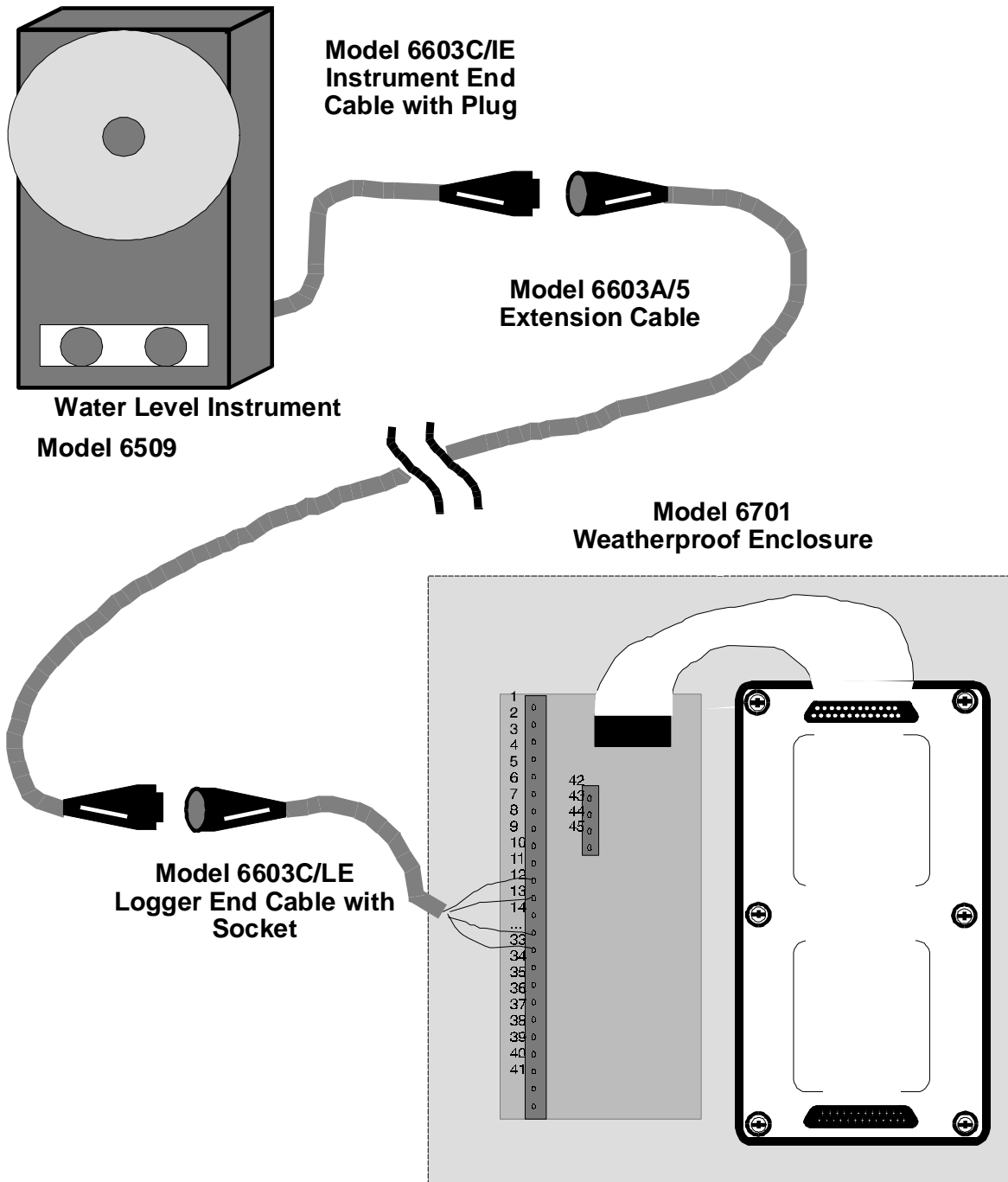
1. INTRODUCTION

The STARLOG Quick Link «SQL» System is UNIDATA's high integrity, weatherproof interconnection system for STARLOG products. It is a quick and efficient means of connecting instruments.

The «SQL» associated products which are described in this supplement are:

Model	Description
Model 6603A/5	«SQL» Extension Cable (5 metre)
Model 6603A/10	«SQL» Extension Cable (10 metre)
Model 6603B /5	«SQL» Half Extension Cable (5 metre)
Model 6603B/10	«SQL» Half Extension Cable (10 metre)
Model 6603C/IE	«SQL» Instrument end cable/plug
Model 6603C/LE	«SQL» Logger end cable/socket
Model 6603E/P	«SQL» Weather proof plug
Model 6603E/S	«SQL» Weather proof socket
Model 6603I	«SQL» Identification Pack

2.



*Example 1: Water Level Instrument upgraded to «SQL»
(using 6603C/IE cable) and connections to the Data Logger
(using a 6603A/5 5 m extension cable and a Model 6603C/LE end cable.)*

THE «SQL» SYSTEM

The «SQL» system consists of a plug connected to the instrument, an extension



Model 6603C/IE
«SQL» Instrument End Cable/Plug



Model 6603C/LE
«SQL» Logger End Cable/Socket

cable and an end cable.

2.1. Model 6603C End Cables

Two different types of end cable are available: one for connection to the instrument (Model 6603C/IE) and the other for direct connection to the Data Logger (Model 6603C/LE).

Two types of extension cable are available. Both types are supplied in either 5 or 10 metre lengths.



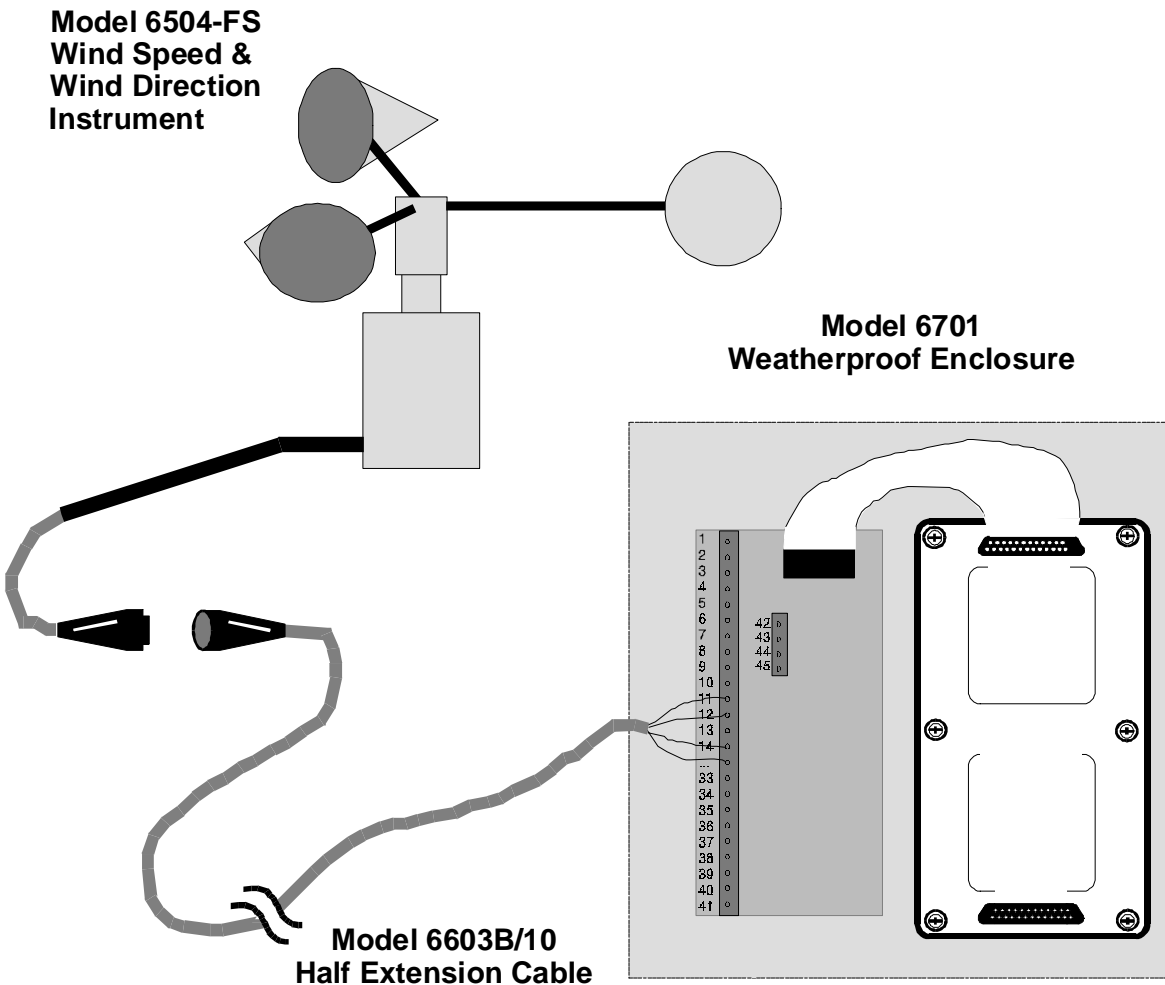
Model 6603A/10 Extension Cable

2.2. Model 6603A Extension Cable

The Model 6603A/5 and 6603A/10 Extension Cables (5 and 10 metre lengths) have a weatherproof socket at one end (to connect an instrument) and a plug at the other end (to connect to a Data Logger via a Model 6603C/LE Logger End Cable.)



Model 6603B/10 Half Extension Cable



Example 2 «SQL» instrument connected to Data Logger with an «SQL» Half Extension Cable (model 6603B/10).

2.3. Model 6603B Half Extension Cable

The Model 6603B/5 and 6603B/10 Extension Cables connect to an instrument via a weatherproof socket at one end and, at the other end, directly wire to a Data Logger (via a Field Termination Strip or the Input Signals connector). A



*Model 6603E/P
«SQL» Weatherproof Plug*

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*Model 6603E/S
«SQL» Weatherproof Socket*

2.4. M

Model 6603E

Weatherproof Connectors

Model 6603E/P and Model 6603E/S (Plug and Socket) are «SQL» connectors available to enable you to upgrade existing equipment to the «SQL» system.



*Model 6603I
«SQL» Identification Pack*

2.5. Model 6603I Identification Pack

The identification pack consists of 5 different coloured cable ties which can be used to label the cables from different instruments.

3. CONNECTIONS

The «SQL» system consists of 8 core cable and 7 pin connectors. The following table shows which colour wire is connected to which pin on the connectors.

Pin	Wire
1	Red
2	Yellow
3	Black
4	White
5	Purple
6	Blue
7	Green & Brown (Shield, see note)

Note: The shield is only connected at the logger end of the «SQL» system. This means that the Shield of «SQL» logger end cables is connected at both ends, the shield of extension cables is connected at the logger end, and the shield of «SQL» instrument end cables is not connected.

4. ASSIGNMENT OF COLOURS

The wires assigned to power and ground are shown below:

Wire Colour	Function
Red	+5.00V DC
Green & Brown	common

The assignment of other colours depends on the instrument but common assignments are shown in the following table:

Wire Colour	Function
Blue	Serial Output
White	Serial Input
Yellow	Clock
Yellow	A0
Blue	A1
White	A2
Black	A3

5. SPECIFICATIONS

Model 6603E Plug and Socket

Protection Standard: IP65

Operating Temperature: -40°C to $+85^{\circ}\text{C}$

Contact Rating: 6 A at 250 V ac/ 300 V dc

Contact Resistance: $<8\text{m}\Omega$

Insulation Resistance: $>10^{13}\Omega$ (after 4 days at 20°C and 80% R.H.)

Lengths: Model 6603A/5	5 metres
Model 6603A/10	10 metres
Model 6603B/5	5 metres
Model 6603B/10	10 metres
Model 6603C/LE	0.5 metre
Model 6603C/IE	0.5 metre

Appendix A

INSTRUMENTS FITTED WITH «SQL» CONNECTORS

Model 6501–BS	Weather Instrument, Temperature
Model 6501–CS	Weather Instrument, Temperature, Global Radiation
Model 6501–DS	Weather Instrument, Temperature, Global Radiation and Humidity
Model 6501–ES	Weather Instrument, Temperature and Humidity
Model 6504–FS	Weather Instrument, Wind Speed and Direction

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Appendix B

STANDARD INSTRUMENT CONNECTIONS

To connect a standard instrument to a Data Logger using the «SQL» system simply connect the coloured wire indicated in the table below to the channel you are using in your Data Logging Scheme (see the relevant supplements for the equipment you are using (Data Logger Hardware or Field Termination Strip) for the pin or numbered terminal assigned to that channel.)

Instrument	Function	Default Channel	Cable Colour or terminal #	«SQL» Pin	«SQL» Colour
Model 6113A Digital Input Module	+5V		5V	1	Red
	Common		Gd	7	Grn/Brn
	Serial output	serial 0	SO	6	Blue
	Serial input		SI	4	White
	Clock	Clock 0	CK	2	Yellow
Model 6115A Signet Flow Transducer Interface	Common		Brown	7	Grn/Brn
	D.L. Battery		White	5	Purple
	Output	c0	Yellow	2	Yellow
Model 6501 Weather Instruments	+5V		Red	1	Red
	Common		Grn/Brn	7	Grn/Brn
	Temperature	a0	Yellow	2	Yellow
	Solar Radiation	a1	Blue	6	Blue
	Humidity	a2	Black	3	Black
Model 6503 Wind Run Anemometer	Common		White	7	Grn/Brn
	Shield			7	Grn/Brn
	Output	c0	Red	2	Yellow
Model 6504 Weather Instruments	+5V		Red	1	Red
	Common		Green	7	Grn/Brn
	Wind Speed	c1	Yellow	2	Yellow
	y Direction	a3	Grey	3	Black
	x Direction	a2	White	4	White

Instrument	Function	Default Channel	Cable Colour or terminal #	«SQL» Pin	«SQL» Colour
Model 6506 Tipping Bucket Rainfall Gauge	Common		White	7	Grn/Brn
	Shield			7	Grn/Brn
	Output	c0	Red	2	Yellow
Model 6507 Thermistor Probe	Common		White	7	Grn/Brn
	Shield			7	Grn/Brn
	Output	a0	Red	2	Yellow
Model 6508 Hydrostatic Water Depth Probe	+5V		Red	1	Red
	depth output	a0	Blue	2	Yellow
	Temp output	a1	Yellow	3	Black
Model 6509 Shaft Encoder Water Level Instrument	+5V		Red	1	Red
	Common		Green	7	Grn/Brn
	Serial output	serial 0	Blue	6	Blue
	Serial input		White	4	White
	Clock	Clock0	Yellow	2	Yellow
Model 6512 Pressure Transmitter	+5V		3	1	Red
	Common		2	7	Grn/Brn
	Output	a0	1	2	Yellow
Model 6515A AD590 Probe	+5V		Yellow	1	Red
	Output	a0	Black	2	Yellow
Model 6517 Phase Angle Instrument	+5V		7	1	Red
	Common		1	7	Grn/Brn
	Serial output	serial 0	3	6	Blue
	Serial input		2	4	White
	Clock	Clock0	6	2	Yellow
Model 6518–1 Water Conductivity Instruments	+5V		pin 21 or FTS 5	1	Red
	Common		7/8	7	Grn/Brn
	serial output	serial 0	22/7	6	Blue
	serial input		10/6	4	White
	Clock	Clock 0	11/9	2	Yellow

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Instrument	Function	Default Channel	Cable Colour or terminal #	«SQL» Pin	«SQL» Colour
Model 6519 AC Voltage/ Current/ Frequency Instrument	Common		4	7	Grn/Brn
	Red V	a0	1	2	Yellow
	White V	a1	2	6	Blue
	Blue V	a2	3	4	White
	Red I	a3	6	3	Black
	White I	a4	7	5	Purple
	Blue I	a5	8	1	Red
	Frequency	c0	5		n/c
Model 6521 Capacitive Water Depth Probe	+5V		Red	1	Red
	Common		Black	7	Grn/Brn
	Output	a0	Blue or Yl	2	Yellow
Model 6522 Barometric Pressure	+5V		3	1	Red
	Common		2	7	Grn/Brn
	Output	a0	1	2	Yellow
Model 6531 Basic Water Level Instrument	+5V		Red	1	Red
	Common		Green	7	Grn/Brn
	serial output	serial 0	Blue	6	Blue
	serial input		White	4	White
	Clock	Clock 0	Yellow	2	Yellow

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