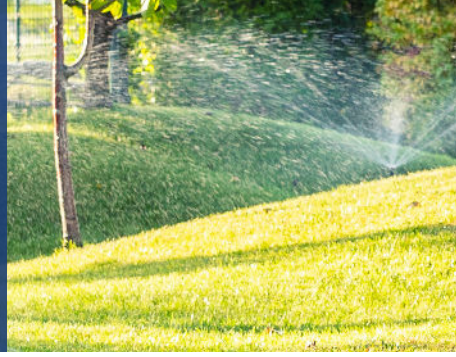
TECH SPECIFICATIONS

MK3 Interface

The MK3 Interface is an interface for output decoders and input decoders.



MK3 Interface

The MK3 interface enables the integration of your irrigation solution with Crysberg's advanced 2-wire decoders, both input and output.

This integration significantly enhances the capabilities of your smart irrigation controller or PLC, elevating your agricultural irrigation to new heights. Simply connect your system to Crysberg using our API to leverage the potential of managing up to 120 input decoders or 500 output decoders on a single two-wire cable.

	MK3 Interface
Electric output (2-wire)	
Nominal voltage	40V peak alternating
Max voltage	42V peak alternating
Max current	600mA continuously
Decoders *	500
Active decoders *	100
Sensor decoder, Digital *	125
Sensor decoder, Analog *	40 analog 4-20mA (constant power) 125 analog 0-10VDC
Terminals	2 sets
Wire size, terminal	AWG 12-16 / 2.0 – 3.5mm^2

Electrical input (remote sys)	
Ethernet (RJ45)	1, 10/100MB/s, <100m cable
RS232	115200 b/s, < 30m cable
Protection	Galvanic is olated

Mechanical/other	
Size (W x H x D)	145mm x 105mm x 75mm
Mounting	DIN Rail
GND Lug	AWG 6 / 13 mm^2. Must be connected to a ground rod/plate with < 10Ω. Do NOT connect to mains GND as it voids 2-wire cable corrosion protection.

* The values are "Up to" and depends upon the final field configuration.

Power supply	
Voltage, supply	42VDC DIN rail, switch mode
Power	65W

Environment	
Operation	0 up to 60°C / 32 to 140°F
Storage	-20 to 70°C / -4 to 158°F
Humidity	95% non-condensing

Software Features	
Technology	Rest/JSON API on RS232 and Ethernet
Decoders & diagnostics	· Discover new decoders/rediscover all decoders · 2-wire low voltage supervision · 2-wire resistance to decoders · Leakage to ground detection and tracing
Output Decoder	· Turn on/off output · Adjust drive parameters or auto-detect drive parameters · Check plunger moves and stay on
Solenoid diagnostics	· Solenoid resistance and inductance supervision · Solenoid current leakage to ground
Input Decoder	· Poll sensor data · Advanced interrupt setup on sensor data change · Power management for sensor reading · Arithmetic value conversion

Wire length

The following tables show 2-wire wire length for a system with
- 100 output decoders on one 2-wire path
- 8 decoders active on one 2-wire path
- 10 analog sensor decoder 4-20mA
- 50 analog sensor decoder 0-10VDC and with the decoders evenly distributed.

Metric wire size:				
Nominal Wire size	Maximum length of critical wire path			
	Loop		Star	
	Km	Miles	Km	Miles
2.0mm²	14.0	8.4	3.5	2.1
2.5mm²	17.2	10.8	4.3	2.7
3.0mm²	20.8	12.8	5.2	3.2
3.5mm²	24.4	15.2	6.1	3.8

Imperial wire size:				
Nominal Wire size	Maximum length of critical wire path			
	Loop		Star	
	Km	Miles	Km	Miles
16 AWG	10.4	6.4	2.6	1.6
14 AWG	16.8	10.4	4.2	2.6
12 AWG	26.8	16.8	6.7	4.2