



Delight Through Connections

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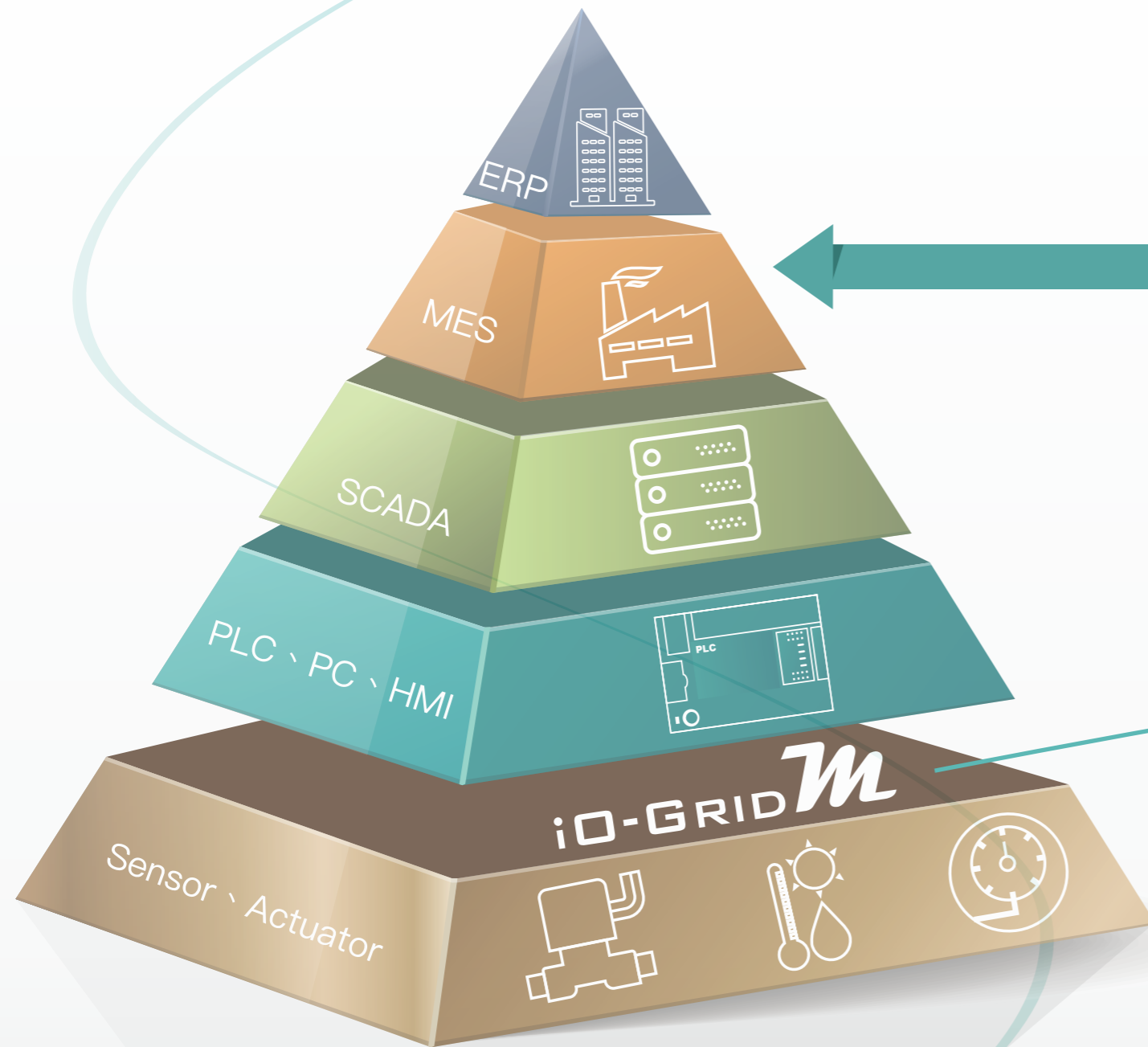
DAUDIN CO., LTD.

iO-GRID™
**Remote
I/O**

IC-02.4

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Data Collection and Analysis for Industrial Production



Seamless Connection Between Control and Field Level



Application Area

- General Machinery
- Processing Machinery
- Textile Industry
- Building Automation
- Wastewater Treatment
- Medical Engineering
- Timber Processing
- CNC Machining
- Precision Instrument
- Smart City
- Biotechnology
- Smart Agriculture
- Plastic Machinery
- Tire and Rubber Industry
- Transportation Logistics
- Wind Power
- Food Industry
- Packaging Machinery
- Printing and Paper Industry
- Handling and Assembly Technology
- Solar Energy
- Automobile Industry
- Forming Process, Steel Plate Processing
- Wire, Cable and Pipe Industry
- Robotics
- Energy Industry
- Semiconductor Manufacturing

and more...





First Step Towards Industrialization

- Large volume of data collection for Industry 4.0 can be effortlessly integrated
- Designed for Modbus Protocol, compatible with various types of controllers (i.e., PLC, IPC, etc....)
- Wide selection of function modules to satisfy any industrial field applications
- Fast assembly, simple operation, and improved system efficiency
- EN 61000-6-2 / EN 61000-6-4, IEC / EN / UL 61010-1, IEC / EN / UL 61010-2-201 Standards

Enhanced Expansion Capability

- Given the different environmental requirements, various function modules can be flexibility configured
- Each master station can connect up to 247 slave stations (approximately 4000 points)
- Modules from only 12 mm wide, provides great aesthetic and organization in panels
- Reduce 70% wiring time and 60% wiring materials
- Easy recognition of module ID and status, improving maintenance efficiency

Gateway Module

Installed in iO-GRID™ systems for Modbus TCP applications. This module includes Ethernet ports, up to four RS485 ports, and LED indicators. Gateway Module utilizes Modbus TCP protocol to support two-way communication flow of data between iO-GRID™ system and the controller.

iO-GRID Power Supply

iO-GRID Power Supply converts the standard 100-240 VAC to a stable low voltage 24 VDC. Then from 24 VDC to 5 VDC, the voltage suitable for all the modules in iO-GRID system.

Power Conversion

- 100-240 VAC to 24 VDC
- 24 VDC to 5 VDC

RJ45 Interface Module

Utilizes Push-In Design terminal blocks to increase the connectivity efficiency

Master Module

iO-GRID™ system's Master Module is quick to install and contains simple operation features. The controller only needs to send the commands to the Master Module, and the Master Module can efficiently relay the instructions to the I/O modules.

Master Module contains three sets of RS485 ports, one is used independently, and the other two are connected in tandem.



LED indicator to monitor the operational status of the system.



Mini USB port to setup the system settings.



Digital Input Module

iO-GRID™ system supports both sinking and sourcing sensors and switches. Every module contains 16 channels, and each channel includes a LED indicator.

Analog Input Module

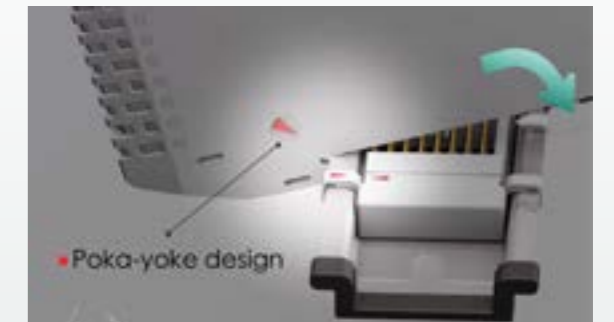
Includes voltage and current type modules, satisfying the industrial automation requirements for various meters, analog sensors and other analog signal applications. Every module contains 4 channels, and each channel includes a LED indicator.

iO-GRID™ Terminal Block

The terminal block utilizes PID (Push-In Design) connectivity, allowing a tool free installation, neat and organized wiring aesthetic, and maximum connection stability.



iO-GRID™ Simple to Install



Digital Output Module

iO-GRID™ system user can choose between the modules of sinking or sourcing, depending on the circuit requirement.

Every channel includes a LED indicator.




Analog Output Module

Includes voltage and current type modules for various meter. Every module contains 4 channels, and each channel includes a LED indicator and grounding feature.




GFPS-0202 GFPS-0303

Power Supply Module
For more detail, see Page 10



GFGW-RM01N GFGW-RM02N

Gateway Module
For Modbus TCP application.
For more detail, see Page 12



GFAI-RM10 GFAI-RM20 GFAO-RM10 GFAO-RM20 GFAX-RM10 GFAX-RM20

Analog I/O Module
For more detail, see Page 16-21




Dinkle Bus Plate
For more detail, see Page 27




BS-214 BS-210

Adaptor Module
For Relay Module or third-party power supply.
For more detail, see Page 28



GFMS-RM01N GFMS-RM01S

Master Module
For more detail, see Page 13



GFDI-RM01N GFDO-RM01N GFAR-RM11 GFAR-RM21

Digital I/O Module
For more detail, see Page 14, 15 and 24

Power Supply Module



GFPS-0202




GFPS-0303

Technical Data

Input Nominal Rating	100~240 VAC	Input Nominal Rating	21 ~ 28.8 VDC
Inrush Current (cold start)	34 A	Max Input Current	<1.3 A
Rated Output Power	48 W / 2 A	Rated Output Power	20 W / 4 A
Output Voltage	24 VDC ± 1%	Rated Output Voltage	5 VDC ± 3%
Overload Protection	Hiccup overload protection	Overload Protection	Latching overload protection
Overload	120%-185% Rated output power	Overload	127%-170% Rated output power
Overvoltage Protection	Latching voltage protection	Overvoltage Protection	Clamping protection
Overvoltage	30~34 VDC	Overvoltage	Clamping on 6.5 VDC~6.7 VDC

General Data

Dimensions W*D*H	20 x 100 x 97 mm	Dimensions W*D*H	12 x 100 x 96 mm
Weight	126 g	Weight	68 g
Operating Temperature	-20...+60°C	Operating Temperature	-20... +70°C
Relative Humidity	RH 20...90%	Relative Humidity	RH 20%...90%
Altitude Limit	< 2000 m	Altitude Limit	< 2000 m
Ingress Protection (IP)	IP 20	Ingress Protection (IP)	IP 20
Pollution Severity	II	Pollution Severity	II
Safety Approval	CE	Safety Approval	CE
Product Certification	UL 61010-1 & UL 61010-2-201	Product Certification	UL 61010-1 & UL 61010-2-201
Wire Range (IEC/UL)	0.2mm ² ~ 2.5mm ² / AWG 26 ~ 12		
Wire Ferrules 	DN00708D DN01008D DN01508D		

Edge Computer




GFPC-0303

Technical Data

CPU	Broadcom BCM2837B0 Cortex-A53, 64-bit SoC @ 1.2 GHz
Memory	32 GB eMMC Flash memory
Display	HDMI * 1
USB	USB 2.0 *2
Ethernet	100 Mbps Port *2
Indicator	LED for System status * 6
Serial	RS485 / RS232 * 1
Ext. Power Supply	5 VDC
Current Draw	Max. 1A@5 VDC

General Data

Dimensions W*D*H	40 x 100 x 97 mm
Weight	169 g
Operating Temperature	0...50°C
Storage Temperature	-20...+75°C
Relative Humidity	RH 95%, non-condensing
Safety Approval	CE
Wiring Range(IEC/UL)	0.2mm ² ~ 1.5mm ² / AWG 28 ~ 16
Wiring Ferrules 	DN00510D DN00710D

Gateway Module



GFGW-RM01N




GFGW-RM02N

Technical Data

Module Type	Modbus TCP Gateway	Modbus TCP Gateway
Power Supply	5 VDC via Dinkle Bus	5 VDC via Dinkle Bus
Current Draw	400 mA @ 5 VDC	400 mA @ 5 VDC
Number Port	Ethernet*2 / RS485*4	Ethernet*2 / RS485*1
Ethernet Interface	RJ45*2	RJ45*2
Serial Interface	PID Terminal Blocks	RS485 via Dinkle Bus
Protocol	Modbus TCP / RTU	Modbus TCP / RTU

General Data

Dimensions W*D*H	20 x 100 x 97 mm	20 x 100 x 97 mm
Weight	84 g	79 g
Operating Temperature	0...+55°C	0...+55°C
Storage Temperature	-25...+85°C	-25...+85°C
Relative Humidity	RH 95%, non-condensing	RH 95%, non-condensing
Altitude Limit	< 2000 m	< 2000 m
Ingress Protection(IP)	IP 20	IP 20
Pollution Severity	II	II
Safety Approval	CE	CE
Product Certification	UL 61010-1 & UL 61010-2-201	UL 61010-1 & UL 61010-2-201
Wire Range (IEC/UL)	0.2mm ² ~ 0.5mm ² / AWG 28 ~ 20	--
Wire Ferrules 	DN00510D	--

Master Module



GFMS-RM01N



GFMS-RM01S

Technical Data

Module Type	Master RS485	Master RS485
Power Supply	5 VDC via Dinkle Bus	5 VDC via Dinkle Bus
Max. Expansion Modules	247	247
Current Draw	48 mA @ 5 VDC	48 mA @ 5 VDC
Interface	RS485 via Dinkle Bus	RS485 via Dinkle Bus

Communication Data

Protocol	Modbus RTU	Modbus RTU
Interface Connector	RJ45	RJ45
Baud Rate Selectable	1200 to 1.5 Mbps	1200 to 1.5 Mbps


General Data

Dimensions W*D*H	20 x 100 x 97 mm	20 x 100 x 97 mm
Weight	84 g	70 g
Operating Temperature	0...+55°C	0...+55°C
Storage Temperature	-25...+85°C	-25...+85°C
Relative Humidity	RH 95%, non-condensing	RH 95%, non-condensing
Altitude Limit	< 2000 m	< 2000 m
Ingress Protection(IP)	IP 20	IP 20
Pollution Severity	II	II
Safety Approval	CE	CE
Product Certification	UL 61010-1 & UL 61010-2-201	UL 61010-1 & UL 61010-2-201

Digital Input Module



GFDI-RM01N

Technical Data	
Number Of Inputs	16
Power Supply	5 VDC via Dinkle Bus
Current Draw	35 mA @ 5 VDC
Voltage Category	24 VDC Sink / Source
On-State Signal Voltage	15...30 VDC
Off-State Signal Voltage	0...10 VDC
Interface	RS485 via Dinkle Bus
Communication Data	
Protocol	Modbus RTU
Format	N, 8, 1
Baud Rate Selectable	1200 to 1.5 Mbps
General Data	
Dimensions W*D*H	12 x 100 x 97 mm
Weight	60 g
Operating Temperature	0...+55°C
Storage Temperature	-25...+85°C
Relative Humidity	RH 95%, non-condensing
Altitude Limit	< 2000 m
Ingress Protection(IP)	IP 20
Pollution Severity	II
Safety Approval	CE
Product Certification	UL 61010-1 & UL 61010-2-201
Wire Range (IEC/UL)	0.2mm ² ~ 1.5mm ² / AWG 28 ~ 16
Wire Ferrules 	DN00510D DN00710D


Digital Output Module



GFDO-RM01N



GFDO-RM02N

Technical Data		
Number Of Outputs	16	16
Load Voltage	24 VDC (±10%)	24 VDC (±10%)
Power Supply	5 VDC via Dinkle Bus	5 VDC via Dinkle Bus
Current Draw	135 mA @ 5 VDC	135 mA @ 5 VDC
Load Specification	Ohmic, lamp load	Ohmic, lamp load
Sink / Source	Sink	Source
Max. Output Current	0.5 A per channel	0.5 A per channel
Interface	RS485 via Dinkle Bus	RS485 via Dinkle Bus
Communication Data		
Protocol	Modbus RTU	Modbus RTU
Format	N, 8, 1	N, 8, 1
Baud Rate Selectable	1200 to 1.5 Mbps	1200 to 1.5 Mbps
General Data		
Dimensions W*D*H	12 x 100 x 97 mm	12 x 100 x 97 mm
Weight	69 g	69 g
Operating Temperature	0...+55°C	0...+55°C
Storage Temperature	-25...+85°C	-25...+85°C
Relative Humidity	RH 95%, non-condensing	RH 95%, non-condensing
Altitude Limit	< 2000 m	< 2000 m
Ingress Protection (IP)	IP 20	IP 20
Pollution Severity	II	II
Safety Approval	CE	CE
Product Certification	UL 61010-1 & UL 61010-2-201	UL 61010-1 & UL 61010-2-201
Wire Range (IEC/UL)	0.2mm ² ~ 1.5mm ² / AWG 28 ~ 16	0.2mm ² ~ 1.5mm ² / AWG 28 ~ 16
Wire Ferrules 	DN00510D DN00710D	DN00510D DN00710D


Analog Input Module



GFAI-RM10



GFAI-RM11

Technical Data		
Number Of inputs	4	4
Power Supply	5 VDC via Dinkle Bus	5 VDC via Dinkle Bus
Current Draw	<105 mA @ 5 VDC	<105 mA @ 5 VDC
Resolution	12 bit	12 bit
Input Type	Voltage ±10 VDC	Voltage 0...10 VDC
Input	Differential	Differential
Accuracy	±0.1%	±0.1%
Input Impedance	400 kΩ, typical	400 kΩ, typical
Sample Rate	500 per second	500 per second
Interface	RS485 via Dinkle Bus	RS485 via Dinkle Bus
Communication Data		
Protocol	Modbus RTU	Modbus RTU
Format	N, 8, 1	N, 8, 1
Baud Rate Selectable	1200 to 1.5 Mbps	1200 to 1.5 Mbps
General Data		
Dimensions W*D*H	12 x 100 x 97 mm	12 x 100 x 97 mm
Weight	61 g	61 g
Operating Temperature	0...+55°C	0...+55°C
Storage Temperature	-25...+85°C	-25...+85°C
Relative Humidity	RH 95%, non-condensing	RH 95%, non-condensing
Altitude Limit	< 2000 m	< 2000 m
Ingress Protection (IP)	IP 20	IP 20
Pollution Severity	II	II
Safety Approval	CE	CE
Product Certification	UL 61010-1 & UL 61010-2-201	UL 61010-1 & UL 61010-2-201
Wire Range (IEC/UL)	0.2mm ² ~ 1.5mm ² / AWG 28 ~ 16	0.2mm ² ~ 1.5mm ² / AWG 28 ~ 16
Wire Ferrules 	DN00510D DN00710D	DN00510D DN00710D


Analog Input Module



GFAI-RM20



GFAI-RM21

Technical Data		
Number Of Inputs	4	4
Power Supply	5 VDC via Dinkle Bus	5 VDC via Dinkle Bus
Current Draw	<105 mA @ 5 VDC	<105 mA @ 5 VDC
Resolution	12 bit	12 bit
Input Type	Current 0...20 mA	Current 4...20 mA
Input	Differential	Differential
Accuracy	±0.1%	±0.1%
Input Impedance	100 Ω, typical	100 Ω, typical
Sample Rate	500 per second	500 per second
Interface	RS485 via Dinkle Bus	RS485 via Dinkle Bus
Communication Data		
Protocol	Modbus RTU	Modbus RTU
Format	N, 8, 1	N, 8, 1
Baud Rate Selectable	1200 to 1.5 Mbps	1200 to 1.5 Mbps
General Data		
Dimensions W*D*H	12 x 100 x 97 mm	12 x 100 x 97 mm
Weight	61 g	61 g
Operating Temperature	0...+55°C	0...+55°C
Storage Temperature	-25...+85°C	-25...+85°C
Relative Humidity	RH 95%, non-condensing	RH 95%, non-condensing
Altitude Limit	< 2000 m	< 2000 m
Ingress Protection (IP)	IP 20	IP 20
Pollution Severity	II	II
Safety Approval	CE	CE
Product Certification	UL 61010-1 & UL 61010-2-201	UL 61010-1 & UL 61010-2-201
Wire Range (IEC/UL)	0.2mm ² ~ 1.5mm ² / AWG 28 ~ 16	0.2mm ² ~ 1.5mm ² / AWG 28 ~ 16
Wire Ferrules 	DN00510D DN00710D	DN00510D DN00710D


Analog Output Module



GFAO-RM10



GFAO-RM11

Technical Data		
Number Of Outputs	4	4
Power Supply	5 VDC via Dinkle Bus	5 VDC via Dinkle Bus
Current Draw	<235 mA @ 5 VDC	<235 mA @ 5 VDC
Resolution	12 bit	12 bit
Output Type	Voltage ± 10 VDC	Voltage 0...10 VDC
Accuracy	$\pm 0.1\%$	$\pm 0.1\%$
Output Impedance	>2 K Ω	>2 K Ω
Interface	RS485 via Dinkle Bus	RS485 via Dinkle Bus
Communication Data		
Protocol	Modbus RTU	Modbus RTU
Format	N, 8, 1	N, 8, 1
Baud Rate Selectable	1200 to 1.5 Mbps	1200 to 1.5 Mbps
General Data		
Dimensions W*D*H	12 x 100 x 97 mm	12 x 100 x 97 mm
Weight	61 g	61 g
Operating Temperature	0...+55°C	0...+55°C
Storage Temperature	-25...+85°C	-25...+85°C
Relative Humidity	RH 95%, non-condensing	RH 95%, non-condensing
Altitude Limit	< 2000 m	< 2000 m
Ingress Protection (IP)	IP 20	IP 20
Pollution Severity	II	II
Safety Approval	CE	CE
Product Certification	UL 61010-1 & UL 61010-2-201	UL 61010-1 & UL 61010-2-201
Wire Range (IEC/UL)	0.2mm ² ~ 1.5mm ² / AWG 28 ~ 16	0.2mm ² ~ 1.5mm ² / AWG 28 ~ 16
Wire Ferrules 	DN00510D DN00710D	DN00510D DN00710D


Analog Output Module



GFAO-RM20



GFAO-RM21

Technical Data		
Number Of Outputs	4	4
Power Supply	5 VDC via Dinkle Bus	5 VDC via Dinkle Bus
Current Draw	<340 mA @ 5 VDC	<340 mA @ 5 VDC
Resolution	12 bit	12 bit
Output Type	Current 0...20 mA	Current 4...20 mA
Accuracy	$\pm 0.1\%$	$\pm 0.1\%$
Output Impedance	<500 Ω	<500 Ω
Interface	RS485 via Dinkle Bus	RS485 via Dinkle Bus
Communication Data		
Protocol	Modbus RTU	Modbus RTU
Format	N, 8, 1	N, 8, 1
Baud Rate Selectable	1200 to 1.5 Mbps	1200 to 1.5 Mbps
General Data		
Dimensions W*D*H	12 x 100 x 97 mm	12 x 100 x 97 mm
Weight	61 g	61 g
Operating Temperature	0...+55°C	0...+55°C
Storage Temperature	-25...+85°C	-25...+85°C
Relative Humidity	RH 95%, non-condensing	RH 95%, non-condensing
Altitude Limit	< 2000 m	< 2000 m
Ingress Protection (IP)	IP 20	IP 20
Pollution Severity	II	II
Safety Approval	CE	CE
Product Certification	UL 61010-1 & UL 61010-2-201	UL 61010-1 & UL 61010-2-201
Wire Range (IEC/UL)	0.2mm ² ~ 1.5mm ² / AWG 28 ~ 16	0.2mm ² ~ 1.5mm ² / AWG 28 ~ 16
Wire Ferrules 	DN00510D DN00710D	DN00510D DN00710D

Analog Input/Analog Output Module



GFX-RM10



GFX-RM11


Technical Data

Number Of Inputs/Outputs	2 inputs / 2 outputs	2 inputs / 2 outputs
Power Supply	5 VDC via Dinkle Bus	5 VDC via Dinkle Bus
Current Draw	<140 mA @ 5 VDC	<140 mA @ 5 VDC
Resolution	12 bit	12 bit
Input / Output Type	Voltage ±10V	Voltage 0...10V
Input	Differential	Differential
Accuracy	±0.1%	±0.1%
Input Impedance	400 kΩ, typical	400 kΩ, typical
Output Impedance	>2 KΩ	>2 KΩ
Sample Rate	500 per second	500 per second
Interface	RS485 via Dinkle Bus	RS485 via Dinkle Bus

Communication Data

Protocol	Modbus RTU	Modbus RTU
Format	N, 8, 1	N, 8, 1
Baud Rate Selectable	1200 to 1.5 Mbps	1200 to 1.5 Mbps

General Data

Dimensions W*D*H	12 x 100 x 97 mm	12 x 100 x 97 mm
Weight	61 g	61 g
Operating Temperature	0...+55°C	0...+55°C
Storage Temperature	-25...+85°C	-25...+85°C
Relative Humidity	RH 95%, non-condensing	RH 95%, non-condensing
Altitude Limit	< 2000 m	< 2000 m
Ingress Protection (IP)	IP 20	IP 20
Pollution Severity	II	II
Safety Approval	CE	CE
Product Certification	UL 61010-1 & UL 61010-2-201	UL 61010-1 & UL 61010-2-201
Wire Range (IEC/UL)	0.2mm ² ~ 1.5mm ² / AWG 28 ~ 16	0.2mm ² ~ 1.5mm ² / AWG 28 ~ 16
Wire Ferrules 	DN00510D DN00710D	DN00510D DN00710D

Analog Input/Analog Output Module



GFX-RM20



GFX-RM21


Technical Data

Number Of Inputs/Outputs	2 inputs / 2 outputs	2 inputs / 2 outputs
Power Supply	5 VDC via Dinkle Bus	5 VDC via Dinkle Bus
Current Draw	<240 mA @ 5 VDC	<240 mA @ 5 VDC
Resolution	12 bit	12 bit
Input / Output Type	Current 0...20 mA	Current 4...20 mA
Input	Differential	Differential
Accuracy	±0.1%	±0.1%
Input Impedance	100 Ω, typical	100 Ω, typical
Output Impedance	<500 Ω	<500 Ω
Sample Rate	500 per second	500 per second
Interface	RS485 via Dinkle Bus	RS485 via Dinkle Bus

Communication Data

Protocol	Modbus RTU	Modbus RTU
Format	N, 8, 1	N, 8, 1
Baud Rate Selectable	1200 to 1.5 Mbps	1200 to 1.5 Mbps


General Data

Dimensions W*D*H	12 x 100 x 97 mm	12 x 100 x 97 mm
Weight	61 g	61 g
Operating Temperature	0...+55°C	0...+55°C
Storage Temperature	-25...+85°C	-25...+85°C
Relative Humidity	RH 95%, non-condensing	RH 95%, non-condensing
Altitude Limit	< 2000 m	< 2000 m
Ingress Protection (IP)	IP 20	IP 20
Pollution Severity	II	II
Safety Approval	CE	CE
Product Certification	UL 61010-1 & UL 61010-2-201	UL 61010-1 & UL 61010-2-201
Wire Range (IEC/UL)	0.2mm ² ~ 1.5mm ² / AWG 28 ~ 16	0.2mm ² ~ 1.5mm ² / AWG 28 ~ 16
Wire Ferrules 	DN00510D DN00710D	DN00510D DN00710D

RTD Module



GFRT-RM01

Technical Data	
Number Of Outputs	4
Power Supply	5 VDC via Dinkle Bus
Current Draw	100 mA@5 VDC
Sensor Connector	2/3/4 wire
Resolution	16 bit
Accuracy	±0.1% FSR
Conversion Time	100ms per channel
Type	Pt50, Pt100, Pt200, Pt500 (-200°C~850°C) Pt1000 (-200°C~300°C) Ni100 (-60°C~180°C) Ni120 (-80°C~260°C)
Diagnostic	Sensor Open or Range Over, then Conversion Data=07FFF(32767)
Interface	RS485 via Dinkle Bus
Communication Data	
Protocol	Modbus RTU
Format	N, 8, 1
Baud Rate Selectable	1200 to 1.5 Mbps
General Data	
Dimensions W*D*H	12 x 100 x 97 mm
Weight	65 g
Operating Temperature	0...+55°C
Storage Temperature	-25...+85°C
Relative Humidity	RH 95%, non-condensing
Altitude Limit	< 2000 m
Ingress Protection (IP)	IP 20
Pollution Severity	II
Safety Approval	CE
Product Certification	UL 61010-1 & UL 61010-2-201
Wire Range (IEC/UL)	0.2 mm ² ~ 1.5 mm ² / AWG 28~16
Wire Ferrules 	DN00510D DN00710D


Counter Module




GFDI-RM02N

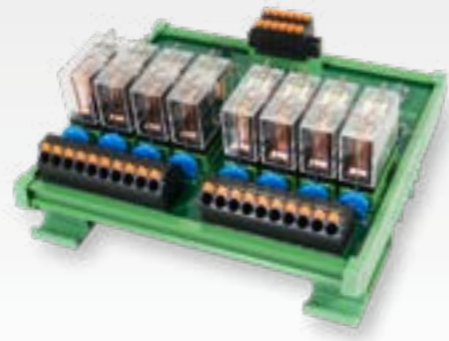


GFHC-RM01

Technical Data	
Number Of Inputs	4
Power Supply	5 VDC via Dinkle Bus
Current Draw	37mA@5 VDC
Frequency	Max. 100Hz
On-State Signal Voltage	15...30 VDC
Off-State Signal Voltage	0...10 VDC
Interface	RS485 via Dinkle Bus
Communication	
Protocol	Modbus RTU
Format	N, 8, 1
Baud Rate Selectable	1200 to 1.5 Mbps
General Data	
Dimensions W*D*H	12 x 100 x 97 mm
Weight	60 g
Operating Temperature	0...+55°C
Storage Temperature	-25...+85°C
Relative Humidity	RH 95%, non-condensing
Altitude Limit	< 2000 m
Ingress Protection (IP)	IP 20
Pollution Severity	II
Safety Approval	CE
Product Certification	UL 61010-1 & UL 61010-2-201
Wire Range (IEC/UL)	0.2 mm ² ~ 1.5 mm ² / AWG 28~16
Wire Ferrules 	DN00510D DN00710D

Technical Data	
Number Of Inputs	4
Power Supply	5 VDC via Dinkle Bus
Current Draw	250 mA@5 VDC
Frequency	Max 200kHz
On-State Signal Voltage	12...30 VDC
Off-State Signal Voltage	0...7 VDC
Input Duty Range	20~80%
Counting Mode	Up, Down, Up/Down Up/Inhibit, Up/Reset Down/Inhibit, Down/Reset Clock/Direction
Number Of Outputs	4
Sink / Source	Sink
Load Voltage	24 VDC(±10%)
Max. Output Current	0.5A
Interface	RS485 via Dinkle Bus
Communication	
Protocol	Modbus RTU
Format	N, 8, 1
Baud Rate Selectable	1200 to 1.5 Mbps
General Data	
Dimensions W*D*H	12 x 100 x 97 mm
Weight	65 g
Operating Temperature	0...+55°C
Storage Temperature	-25...+85°C
Relative Humidity	RH 95%, non-condensing
Altitude Limit	< 2000 m
Ingress Protection (IP)	IP 20
Pollution Severity	II
Safety Approval	CE
Wire Range (IEC/UL)	0.2 mm ² ~ 1.5 mm ² / AWG 28~16
Wire Ferrules 	DN00510D DN00710D

Relay Module



GFAR-RM11



GFAR-RM21



Technical Data

Number Of Outputs	8	4
Power Supply	24 VDC	24 VDC
Current Draw	<220 mA @ 24 VDC	<109 mA @ 24 VDC
Max. Switching Voltage	250 VAC / 30 VDC	250 VAC / 30 VDC
Max. Switching Current	10 A	10 A
Operation Time	Max 10 ms	Max 10 ms
Release Time	Max 5 ms	Max 5 ms

Communication Data

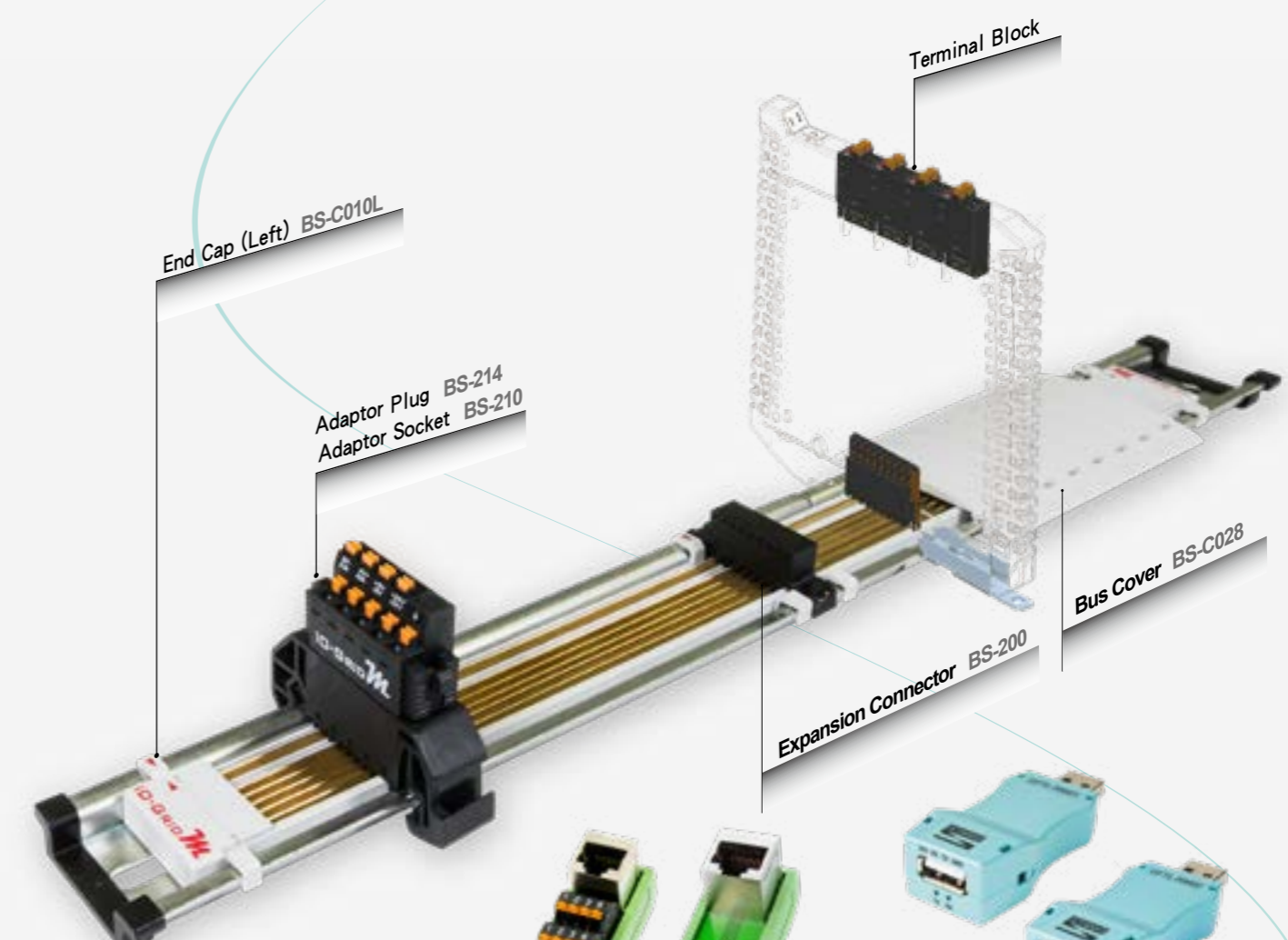
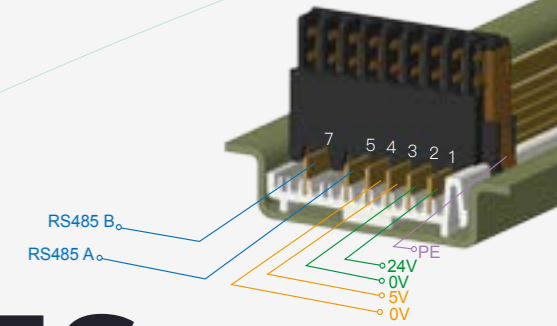
Protocol	Modbus RTU	Modbus RTU
Format	N, 8, 1	N, 8, 1
Baud Rate Selectable	1200 to 1.5 Mbps	1200 to 1.5 Mbps

General Data

Dimensions W*D*H	134 x 121.8 x 60.5 mm	68 x 121.8 x 60.5 mm
Weight	358 g	195 g
Operating Temperature	0...+55°C	0...+55°C
Storage Temperature	-25...+85°C	-25...+85°C
Relative Humidity	RH 95%, non-condensing	RH 95%, non-condensing
Altitude Limit	< 2000 m	< 2000 m
Ingress Protection (IP)	IP 20	IP 20
Pollution Severity	II	II
Safety Approval	CE	CE
Wire Range (IEC/UL)	0.2 mm ² ~ 1.5 mm ² / AWG 24 ~ 16	0.2 mm ² ~ 1.5 mm ² / AWG 24 ~ 16
Wire Ferrules 	DN00508D DN00708D DN01008D	DN00508D DN00708D DN01008D
Wire Range (IEC/UL)	0.2 mm ² ~2.5 mm ² / AWG 24~12	0.2 mm ² ~2.5 mm ² / AWG 24~12
Wire Ferrules 	DN00508D DN00708D DN01008D DN01510D	DN00508D DN00708D DN01008D DN01510D

iO-GRID™

ACCESSORIES



Wire Harness 6+6



Wire Harness 3+3



Wire Harness 5+5



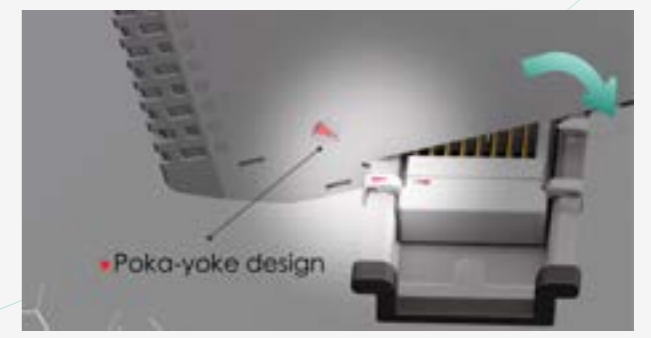
Marking Label



USB Converter



Interface Module



Poka-yoke design

USB Converter

GFTL-RM01

iD-GRID™ Setup
USB / RS232

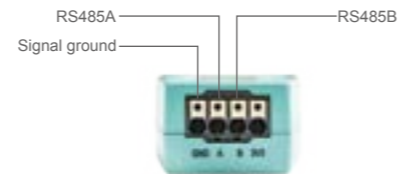


GFTL-RM02

RS485 communication
USB / RS485

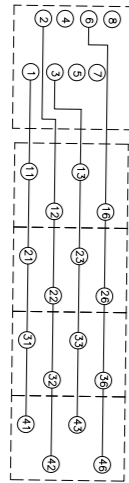


Wire range (IEC/UL)	0.2 ~ 1.5mm ² / AWG 28 ~ 16
Wire ferrules	DN00510D DN00710D



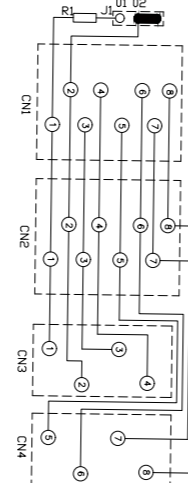
Interface Module

0170-0102



Terminal block
Ethernet RJ45 female connector
Wire range (IEC/UL): 0.14 ~ 1.5mm² / AWG 28 ~ 16

0170-0103

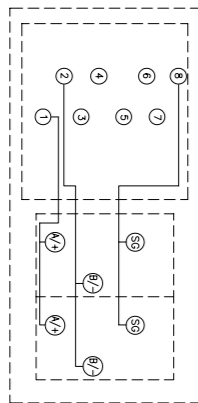


Terminal block
Ethernet RJ45 female connector
Wire range (IEC/UL): 0.14 ~ 1.5mm² / AWG 28 ~ 16

Interface Module

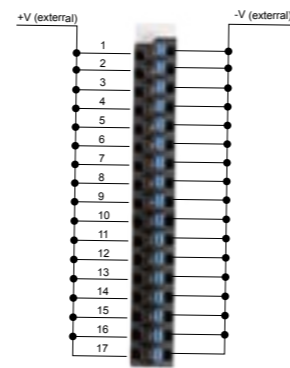
Power Distribution Module

0170-0104



Terminal block
8 pin RJ45 female connector
RS485 Interface
Wire range (IEC/UL): 0.14 ~ 1.5mm² / AWG 28 ~ 16

GFPB-0102

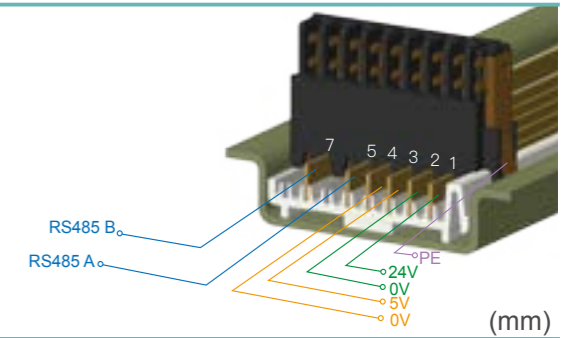
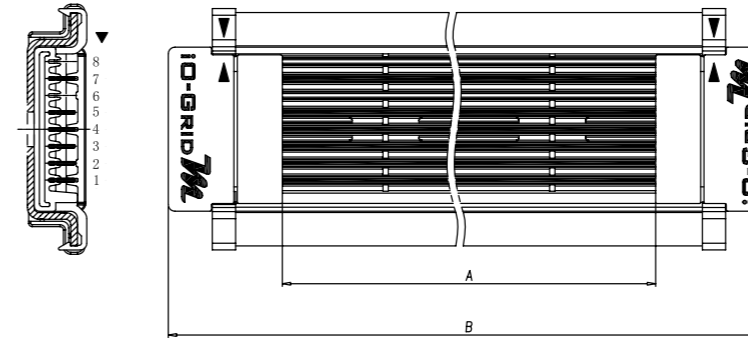


24VDC power distribution
External power supply
Wire range (IEC/UL): 0.2 ~ 1.5mm² / AWG 28 ~ 16

Standard Bus



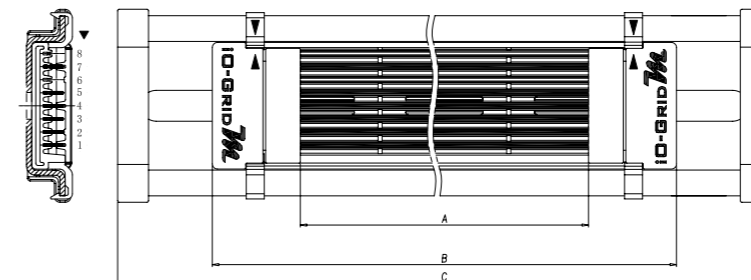
BS-0X123457RM



Part No.	A	B
BS-07123457RM	61	95.2
BS-00123457RM	91	125.2
BS-01123457RM	121	155.2
BS-02123457RM	171	205.2
BS-03123457RM	221	255.2
BS-04123457RM	271	305.2
BS-05123457RM	331	365.2



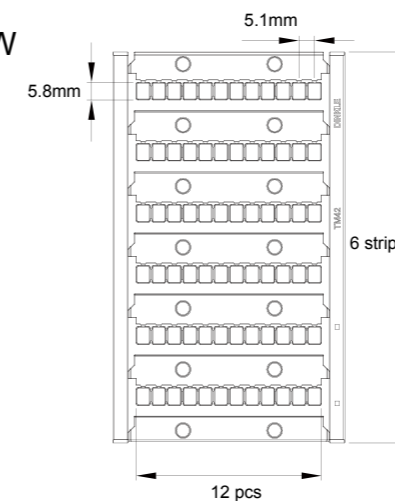
BS-7XX-123457RM



Part No.	A	B	C
BS-740-123457RM	61	95.2	200
BS-700-123457RM	91	125.2	200
BS-701-123457RM	121	155.2	200
BS-702-123457RM	171	205.2	300
BS-703-123457RM	221	255.2	300
BS-704-123457RM	271	305.2	400
BS-705-123457RM	331	365.2	400

Marking label





TM42W

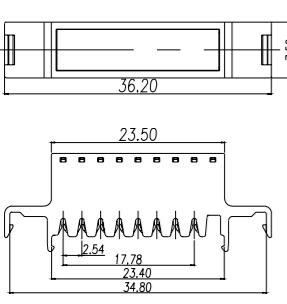


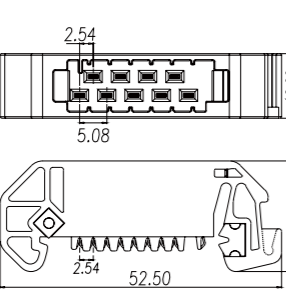
If there are any marker requirements, please refer to Dinkle's official website for more information of D-Thermo, the thermal transfer printer.

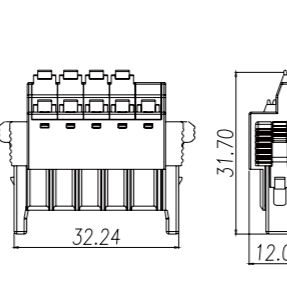


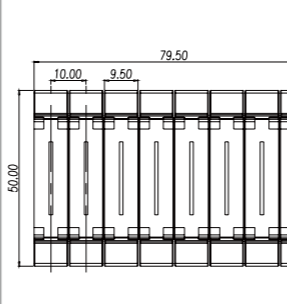
Bus Accessories

Expansion Connector BS-200		Adaptor Socket BS-210		Adaptor Plug BS-214		Bus cover BS-C028	
							
Number of channels	8	Number of channels	9	Number of channels	9	Applied temperature	
pitch(mm)	2.54	Rated voltage	150V	Rated voltage	150V	-40°C~+105°C	
Rated voltage	12V~150V	Rated current	8A	Rated current	8A		
Rated current	Max.8A	Rated withstand voltage	1600V	Rated withstand voltage	1600V		
Rated withstand voltage	1600V	Applied temperature	-40°C~+105°C	Applied temperature	-40°C~+105°C		
Applied temperature	-40°C~+105°C			Wire range (IEC/UL)	0.2~1.5mm ² / AWG 28~16		

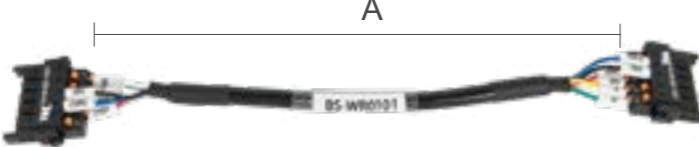








Wire Harness 6+6



(24P) 1 ○ ——— 1 (24P)

(24N) 2 ○ ——— 2 (24N)

(5P) 3 ○ ——— 3 (5P)

(5N) 4 ○ ——— 4 (5N)

(1A) 5 ○ ——— 5 (1A)

(1B) 7 ○ ——— 7 (1B)

Part No.	A
BS-WR00101	0.25 m
BS-WR00102	0.4 m

Wire Harness 3+3



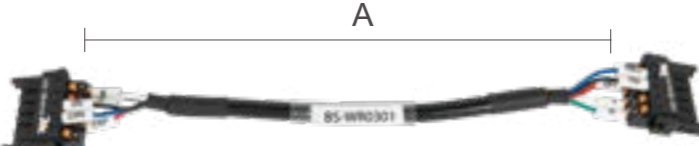
(5N) 4 ○ ——— 4 (5N)

(1A) 5 ○ ——— 5 (1A)

(1B) 7 ○ ——— 7 (1B)

Part No.	A
BS-WR00201	0.25 m
BS-WR00202	0.50 m
BS-WR00203	1 m
BS-WR00204	1.5 m
BS-WR00205	2 m

Wire Harness 5+5



(24P) 1 ○ ——— 1 (24P)

(24N) 2 ○ ——— 2 (24N)

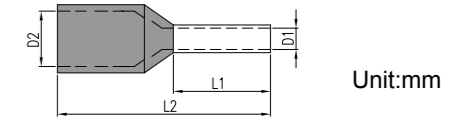
(5N) 4 ○ ——— 4 (5N)

(1A) 5 ○ ——— 5 (1A)


(1B) 7 ○ ——— 7 (1B)

Part No.	A
BS-WR00301	0.25 m
BS-WR00302	0.5 m
BS-WR00303	1 m
BS-WR00304	1.5 m
BS-WR00305	2m


Wire Ferrules



Part No.	Wire Range		Dimension				Package (pcs)		DIN Color	Tools
	AWG	mm ²	D1	D2	L1	L2	bag	box		
DN00206D	24	0.2	0.75	1.9	6	10	1,000	10,000	● Light Blue	Note: The wire diameter of the table is determined according to UL486E, IEC998-1 and IEC947-7. Please refer to the table to select suitable ferrules. All recommended ferrules in this catalogue are in accordance with this table.
DN00208D					8	12	1,000	10,000		
DN00306D	22	0.34	0.8	1.9	6	10	1,000	10,000	● Turouise	
DN00308D					8	12	1,000	10,000		
DN00506D	20	0.5	1	2.6	6	12	500	5,000	○ White	
DN00508D					8	14	500	5,000		
DN00510D					10	16	500	4,000		
DN00706D	18	0.75	1.2	2.8	6	12	500	4,000	● Grey	
DN00708D					8	14	500	4,000		
DN00710D					10	16	500	4,000		
DN00712D					12	18	500	4,000		
DN01006D	16	1	1.4	3	6	12	500	3,000	● Red	
DN01008D					8	14	500	3,000		
DN01010D					10	16	500	3,000		
DN01012D	16	1.5	1.7	3.5	12	18	500	2,000	● Black	
DN01508D					8	14	500	2,000		
DN01510D					10	16	500	2,000		
DN01512D	16	1.5	1.7	3.5	12	18	500	2,000		
DN01518D					18	24	500	2,000		



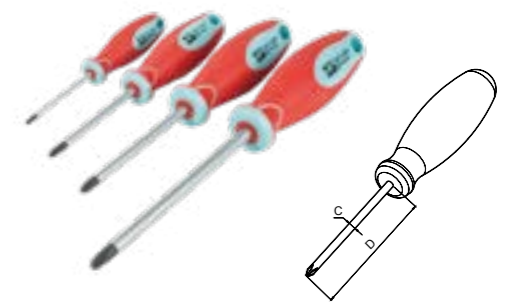
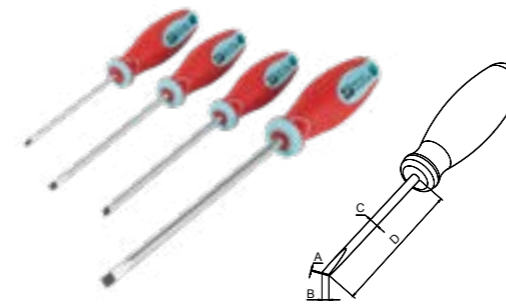
DNT13-0101
28-7 AWG
0.08-10 mm²



DNT04-2010A
20~10 AWG
0.6-5 mm²

Slotted Screwdriver

Phillips Screwdriver



Technica Data	Slotted screwdriver				Phillips screwdriver			
	DNT11-0102	DNT11-0107	DNT11-0109	DNT11-0111	DNT11-0201	DNT11-0202	DNT11-0205	DNT11-0208
Part number	DNT11-0102	DNT11-0107	DNT11-0109	DNT11-0111	DNT11-0201	DNT11-0202	DNT11-0205	DNT11-0208
Size	2.5 X 75 mm	3.5 X 100 mm	4.0 X 100 mm	5.5 X 150 mm	#0 X 60	#1 X 80	#2 X 100	#3 X 150
A	2.5	3.5	4.0	5.0	-	-	-	-
B	0.4	0.6	0.8	1.0	-	-	-	-
C	2.5	3.5	4.0	5.0	3.0	5.0	6.0	8.0
D	75	100	100	150	60	80	100	150
E	21.6	21.6	21.6	27.2	21.6	27.7	33	37.5
F	70	70	70	90	70	90	108	122
Package	12	12	12	12	12	12	12	6

