

## Control Valve Wiring – Single Core

### Application

For use in automatic irrigation systems to connect solenoid valves to controller. Extra low voltage systems only (as defined by AS3000). Suitable for direct burial. Not suitable for connection to Mains Power Supply

### Specification

Conductor: Multi-strand plain copper wire

Insulation: UV stabilised polypropylene to AS3808

Colours: Black, Blue, Brown, Green, Red, White, Yellow

Coil Lengths: 100 and 500 metres

Sizes: 0.5, 1.0, 1.5, 2.5, 4.0, 6.0mm<sup>2</sup>

### Wiring Installation Hints

- It is important to know the current draw of the electrical

components so that the correct wire size is used.

- When installing control wire, ensure wire is looped at valve location to allow for expansion/contraction and soil movement.
- All valves to be installed in well drained gravel based valve box enclosures.
- A common wire links one wire on all solenoid valves to the controller and is usually black in colour.
- Ensure all wire connections are accessible for later servicing and fault finding.
- Ensure wire is not taut in the trench, i.e. allow for movement by providing extra slack in all installations.

- An active wire is defined as the wire that connects a valve to a specific station. They can be various colours.
- All wire connections must be waterproof, i.e. use wire connectors and sealant gel to ensure a waterproof connection.



### Typical Properties

Nominal Area (mm <sup>2</sup> )	Nearest AWG No.	Conductor No/Diam (mm)	Amp rating (Amps)	Insulation Thickness (mm)	Electrical Resistance @ 20°C ohms/1000m	Nominal OD (mm)	Weight (kg/100m)
0.5	20	7/0.30	3	0.3	38.4	1.6	0.7
1.0	17	7/0.43	10	0.6	21.2	2.5	1.2
1.5	16	7/0.50	16	0.6	13.6	2.8	1.6
2.5	13 ½	7/0.67	23	0.6	7.4	3.3	2.7
4.0	11	7/0.85	30	0.6	4.6	3.8	4.1
6.0	9 ½	7/1.04	39	0.7	3.1	4.55	6.16

### Ordering Information

Code	Description
SC05100XXX	Single Core 0.5mm <sup>2</sup> x 100m coil Multi-strand 7/0.30 Available in Black (BLK), Blue (BLU), Brown (BRN), Green (GRN), Red (RED), White (WHI), Yellow (YEL). <b>(To order quote (for example) SC05100BLK)</b>
SC10100XXX	Single Core 1.0mm <sup>2</sup> x 100m coil Multi-strand 7/0.43 Available in seven standard colours as above
SC10500XXX	Single Core 1.0mm <sup>2</sup> x 500m coil Multi-strand 7/0.43 Available in seven standard colours as above
SC15100XXX	Single Core 1.5mm <sup>2</sup> x 100m coil Multi-strand 7/0.50 Available in seven standard colours as above
SC15500XXX	Single Core 1.5mm <sup>2</sup> x 500m coil Multi-strand 7/0.50 Available in seven standard colours as above
SC25500XXX	Single Core 2.5mm <sup>2</sup> x 500m coil Multi-strand 7/0.67 Available in seven standard colours as above
SC40500XXX	Single Core 4.0mm <sup>2</sup> x 500m coil Multi-strand 7/0.85 Available in seven standard colours as above
SC60500XXX	Single Core 6.0mm <sup>2</sup> x 500m coil Multi-strand 7/1.04 Available in seven standard colours as above



## Control Valve Wiring – Multi-core

### Application

For use in automatic irrigation systems to connect solenoid valves to controller. Extra low voltage systems only (as defined by AS3000). Suitable for direct burial. Not suitable for connection to Mains Power Supply

### Specification

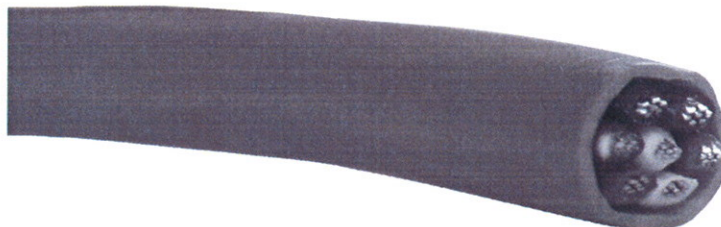
Conductor: Multi-strand plain Oxygen free copper wire

Insulation: UV stabilised, Red polypropylene to AS3808

Outer Sheath: Flexible 75°C PVC to AS3808 RoHS Compliant

Coil Lengths: 50m (0.5mm<sup>2</sup> only), 100 and 500 metres

Sizes: 0.5, 1.0, 1.5, 2.5, 4.0, 6.0mm<sup>2</sup>



### Ordering Information

MC	xx	yy	zz
	02 (2 cores)	05 (0.5mm <sup>2</sup> )	50 (50 metres)
	03 (3 cores)	10 (1.0mm <sup>2</sup> )	100 (100 metres)
	05 (5 cores)	15 (1.5mm <sup>2</sup> )	500 (500 metres)
	07 (7 cores)	25 (2.5mm <sup>2</sup> )	
	09 (9 cores)		
	13 (13 cores)		

Example of how to order: 7 core x 1.5mm<sup>2</sup> x 500 metre coil – MC0715500

### Typical Properties

Nominal Area per core (mm <sup>2</sup> )	No. of Cores.	Conductor No/ Diam (mm)	Amp rating (Amps)	Insulation Thickness (mm)	Sheath Thickness (mm)	Electrical Resistance @ 20°C ohms/1000m	Nominal OD (mm)	Weight (kg/100m)
0.5	3	7/0.30	4	0.3	0.6	38.4	4.60	3.20
	5	7/0.30	4	0.3	0.6	38.4	5.50	4.60
	7	7/0.30	4	0.3	0.6	38.4	6.10	6.00
	9	7/0.30	4	0.3	0.6	38.4	7.10	7.50
	13	7/0.30	4	0.3	0.7	38.4	8.50	10.70
1.0	2	7/0.43	10	0.4	0.6	21.2	5.50	3.90
	3	7/0.43	10	0.4	0.6	21.2	5.80	4.70
	5	7/0.43	10	0.4	0.6	21.2	7.20	7.30
	7	7/0.43	10	0.4	0.6	21.2	7.80	9.80
	9	7/0.43	10	0.4	0.7	21.2	9.20	12.30
	13	7/0.43	10	0.4	0.7	21.2	10.70	17.70
1.5	2	7/0.50	16	0.4	0.6	13.6	5.90	4.40
	3	7/0.50	16	0.4	0.6	13.6	6.20	6.40
	5	7/0.50	16	0.4	0.6	13.6	7.70	9.50
	7	7/0.50	16	0.4	0.7	13.6	8.60	12.70
	9	7/0.50	16	0.4	0.7	13.6	10.20	16.10
	13	7/0.50	16	0.4	0.7	13.6	11.60	22.80
2.5	2	7/0.67	23	0.4	0.6	7.41	7.10	6.80
	3	7/0.67	23	0.4	0.6	7.41	7.20	9.30
	5	7/0.67	23	0.4	0.7	7.41	9.20	14.70
	7	7/0.67	23	0.4	0.7	7.41	10.10	20.70
	9	7/0.67	23	0.4	0.7	7.41	12.90	26.00
	13	7/0.67	23	0.4	0.8	7.41	14.20	36.00

### Core Colours

2 core	Black	Red											
3 core	Black	Red	White										
5 core	Black	Red	White	Blue	Green								
7 core	Black	Red	White	Blue	Green	Brown	Yellow						
9 core	Black	Red	White	Blue	Green	Brown	Yellow	Pink	Grey				
13 core	Black	Red	White	Blue	Green	Brown	Yellow	Pink	Grey	Violet	Beige	Lt Green	Orange



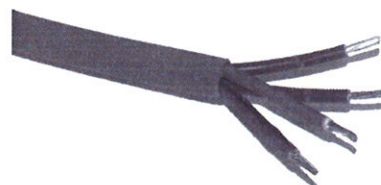
**GDC, TDC Decoder  
Communication Cable**
**Application**

For use specifically in GDC and TDC control systems to connect decoders to the interface unit. Extra low voltage systems only (as defined by AS3000). Suitable for direct burial. Not suitable for connection to Mains Power.

**Features**

- Heavy duty outer sheath to help retain the integrity of the cable.
- Two cores are colour coded to match the communication cable from the decoders and reduce the possibility of wiring errors.

Specifications	
Conductor	Tinned, solid core copper wire
No. of conductors	2
Insulation	V75 PVC to AS3808, 1.5mm thick
Outer Sheath	Red Heavy duty, 4V75 PVC to AS3808, 1.2mm thick
Colours	1 x Black and 1 x white insulation with Red outer sheath
Coil Length	500 metres
Size	2.5mm <sup>2</sup> (two conductors)
Coil Weight/100m	13.4 kg
Nominal Cross section	7.5mm x 12.5mm
Electrical resistance @ 20°C, ohms/1000m	7.35

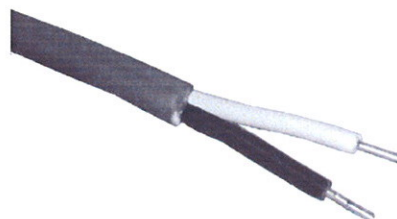

**GDC, TDC Decoder-Solenoid Cable**
**Application**

For use specifically in GDC and TDC control systems to connect decoders to each solenoid. Colour coded to match decoder wiring and help avoid incorrect connection. Suitable for direct burial. Not suitable for connection to Mains.

**Features**

- Two products available; 4 core, 8 core.
- Use 4 core on 1 and 2 output decoders
- Use 8 core on 4 output decoders
- Colour coding helps to avoid incorrect solenoid wiring polarity. Always connect the Black striped wire to the Black wire of the latching coil.

Specifications	
Conductor	Stranded copper wire
Insulation	Coloured UV stabilised polypropylene
Outer Sheath	Red 4V75 PVC to AS3808
Colours: 4 core	Green, Green with Black stripe, Red and Red with Black stripe
Colours: 8 core	Green, Green with Black stripe, Red and Red with Black stripe, orange and Orange with Black stripe, Blue and Blue with Black stripe
Coil Length	500 metres
Size	1.5mm <sup>2</sup> conductors
Coil Weight	40kg (4 core) 75kg (8 core)
Electrical resistance @ 20°C, ohms/1000m	13.6


**Ordering Information**

Code	Description
MC0225500-D	2 x 2.5mm <sup>2</sup> solid core copper GDC/TDC communication cable x 500 metre
MC0415500-D	4 x 1.5mm <sup>2</sup> stranded copper GDC/TDC cable x 500 metre. Use with 1 & 2 output decoders
MC0815500-D	8 x 1.5mm <sup>2</sup> stranded copper GDC/TDC cable x 500 metre. Use with 4 output decoders