CONTA-ELECTRONICS

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Product Information

GSM-PRO2 2G / 3G / 4G Remote Control Solution



CONTA-CLIP: thinking ahead for connection systems

CONTA-CLIP was founded in 1978. We operate globally as an owner-operated medium-sized company.

Users of electrical and electronic connection systems rely on our reliable products and our many years of industrial and global market expertise.

Our company is now one of the most important manufacturers in the field.

For over 40 years, our components and solutions have been used in various process and industrial automation applications, including: railway technology, materials handling, building automation, air conditioning, mechanical and facility engineering, measurement and control technology, control panel construction, shipbuilding, transformer construction and environmental technology.

Over the years, we have evolved into an innovator that sets the tone with new ideas and creative impulses.

Our employees come from a wide variety of industries and view themselves as true connectivity specialists. They understand the specific problems, requirements and challenges of our customers. This results in communication among equals.

The profits then flow into the development of new products as well as into modern, efficient manufacturing processes.

Our company 3

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- A complete line of products for 6 your challenges

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A high quality standard throughout all departments is our number one priority.

Our top-class products are supported by this interplay between top-class men and machinery. We have also designed our range of services to align with customer needs.

Our products are divided into six categories: CONTA-CONNECT for terminal blocks and accessories, KDS cable management systems, CONTA-ELECTRONICS for electrical and electronic switchgear cabinet components, CONTA-LABEL for marking systems, CONTA-BOX for housings, and CONTA-CON for PCB terminal blocks and connectors.

We design customer-specific solutions for electronics, provide completely assembled housings and assemblies as needed, assemble terminal blocks for series production, and quickly handle component labelling tasks.

We greet these challenges with passion and enthusiasm, because we see each customer as our partner.

CONTA-CLIP customer representatives are always ready to offer their support to the customer, because service and helpfulness are rooted deeply in our corporate philosophy.

Advantage online: the CONTA-CLIP Online Catalogue

No matter where you are, as long as you're online you can access our digital catalogue to look at our services and quickly identify suitable solutions for your requirements.

Fast results Use the full-text search, enter an order number or use the convenient "step-bystep" feature search function.

Project planning at a glance: After you've selected the products, all the master data for the materials (sales data, technical data, drawings, connection diagrams, classifications and approvals) are made available as a data sheet or export file.

Detailed inquiries about components can be sent via the shopping cart directly to our headquarters. Upon request, you will receive an e-mailed copy of your inquiry.

Application films: Complex functions be explained easily and clearly with sounds and images.

Printed catalogue: Would you like an offline overview? Please ask for our free printed catalogues.

Industry-specific: You will find the solutions that are relevant for your industry, according to your expertise.

Newsletter: Do you want to stay up to date? Subscribe to our newsletter! Simply register, confirm our authentication e-mail, and you'll be reqularly informed about all CONTA-CLIP news.

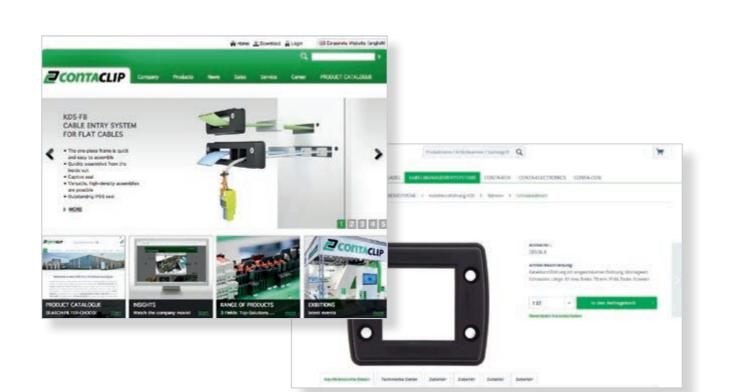
Discover how the world of CONTA-CLIP and our website can deliver added value for you and your projects!

Globally available for you

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Are you working abroad? No problem. Our worldwide sales and distribution partners help us to be globally networked and provide on-time reliable deliveries. Simply scan the QR code shown and you'll learn on our website about the sales partner responsible for your country.

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Algeria
Morocco
Our locations in Asia
Bahrain
China
Hong Kong
India
Israel
Jordan
Qatar
Malaysia
Oman
Pakistan
Saudi Arabia
Singapore
South Korea
Taiwan

Turkey

United Arab Emirates

alia New Zealand

> Belgium Bulgaria Denmark Germany Finland France Greece Great Britain Ireland Iceland Italy Croatia Latvia Netherlands Norway Austria Poland Portugal Romania



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cations in Australia

Our locations in Europe

Bosnia and Herzegovina

Russia Sweden Switzerland Serbia Slovakia Slovenia Spain **Czech Republic** Ukraine Hungary **Belarus**

Our locations in North America Canada

Mexico United States

Our locations in South America Bolivia

- Brazil Chile Ecuador
- Columbia

A complete line of products to meet your demands The CONTA-CLIP Catalogues





CONTA-CONNECT

Terminal blocks with Push-In connection system

Terminal blocks with screw connections and special terminals

Everything for classic wiring with screw connection systems (also for high

currents): SRK feed-through and PE terminals, RK high-temperature variants, TK

transformer terminals, HSK high-power stud terminals, SVB series screw distribu-

tor blocks, and the modular feed-through terminal systems from the SDK series.

Our wide range of innovative PRK and FRK terminal blocks with the Push-In connection system include feed-through terminals, PE terminals, disconnect terminals, fused terminals, multi-level terminals, installation terminals and initiator terminals, for conductor cross-sections from 0.2 mm² to 25 mm².



Cat. no. 98070.2



Cat. no. 98071.2



Cat. no. 98072.2



Cat. no. 98073.2



Cat. no. 98074.2



CONTA-LABEL

Marking components for ink-based marking systems The CONTA-LABEL products provide polyamide markers for labelling conductors, cables, devices and facilities with ink print. These markers are available in many shapes and colours: in the classic MC Maxicard format for self-printing with the EMS plotter system EMS or other ink-jet systems, or ready-to-use customized printed in the PMC Pocket-Maxicard format.



CONTA-BOX Housings

Our wide variety of housings made of polystyrene, polycarbonate, polyester, ABS and aluminium deliver solutions for protecting electronic circuits, integrated devices and terminal blocks. On request, the housings can be custom-processed and assembled with our CONTA-CONNECT, CONTA-ELECTRONICS and CONTA-CON product lines.

CONTA-CONNECT

CONTA-CONNECT

Terminal blocks with tension-spring connection

Our versatile line of terminals with tension spring connections for conductor cross-sections from 0.2 mm² to 16 mm² includes: the ZRK/ZSL series of feedthrough and PE terminals, the double-level ZRKD/ZSLD, the ZIKD three-level terminal blocks, motor-connection terminals, (blade-) disconnect terminals, fused terminals, direct-mount terminals, and initiator/actuator terminals for transmitting positioning, encoder and alert signals.



CONTA-CONNECT

Installation materials and other accessories for terminal blocks Our installation products include cabling ducts, assembly tools, cable glands with metric or PG threads, DIN rials, rail cutters and punching tools. The terminal block accessories include different versions of end stops, wire-end ferrules, and connectors.



CONTA-LABEL

Marking components for thermal-transfer marking systems CONTA-CLIP provides the TTPCard thermal-transfer printer and a large selection of PC, PVC and PVCF markers or labels in card format: for professional, permanent labelling of terminals, devices, conductors, cables, facilities and switchgear cabinets.



CONTA-ELECTRONICS

from 3 mm to 35 mm.

KDS CABLE MANAGEMENT SYSTEMS

Electrical and electronic cabinet components Our CONTA-ELECTRONICS products provide active and passive components for the transfer and conversion of analogue and digital signals at the coupling level. This product line includes power supplies, multi-function timing relays, coupling relays, digital switching modules, interface modules, opto-couplers, signal converters, GSM communication modules and much more.

CONTA-CON PCB terminals and connectors

This catalogue presents our wide variety of CONTA-CON PCB terminal blocks and connector systems. The modular components can be configured for any required number of poles. They are available in the wire connection types: wire protection, eccentric, clamping yoke, and (for demanding operating conditions) with tension-spring or Push-in wire terminations.



Cat. no. 98075.2

KDS cable entries | KES cable entries | SAB|SSAB|SABK shielding solutions The KDS and KES cable entries enable a tool-free, IP66-sealed feed-through for unassembled and assembled cables and hoses. The feed-through openings can be adapted at any time to meet your requirements. The SAB shied-connection clips can be used to provide a reliable shield contact with conductor diameters



Cat. no. 98077.2



Cat. no. 98078.2

Cat. no. 98079.2



Cat. no. 98076.2

GSM-PRO2 – the perfect communicator

GSM-PRO2 (E) – the perfect communicator

CONTA-CLIP's GSM-PRO2 series provides a 2G/3G and 4G remote control and maintenance solution which allows you to monitor and control decentralized facilities.

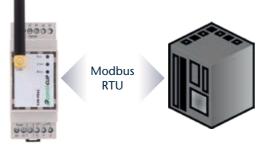
The GSM-PRO2(E) module informs you when the process reaches a user-defined status or limit value. Digital and analogue inputs values can also be transmitted via e-mail or SMS (text message). The digital relay outputs can be switched using an SMS sent from the decentralized control room or from the service technician. The process can be monitored and controlled remotely. Monitoring and controlling the GSM-PRO2(E) modules is even easier when using our iPhone or Android apps.

The inputs and outputs of the modules and their desired functions can be configured using an easy-to-understand application.



GSM-PRO2 communicates with a PLC

The built-in Modbus RTU interface enables the **GSM-PRO2** to be connected as a slave to other controllers (such as a PLC). Thus, the **GSM-PRO2** can be used to conveniently expand a PLC system with additional GSM functionality. By using predefined registers, the PLC can send an SMS or e-mail using the **GSM-PRO2** as a messenger. The PLC can also be controlled using the **GSM**-PRO2. The module can set predefined registers to influence the PLC process (analogue or digital).



Inputs and outputs

Both **GSM-PRO2** modules are equipped with two multi-functional inputs, a relay output and a pulse counter input. The two **GSM-PRO2E** variants are equipped with ten multi-functional inputs, four relay outputs and a pulse counter input. The pulse counter input can process a maximum of 1000 pulses per second and enables, for example, a photovoltaic system or a kWh counter to be connected.



Expansion modules

The **GSM-PRO2** modules also allow you to increase the number of available inputs and outputs. Up to 15 I/O expansion modules in 4 different versions can be controlled from each module. Integrated plug-in connectors are used to control and supply power to the modules. The expansion modules can also be configured using an easy-to-understand application.



OTA (over-the-air) capabilities

In many systems or machines, some parameters or user entries may need to be changed after the installation is completed. In such cases you may also need to change parameters on the **GSM-PRO2** module. The **GSM-PRO2** module features OTA (over-the-air) functions for just such instances.

OTA configuration

Whether it is a user's new telephone number, a new I/O setting, a changed module name or any other change: the settings of all GSM-PRO2 modules can be adjusted comfortably and decentralized throughout the world.

OTA firmware updates

The **GSM-PRO2** module can also update its firmware using OTA, so modules with different versions can always be kept up to date.

GSM-PRO2-GPS

The **GSM-PRO2-GPS** module has an integrated GPS function with an external antenna connection. The module can determine its location at any time and the user can then view the mapped location in a web browser. This way, it becomes easy and clear to monitor the positions of portable systems or machines at any time.

Smartphone apps

CONTA-CLIP's iPhone and Android smartphone apps for the **GSM-PRO2** modules provide a simple and fast solution so that you can get an overview of each distributed system and application. These apps can show you the status of all inputs and outputs from one or more **GSM-PRO2** modules. They also allow you some control over the process. Module outputs can be controlled easily and directly using this app. The app buttons provide an intuitive control interface (for controlling the heating, a motor, water pump, etc.).

Web Portal software

The **GSM-PRO2**, like most SMS modules, are often used as stand-alone units in the field. These modules are put to use at various remote locations even though they normally have configurations which are very similar. It is often quite helpful to have one overall view of the status of all modules used in the field. The new GSM-PRO2 portal software from CONTA-CLIP offers you precisely this possibility. All modules in the field can now be easily monitored and run from a single local site or control panel.













	GSM-PRO2	GSM-PRO2-GPS
Circuit diagram	95 x 36 x 67 / 65 (without antenna)	95 x 36 x 67/65 (without antenna)
Weight, g Type	133 GSM-PRO2	137 GSM-PRO2-GPS
Cat. no. Qty.	16368.2 1	
Input/output data		
2 multi-function (analogue/digital) inputs Resolution/accuracy (0 10 V) (0 20 mA) Input resistance (0 10 V) (0 20 mA) Input current (dig. inputs) Ul minimum pulse duration Threshold of dig. Inputs Counter, digital input (pull-down) Pull-down voltage source Relay output Continuous current / Inrush current (resistive load) Max. switching capacity Lifespan at resistive load Max. switching frequency	0 10 V/0(4) 20 mA/24 V DC (10 30 V DC) 20 mV / \pm (20 mV +0.3 % of the measured value) – 40 80 kOhm / 500 Ohm @10 V: 0.2 mA / @24 V: 0.5 mA / @30 V: 0.6 mA 500 ms Low < 2 V / High > 4 V 1000 pulses/sec. Max. pull-down resistance: 24 kOhm Typ. 10 30 V DC, unregulated, depending on load CO universal contact, 250 V ~ 5 A / 5 A 1200 VA at 240 V AC, 5 A Electrical, at max. load: > 1.5 x 10 ⁵ switching cycles. M 6 min ⁻¹ at continuous current, 1200 min ⁻¹ without load	n Mechanical: > 15 x 10 ⁶ switching cycles
Contact material / Test voltage	AgNi / 4 kV	
GSM specifications	20 Out d hand COM hands 050 000 1800 and 100	
Frequency bands	2G: Quad-band GSM bands: 850, 900, 1800 and 190 3G: Five-band UMTS (WCDMA/FDD) bands: 800, 850	
SIM card	Nano SIM	
Antenna	50 Ohm impedance, SMA plug	
GPS specifications		
Frequency Time to first fix (@ -140 dBm) Antenna		1575 1587 Mhz Hot < 2 s, warm < 35 s, cold < 46 s 50 Ohm impedance, SMA plug
Voltage active antenna		3 V @ RF plug
Bus specifications Interface ports	Serial RS485, uninsulated	
Voltage interface	24 V DC – 0.5 A	
Bus protocol	Modbus RTU	
Modbus slave functionality is available	Yes (no other expansion modules can be connected)	
General information	10 + 20 1/ DC	
Voltage supply Current consumption	10 to 30 V DC 275 mA DC @ 24 V DC	
Backup power	Internal maintenance-free supercap capacitor	
Operating / storage temperature	-20 °C to +50 °C / -20 °C to +70 °C	
Max. relative humidity	80 %, non-condensing	
DIN VDE specifications Electromagnetic properties	Low Voltage Directive (LVD) 2014/35/EU, in compliance Directive 2014/30/EU, in compliance with EN 55011 a	
Frequency spectrum	RED 2014/53/EU	ING EN 01320-1
Wire cross-section / Stripping length	0.2 2.5 mm ² screw terminal connection / 6 mm	
Mounting / Installation position	DIN rail TS35 or direct mounting / arbitrary	
Material / Flammability class Protection class (DIN 40050) Accessories	Housing: Noryl; terminals: polyamide 6.6 / UL94 V-0 IP 20	
Antenna GSM	GSM-ANTENNA-90°	
Cat. no. Qty.	16379.2	1
GPS antenna	GSM-ANTENNA-GPS-3M-K	
Cat. no. Qty. External combi-antenna GSM + GPS	16380.2 GSM-ANTENNA-EXTERNAL-GSM+GPS-SMA-3M	1
Cat. no. Qty.	16381.2	1
External GSM antenna	GSM-ANTENNA-EXTERNAL-SMA-3M	
Cat. no. Qty.	16061.2	1
External GSM antenna	GSM-ANTENNA-EXTERNAL-SMA-5M	
Cat. no. Qty. External GSM antenna	16172.2 CSM ANTENNA EXTERNAL SMA 10M	1
Cat. no. Qty.	GSM-ANTENNA-EXTERNAL-SMA-10M 16173.2	1
Programming cable	GSM-USB-MICRO-cable	
Cat. no. Qty.	16382.2	1

Circuit diagram		GSM-PRO2E
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[249] 39 1 19 19 19 19 12 124 125 122 134 127 132 149 4	1.42.1	-
Dimensions (L x W x H) TS 35 / direct mount, mm		95 x 88 x 67 / 65 (without
Weight, g		188
Туре		GSM-PRO2E
Cat. no.	Qty.	16407.2
Input/output data		0 10 V (0 (4) 20 m h (4)
10 multi-function (analogue/digital) inputs Resolution/accuracy (0 10 V) (0 20 mA)		0 – 10 V / 0 (4) – 20 mA / . 20 mV / ± (20 mV 0.3 % o
Input resistance (0 10 V) (0 20 mA)		80 kOhm / 500 Ohm
Input current (dig. inputs)		@10 V: 0.2 mA / @24 V: 0.
UI minimum pulse duration		500 ms
Threshold of dig. Inputs		Low < 2 V / High > 4 V
Counter, digital input (pull-down)		1000 pulses/sec. Max. pu
Pull-down voltage source 4 relay outputs		Typ. 10 30 V DC, unrege CO universal contact, 250
Continuous current / Inrush current (resistive lo	ad)	5 A/5 A
Max. switching capacity	,	1200 VA at 240 V AC, 5 A
Lifespan at resistive load		Electrical, at max. load: > 1
Max. switching frequency		6 min ⁻¹ at continuous curre
Contact material / Test voltage		AgNi/4 kV
GSM specifications Frequency bands		2G: Quad-band GSM band
		3G: Five-band UMTS (WCE
SIM card		Nano SIM
Antenna		50 Ohm impedance, SMA
Frequency		
Frequency Time to first fix (@ -140 dBm)		
Frequency Time to first fix (@ -140 dBm) Antenna		
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna		
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports		Serial RS485, uninsulated
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface		Serial RS485, uninsulated 24 V DC – 0.5 A
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface Bus protocol		24 V DC – 0.5 A -
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available		24 V DC – 0.5 A
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information		24 V DC – 0.5 A -
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply		24 V DC – 0.5 A - No
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power		24 V DC - 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free s
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature		24 V DC - 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free s -20 °C to +50 °C / -20 °C t
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity		24 V DC - 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free s -20 °C to +50 °C / -20 °C t 80 %, non-condensing
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications		24 V DC - 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free : -20 °C to +50 °C / -20 °C to 80 %, non-condensing Low Voltage Directive (LVD
General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties		24 V DC – 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free s -20 °C to +50 °C / -20 °C t 80 %, non-condensing Low Voltage Directive (LVD Directive 2014/30/EU, in co
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum		24 V DC - 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free s -20 °C to +50 °C / -20 °C t 80 %, non-condensing Low Voltage Directive (LVD Directive 2014/30/EU, in co RED 2014/53/EU
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications		24 V DC - 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free s -20 °C to +50 °C / -20 °C t 80 %, non-condensing Low Voltage Directive (LVD Directive 2014/30/EU, in co RED 2014/53/EU 0.2 2.5 mm ² screw term
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum Wire cross-section / Stripping length Mounting / Installation position Material / Flammability class		24 V DC - 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free s -20 °C to +50 °C / -20 °C t 80 %, non-condensing Low Voltage Directive (LVD Directive 2014/30/EU, in co RED 2014/53/EU 0.2 2.5 mm ² screw term DIN rail TS35 or direct mod Housing: Noryl; terminals:
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum Wire cross-section / Stripping length Mounting / Installation position Material / Flammability class Protection class (DIN 40050)		24 V DC - 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free s -20 °C to +50 °C / -20 °C t 80 %, non-condensing Low Voltage Directive (LVD Directive 2014/30/EU, in c RED 2014/53/EU 0.2 2.5 mm ² screw term DIN rail TS35 or direct mod
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum Wire cross-section / Stripping length Mounting / Installation position Material / Flammability class Protection class (DIN 40050) Accessories		24 V DC - 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free -20 °C to +50 °C / -20 °C t 80 %, non-condensing Low Voltage Directive (LVE Directive 2014/30/EU, in c RED 2014/53/EU 0.2 2.5 mm ² screw term DIN rail TS35 or direct moo Housing: Noryl; terminals: IP 20
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum Wire cross-section / Stripping length Mounting / Installation position Material / Flammability class Protection class (DIN 40050) Accessories Antenna GSM	Otv.	24 V DC - 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free : -20 °C to +50 °C / -20 °C t 80 %, non-condensing Low Voltage Directive (LVD Directive 2014/30/EU, in c RED 2014/53/EU 0.2 2.5 mm ² screw term DIN rail TS35 or direct mod Housing: Noryl; terminals: IP 20 GSM-ANTENNA-90°
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum Wire cross-section / Stripping length Mounting / Installation position Material / Flammability class Protection class (DIN 40050) Accessories Antenna GSM Cat. no.	Qty.	24 V DC - 0.5 A No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free : -20 °C to +50 °C / -20 °C t 80 %, non-condensing Low Voltage Directive (LVD Directive 2014/30/EU, in c RED 2014/53/EU 0.2 2.5 mm ² screw term DIN rail TS35 or direct mod Housing: Noryl; terminals: IP 20 GSM-ANTENNA-90° 16379.2
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum Wire cross-section / Stripping length Mounting / Installation position Material / Flammability class Protecton class (DIN 40050) Accessories Antenna GSM Cat. no. GPS antenna	Qty. Qty.	24 V DC - 0.5 A No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free : -20 °C to +50 °C / -20 °C t 80 %, non-condensing Low Voltage Directive (LVD Directive 2014/30/EU, in c RED 2014/53/EU 0.2 2.5 mm ² screw term DIN rail TS35 or direct mod Housing: Noryl; terminals: IP 20 GSM-ANTENNA-90° 16379.2
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum Wire cross-section / Stripping length Mounting / Installation position Material / Flammability class Protection class (DIN 40050) Accessories Antenna GSM Cat. no. External combi-antenna GSM + GPS	Qty.	24 V DC - 0.5 A No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free -20 °C to +50 °C / -20 °C t 80 %, non-condensing Low Voltage Directive (LVD Directive 2014/30/EU, in c RED 2014/53/EU 0.2 2.5 mm ² screw term DIN rail TS35 or direct moi Housing: Noryl; terminals: IP 20 GSM-ANTENNA-90° 16379.2 GSM-ANTENNA-GPS-3M- 16380.2 GSM-ANTENNA-EXTERN/
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum Wire cross-section / Stripping length Mounting / Installation position Material / Flammability class Protection class (DIN 40050) Accessories Antenna GSM Cat. no. External combi-antenna GSM + GPS Cat. no.		24 V DC - 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free s -20 °C to +50 °C / -20 °C t 80 %, non-condensing Low Voltage Directive (LVD Directive 2014/30/EU, in c RED 2014/53/EU 0.2 2.5 mm ² screw term DIN rail TS35 or direct mor Housing: Noryl; terminals: IP 20 GSM-ANTENNA-90° 16379.2 GSM-ANTENNA-GPS-3M- 16380.2 GSM-ANTENNA-EXTERN/ 16381.2
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum Wire cross-section / Stripping length Mounting / Installation position Material / Flammability class Protection class (DIN 40050) Accessories Antenna GSM Cat. no. External combi-antenna GSM + GPS Cat. no. External GSM antenna	Qty. Qty.	24 V DC - 0.5 A No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free : -20 °C to +50 °C / -20 °C t 80 %, non-condensing Low Voltage Directive (LVD Directive 2014/30/EU, in c RED 2014/30/EU 0.2 2.5 mm ² screw term DIN rail TS35 or direct mor Housing: Noryl; terminals: IP 20 GSM-ANTENNA-90° 16379.2 GSM-ANTENNA-GPS-3M- 16380.2 GSM-ANTENNA-EXTERN/ 16381.2 GSM-ANTENNA-EXTERN/
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum Wire cross-section / Stripping length Mounting / Installation position Material / Flammability class Protection class (DIN 40050) Accessories Antenna GSM Cat. no. External combi-antenna GSM + GPS Cat. no. External GSM antenna Cat. no.	Qty.	24 V DC - 0.5 A No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free 9 -20 °C to +50 °C / -20 °C t 80 %, non-condensing Low Voltage Directive (LVD Directive 2014/30/EU, in co RED 2014/53/EU 0.2 2.5 mm ² screw term DIN rail TS35 or direct mod Housing: Noryl; terminals: IP 20 GSM-ANTENNA-90° 16379.2 GSM-ANTENNA-GPS-3M- 16380.2 GSM-ANTENNA-EXTERNA 16081.2
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum Wire cross-section / Stripping length Mounting / Installation position Material / Flammability class Protection class (DIN 40050) Accessories Antenna GSM Cat. no. External combi-antenna GSM + GPS Cat. no. External GSM antenna Cat. no. External GSM antenna Cat. no.	Qty. Qty.	24 V DC - 0.5 A No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free : -20 °C to +50 °C / -20 °C t 80 %, non-condensing Low Voltage Directive (LVE Directive 2014/30/EU, in c RED 2014/53/EU 0.2 2.5 mm ² screw term DIN rail TS35 or direct mod Housing: Noryl; terminals: IP 20 GSM-ANTENNA-90° 16379.2 GSM-ANTENNA-GPS-3M- 16380.2 GSM-ANTENNA-EXTERN/ 16381.2 GSM-ANTENNA-EXTERN/ 16061.2
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum Wire cross-section / Stripping length Mounting / Installation position Material / Flammability class Protection class (DIN 40050) Accessories Antenna GSM Cat. no. External combi-antenna GSM + GPS Cat. no. External GSM antenna Cat. no. External GSM antenna Cat. no. External GSM antenna	Qty. Qty. Qty.	24 V DC - 0.5 A No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free s -20 °C to +50 °C / -20 °C t 80 %, non-condensing Low Voltage Directive (LVD Directive 2014/30/EU, in co RED 2014/53/EU 0.2 2.5 mm² screw term DIN rail TS35 or direct mod Housing: Noryl; terminals: IP 20 GSM-ANTENNA-90° 16379.2 GSM-ANTENNA-GPS-3M- 16380.2 GSM-ANTENNA-EXTERNA 16381.2 GSM-ANTENNA-EXTERNA 16061.2 GSM-ANTENNA-EXTERNA 16172.2
Frequency Time to first fix (@ -140 dBm) Antenna Voltage active antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum Wire cross-section / Stripping length Mounting / Installation position Material / Flammability class Protection class (DIN 40050) Accessories Antenna GSM Cat. no. External GSM antenna Cat. no. External GSM antenna Cat. no. External GSM antenna Cat. no.	Qty. Qty. Qty.	24 V DC - 0.5 A No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free 9 -20 °C to +50 °C / -20 °C t 80 %, non-condensing Low Voltage Directive (LVD Directive 2014/30/EU, in co RED 2014/53/EU 0.2 2.5 mm ² screw term DIN rail TS35 or direct mod Housing: Noryl; terminals: IP 20 GSM-ANTENNA-90° 16379.2 GSM-ANTENNA-GPS-3M- 16380.2 GSM-ANTENNA-EXTERN/ 16061.2 GSM-ANTENNA-EXTERN/ 16061.2 GSM-ANTENNA-EXTERN/

	GSM-PRO2E-GPS	
0000000		
antenna)	95 x 88 x 67 / 65 (without antenna) 190	
1	GSM-PRO2E-GPS	1
24 V DC (10 – 30 V DC) of the measured value) – 40 µ	JA / \pm (40 μ A + 0.3 % of the measured value)	
.5 mA / @30 V: 0.6 mA		
ull-down resistance: 24 kOhm julated, depending on load V ~	1	
1.5 x 10 ⁵ switching cycles. M ent, 1200 min ⁻¹ without load	echanical: > 15 x 10 ⁶ switching cycles	
ds: 850, 900, 1800 and 1900 DMA/FDD) bands: 800, 850		
plug		
	1575 1587 Mhz Hot < 2 s, warm < 35 s, cold < 46 s 50 Ohm impedance, SMA plug 3 V @ RF plug	
supercap capacitor to +70 °C		
D) 2014/35/EU, in complianc compliance with EN 55011 ar		
ninal connection / 6 mm ounting / arbitrary polyamide 6.6 / UL94 V-0		
		1
-К		1
AL-GSM+GPS-SMA-3M		1
AL-SMA-3M		1
AL-SMA-5M		1
AL-SMA-10M		1
		1
		1

	GSM-PRO2-4G-EU	GSM-PRO2-4G-US
Circuit diagram		
Circuit diagram		
Power Image: Comparison of the second s	4G I	
Dimensions (L x W x H) TS 35 / direct mount, mm Weight, g	95 x 36 x 67 / 65 (without antenna) 135	95 x 36 x 67 / 65 (without antenna) 135
Type	GSM-PRO2-4G-EU	GSM-PRO2-4G-US
Cat. no. Q		1 16456.2 1
Input/output data	,	
2 multi-function (analogue/digital) inputs Resolution/accuracy (0 10 V) (0 20 mA) Input resistance (0 10 V) (0 20 mA) Input current (dig. inputs) UI minimum pulse duration	0 10 V / 0(4) 20 mA /24 V DC (10 30 V l 20 mV / ± (20 mV +0.3 % of the measured value 80 kOhm / 500 Ohm @10 V: 0.2 mA / @24 V: 0.5 mA / @30 V: 0.6 m. 500 ms	e) – 40 μA / \pm (40 μA +0.3 % of the measured value)
Threshold of dig. Inputs	Low < 2 V / High > 4 V	
Counter, digital input (pull-down)	1000 pulses/sec. Max. pull-down resistance: 24	
Pull-down voltage source	Typ. 10 30 V DC, unregulated, depending on	n load
Relay output Continuous current / Inrush current (resistive load)	CO universal contact, 250 V ~ 5 A / 5 A	
Max. switching capacity	1200 VA at 240 V AC, 5 A	
Lifespan at resistive load	Electrical, at max. load: $> 1.5 \times 10^5$ switching cy	x cles. Mechanical: > 15 x 10 ⁶ switching cycles
Max. switching frequency	6 min ⁻¹ at continuous current, 1200 min ⁻¹ witho	
Contact material / Test voltage	AgNi / 4 kV	
GSM specifications		
Frequency bands	2G - GSM/GPRS/EDGE: dual band 900/1800 MI	Hz
CIN 4 anot	3G - UMTS/HSPA+: dual band 900 (BdVIII)/ 2100 MHz (BdI) 4G - LTE CAT1: Penta band 700 (Bd28)/ 800 (Bd20)/900 (Bd8)/1800 (Bd3)/2100 MHz (I	3G - UMTS/HSPA+: triple band, 850 (BdV)/ AWS (BdIV)/1900 MHz (BdII) 4G - LTE CAT1: Quad band, 700 (Bd12)/ 850 (Bd5)/ Bd1) AWS (Bd4)/1900 MHz (Bd2)
SIM card Antenna	Nano SIM 50 Ohm impedance, SMA plug	
Bus specifications	so onin impedance, sivia plug	
Interface ports	Serial RS485, uninsulated	
Voltage interface	24 V DC – 0.5 A	
Bus protocol	Modbus RTU	
Modbus slave functionality is available	Yes (no other expansion modules can be connect	cted)
General information	10 to 20 V DC	
Voltage supply Current consumption	10 to 30 V DC 275 mA DC @ 24 V DC	
Backup power	Internal maintenance-free supercap capacitor	
Operating / storage temperature	-20 °C to +50 °C / -20 °C to +70 °C	
Max. relative humidity	80 %, non-condensing	
DIN VDE specifications	Low Voltage Directive (LVD) 2014/35/EU, in con	npliance with EN 50178
Electromagnetic properties	Directive 2014/30/EU, in compliance with EN 5.	
Frequency spectrum	RED 2014/53/EU	CFR Title 47 parts 22 and 24
Wire cross-section / Stripping length	0.2 2.5 mm ² screw terminal connection / 6 m	nm
Mounting / Installation position	DIN rail TS35 or direct mounting / arbitrary	1)/0
Material / Flammability class Protection class (DIN 40050)	Housing: Noryl; terminals: polyamide 6.6 / UL94 IP 20	4 V-U
Accessories	11 20	
Antenna GSM	GSM-ANTENNA-4G	
	y. 16450.2	1
External GSM antenna	GSM-ANTENNA-EXTERNAL-4G-3M	
	y. 16451.2	1
External GSM antenna	GSM-ANTENNA-EXTERNAL-4G-5M	
	y. 16452.2	1
Programming cable Cat. no. Q	GSM-USB-MICRO-cable	1
Q	y. 16382.2	

	GSM-PRO2E-4G-EU
Circuit diagram	
t1 0V ui1 0V ui2 0V ui3 ui4 ui5 ui6 ui7 ui8 ui9 ui10 Inputs <	ov
(GSM)	
	- 2 3
	8
	L
Power C C C C C	trotatosta
24V 0v 14 11 12 24 21 22 34 31 32 44 41	42
Dimensions (L x W x H) TS 35 / direct mount, mm	95 x 88 x 67 / 65 (without a
Weight, g	188 CSM PRO25 4C 5U
Type Cat. no. C	GSM-PRO2E-4G-EU 2ty. 16455.2
Input/output data	(1) 10133.2
10 multi-function (analogue/digital) inputs	0 – 10 V / 0 (4) – 20 mA / 2
Resolution/accuracy (0 10 V) (0 20 mA)	20 mV / ± (20 mV 0.3 % of
Input resistance (0 10 V) (0 20 mA)	80 kOhm / 500 Ohm
Input current (dig. inputs)	@10 V: 0.2 mA / @24 V: 0.5
UI minimum pulse duration Threshold of dig. Inputs	500 ms Low < 2 V / High > 4 V
Counter, digital input (pull-down)	1000 pulses/sec. Max. pul
Pull-down voltage source	Typ. 10 30 V DC, unregu
4 relay outputs	CO universal contact, 250 \
Continuous current / Inrush current (resistive load) 5 A/5 A
Max. switching capacity	
	1200 VA at 240 V AC, 5 A
Lifespan at resistive load	Electrical, at max. load: > 1.
Lifespan at resistive load Max. switching frequency	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous curre
Lifespan at resistive load	1200 VA at 240 V AC, 5 A Electrical, at max. load: > 1. 6 min ⁻¹ at continuous curren AgNi / 4 kV
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous curre
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous curre AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous curre AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual ba 2100 MHz (BdI)
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous curre AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual bat 2100 MHz (Bdl) 4G - LTE CAT1: Penta band
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous currer AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual ban 2100 MHz (BdI) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous currer AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual ban 2100 MHz (BdI) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna Bus specifications	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous curre AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual bai 2100 MHz (Bdl) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM 50 Ohm impedance, SMA p
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna Bus specifications Interface ports	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous curre AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual bai 2100 MHz (Bdl) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM 50 Ohm impedance, SMA p Serial RS485, uninsulated
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna Bus specifications Interface ports Voltage interface	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous curre AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual bai 2100 MHz (Bdl) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM 50 Ohm impedance, SMA p
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna Bus specifications Interface ports Voltage interface Bus protocol	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous curre AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual bai 2100 MHz (Bdl) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM 50 Ohm impedance, SMA p Serial RS485, uninsulated
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous curre AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual ba 2100 MHz (Bdl) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM 50 Ohm impedance, SMA p Serial RS485, uninsulated 24 V DC - 0.5 A
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous curre AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual ba 2100 MHz (Bdl) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM 50 Ohm impedance, SMA p Serial RS485, uninsulated 24 V DC - 0.5 A
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous currer AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual ban 2100 MHz (BdI) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM 50 Ohm impedance, SMA p Serial RS485, uninsulated 24 V DC - 0.5 A No 10 to 30 V DC 285 mA DC @ 24 V DC
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous curre AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual ba 2100 MHz (Bdl) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM 50 Ohm impedance, SMA p Serial RS485, uninsulated 24 V DC - 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free s
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous curre AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual ba 2100 MHz (Bdl) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM 50 Ohm impedance, SMA p Serial RS485, uninsulated 24 V DC - 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free s -20 °C to +50 °C / -20 °C to
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous curre AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual ba 2100 MHz (Bdl) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM 50 Ohm impedance, SMA p Serial RS485, uninsulated 24 V DC – 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free s -20 °C to +50 °C / -20 °C to 80 %, non-condensing
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous curre AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual ba 2100 MHz (Bdl) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM 50 Ohm impedance, SMA p Serial RS485, uninsulated 24 V DC – 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free s -20 °C to +50 °C / -20 °C to 80 %, non-condensing Low Voltage Directive (LVD)
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous curre AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual ba 2100 MHz (Bdl) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM 50 Ohm impedance, SMA p Serial RS485, uninsulated 24 V DC – 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free s -20 °C to +50 °C / -20 °C to 80 %, non-condensing Low Voltage Directive (LVD) Directive 2014/30/EU, in co
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous curre AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual ba 2100 MHz (Bdl) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM 50 Ohm impedance, SMA p Serial RS485, uninsulated 24 V DC – 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free s -20 °C to +50 °C / -20 °C to 80 %, non-condensing Low Voltage Directive (LVD) Directive 2014/30/EU, in co RED 2014/53/EU
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum Wire cross-section / Stripping length	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous currer AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual ban 2100 MHz (Bdl) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM 50 Ohm impedance, SMA p Serial RS485, uninsulated 24 V DC – 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free s -20 °C to +50 °C / -20 °C to 80 %, non-condensing Low Voltage Directive (LVD) Directive 2014/30/EU, in co RED 2014/53/EU 0.2 2.5 mm ² screw termi
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum Wire cross-section / Stripping length Mounting / Installation position Material / Flammability class	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous currer AgNi / 4 kV 2G - GSM/GPRS/EDGE: dual 3G - UMTS/HSPA+: dual ban 2100 MHz (Bdl) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM 50 Ohm impedance, SMA p Serial RS485, uninsulated 24 V DC – 0.5 A
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum Wire cross-section / Stripping length Mounting / Installation position Material / Flammability class Protection class (DIN 40050)	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous currer AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual ban 2100 MHz (Bdl) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM 50 Ohm impedance, SMA p Serial RS485, uninsulated 24 V DC - 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free s -20 °C to +50 °C / -20 °C to 80 %, non-condening Low Voltage Directive (LVD); Directive 2014/30/EU, in co RED 2014/53/EU 0.2 2.5 mm ² screw termi DIN rail TS35 or direct mou
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum Wire cross-section / Stripping length Mounting / Installation position Material / Flammability class Protection class (DIN 40050) Accessories	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous currer AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual ban 2100 MHz (Bdl) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM 50 Ohm impedance, SMA p Serial RS485, uninsulated 24 V DC - 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free si -20 °C to +50 °C / -20 °C to 80 %, non-condensing Low Voltage Directive (LVD) Directive 2014/3/EU 0.2 2.5 mm ² screw termin DIN rail TS35 or direct mou Housing: Noryl; terminals: p IP 20
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum Wire cross-section / Stripping length Mounting / Installation position Material / Flammability class Protection class (DIN 40050) Accessories Antenna GSM	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous currer AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual bar 2100 MHz (Bdl) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM 50 Ohm impedance, SMA p Serial RS485, uninsulated 24 V DC - 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free si -20 °C to +50 °C / -20 °C to 80 %, non-condensig Low Voltage Directive (LVD) Directive 2014/30/EU, in co RED 2014/53/EU 0.2 2.5 mm ² screw termi DIN rail TS35 or direct mou Housing: Noryl; terminals: p IP 20 GSM-ANTENNA-4G
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum Wire cross-section / Stripping length Mounting / Installation position Material / Flammability class Protection class (DIN 40050) Accessories Antenna GSM Cat. no.	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous currer AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual bar 2100 MHz (Bdl) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM 50 Ohm impedance, SMA p Serial RS485, uninsulated 24 V DC – 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free ss -20 °C to +50 °C / -20 °C to 80 %, non-condensing Low Voltage Directive (LVD) Directive 2014/30/EU, in co RED 2014/53/EU 0.2 2.5 mm ² screw termin DIN rail TS35 or direct mou Housing: Noryl; terminals: p IP 20 GSM-ANTENNA-4G 16450.2
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum Wire cross-section / Stripping length Mounting / Installation position Material / Flammability class Protection class (DIN 40050) Accessories Antenna GSM Cat. no. C External GSM antenna	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous currer AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual bat 2100 MHz (Bdl) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM 50 Ohm impedance, SMA p Serial RS485, uninsulated 24 V DC – 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free s -20 °C to +50 °C / -20 °C to 80 %, non-condensing Low Voltage Directive (LVD) Directive 2014/30/EU, in co RED 2014/53/EU 0.2 2.5 mm ² screw termi DIN rail TS35 or direct mou Housing: Noryl; terminals: p IP 20 GSM-ANTENNA-4G 16450.2 GSM-ANTENNA-EXTERNA
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum Wire cross-section / Stripping length Mounting / Installation position Material / Flammability class Protection class (DIN 40050) Accessories Antenna GSM Cat. no. Cat. no.	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous currer AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual bat 2100 MHz (Bdl) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM 50 Ohm impedance, SMA p Serial RS485, uninsulated 24 V DC – 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free s -20 °C to +50 °C / -20 °C to 80 %, non-condening Low Voltage Directive (LVD) Directive 2014/30/EU, in co RED 2014/53/EU 0.2 2.5 mm ² screw termi DIN rail TS35 or direct mou Housing: Noryl; terminals: p IP 20 GSM-ANTENNA-4G 16450.2 GSM-ANTENNA-EXTERNA 16451.2
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum Wire cross-section / Stripping length Mounting / Installation position Material / Flammability class Protection class (DIN 40050) Accessories Antenna GSM Cat. no. C External GSM antenna	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous current AgNi / 4 kV 2G - GSM/GPRS/EDGE: dua 3G - UMTS/HSPA+: dual bat 2100 MHz (Bdl) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM 50 Ohm impedance, SMA p Serial RS485, uninsulated 24 V DC – 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free su -20 °C to +50 °C / -20 °C to 80 %, non-condensing Low Voltage Directive (LVD) Directive 2014/30/EU, in co RED 2014/53/EU 0.2 2.5 mm ² screw termi DIN rail TS35 or direct mou Housing: Noryl; terminals: p IP 20 GSM-ANTENNA-4G 16450.2 GSM-ANTENNA-EXTERNA 2ty. 16451.2
Lifespan at resistive load Max. switching frequency Contact material / Test voltage GSM specifications Frequency bands SIM card Antenna Bus specifications Interface ports Voltage interface Bus protocol Modbus slave functionality is available General information Voltage supply Current consumption Backup power Operating / storage temperature Max. relative humidity DIN VDE specifications Electromagnetic properties Frequency spectrum Wire cross-section / Stripping length Mounting / Installation position Material / Flammability class Protection class (DIN 40050) Accessories Antenna GSM Cat. no. C External GSM antenna	Electrical, at max. load: > 1. 6 min ⁻¹ at continuous current AgNi / 4 kV 2G - GSM/GPRS/EDGE: dual 3G - UMTS/HSPA+: dual bance 2100 MHz (Bdl) 4G - LTE CAT1: Penta band 800 (Bd20)/900 (Bd8)/1800 Nano SIM 50 Ohm impedance, SMA pro- Serial RS485, uninsulated 24 V DC – 0.5 A - No 10 to 30 V DC 285 mA DC @ 24 V DC Internal maintenance-free si -20 °C to +50 °C / -20 °C to 80 %, non-condensing Low Voltage Directive (LVD) Directive 2014/30/EU, in co RED 2014/53/EU 0.2 2.5 mm ² screw termi DIN rail TS35 or direct mou Housing: Noryl; terminals: p IP 20 GSM-ANTENNA-4G 2ty. 16450.2 GSM-ANTENNA-EXTERNA

	GSM-PRO2E-4G-US
66699 66699 66699 46 Le	6666666666666
antenna)	95 x 88 x 67 / 65 (without antenna) 188
1	GSM-PRO2E-4G-US 16457.2 1
24 V DC (10 – 30 V DC)	$IA / \pm (40 \ \mu A + 0.3 \ \% \text{ of the measured value})$
.5 mA / @30 V: 0.6 mA	
ull-down resistance: 24 kOhm julated, depending on load V ~	
1.5 x 10 ⁵ switching cycles. M ent, 1200 min ⁻¹ without load	echanical: > 15 x 10 ⁶ switching cycles
al band 900/1800 MHz	
and 900 (BdVIII)/	3G - UMTS/HSPA+: triple band, 850 (BdV)/ AWS (BdIV)/1900 MHz (BdII)
d 700 (Bd28)/ 00 (Bd3)/2100 MHz (Bd1)	4G - LTE CAT1: Quad band, 700 (Bd12)/ 850 (Bd5)/ AWS (Bd4)/1900 MHz (Bd2)
plug	
supercap capacitor to +70 °C	
D) 2014/35/EU, in compliance compliance with EN 55011 ar	nd EN 61326-1
ninal connection / 6 mm ounting / arbitrary polyamide 6.6 / UL94 V-0	CFR Title 47 parts 22 and 24
AL-4G-3M	1
	1
AL-4G-5M	1

Digital input module	GSM-PRO-10DI	Circuit diagram
 10 digital inputs, 24V One LED display per input 		
Type Cat. no.	GSM-PRO-10DI Qty. 16375.2	
Digital output module	GSM-PRO-4DO	Circuit diagram
 4 relay outputs, one CO contact each Max. continuous current per relay: 16 A (conta materials for high inrush currents) One yellow LED status display per channel 	act	
Type Cat. no.	GSM-PRO-4DO Qty. 16378.2	GSM-4D0-12 V DC 16444.2
Analogue input module	GSM-PRO-8AI	Circuit diagram
 8 multi-function analogue inputs: 0 10 V, 0(4) 20 mA, NTC, RTD (PT1000 / N11000) -40 +120 °C Custom configuration for each input 		1 - 2 - 3 - 4
Type Cat. no.	GSM-PRO-8AI Qty. 16377.2	
Analogue output module	GSM-PRO-4AO	Circuit diagram
• 4 analogue outputs, 0 10 V	6666655	24 as3 57 2+ as+ 0y
	604002	A = 0 + 0 + 0 + 0 + 0 + 0 + 0 + 0 + 0 + 0
Туре	CSM-PRO-4AO 16376.2	
Туре		
Type Cat. no.	Qty. 16376.2 1 GSM-PRO-CON tter-	

Technical documentation

		GSM-PRO-10DI	GSM-PRO-4DO	GSM-PRO-4DO 12 V DC	GSM-PRO-8AI	GSM-PRO-4AO	GSM-PRO-CON
Multi-function analogue inputs	0 10 V / 0 (4) 20 mA / RTD. Default: RTD input. Input configurable using plug-in resistors				8		
Input resistance (0 10V)	Resistance: fixed (200 kOhm)				•		
Input resistance (0(4) 20 mA)	Resistor: plug-in (Ri), 250 ohms ±0.1% (resistor is not included)*				•		
Input resistance (RTD -40 +120 °C)	Resistor: plug-in (Rt), sensor-dependent ±0.1% (resistor is not included)*				•		
RTD sensor type	PT1000 (IEC6075) Rt: 5k11 ±0.1%, NI1000 (TK5000 Siemens) Rt: 5k11 ±0.1%, NTC (10K3A1) Rt: 40K ±0.1% *				•		
Resolution / conversion error (0 10 V)	10 bit / ±(10 mV + 0.3% of measured value)				•		
Resolution / conversion error (0(4) 20 mA)	10 bit / ±(20 μ A + 0.4% of measured value)				•		
Resolution / conversion error (RTD)	14 bit / ±(0.4 °C + 0.5% of measured value)				•		
Temperature coefficient	< 0.02 % °C				•		
Digital input	Active high (connect the supply voltage or VDD(+) from the module to the input)	10					
Input voltage	24 V DC (10 30V)	•					
Threshold of dig. Inputs	Low < 3 V / High > 6 V	•					
Max. frequency	20 Hz	•					
Min. pulse length	15 ms	•					
Impedance	58 kOhm	•					
VDD (+) output	Can only be used for the inputs	•					
LED status display	Bi-colour LED per input (green/red/off, programmable)	•					
Analogue output	0 10 V DC, short-circuit and overvoltage protected (24 V)					4	
Load resistance / current per channel	> 1 kOhm / < 10 mA					•	
Resolution / Conversion error	10 bit / ±(30 mV + 0.5 % of measured value)					•	
Temperature coefficient	< 0.02 % °C					•	
LED status display	Yellow LED. Light intensity depends on output value; < 1.5 V = not illuminated					•	
Relay output			4	4			
Contact type	4 x 1 CO		•	•			
Max. switching voltage	250 V~		•	•			
Continuous current / Inrush current	16 A / 80 A (20 ms)		•	•			
(resistive load) Max. module current (all relays)	32 A		•	•			
Max. switching capacity	4000 VA		•	•			
Electrical lifespan at nominal / 2 A load	1 x 10 ⁵ / 7 x 10 ⁵ switching operations @ 23 °C and resistive load		•	•			
Mechanical lifespan	30 x 10 ⁵ switching operations		•	•			
Max. switching frequency	6 min ⁻¹ at continuous current, 1200 min ⁻¹ without load		•	•			
Contact material	AqSnO2		•	•			
Test voltage coil - contact	5 kV		•	•			
LED status display	Yellow		•	•			
Bus specifications							
Interface ports	Serial RS485, uninsulated	•	•	•	•	•	•
Max. cable length	500 m	•	•	•	•	•	•
Terminating resistor	Integrated terminating resistor is activated by jumper (default: off)	•	•	•	•	•	•
Protective circuitry	Integrated transient protection	•	•	•	•	•	٠
Bus connection	Integrated plug-in connector (modules mounted without clearance, no wiring required)	•	•	•	•	•	٠
Connection type	Shielded twisted-pair cable	•	•	•	•	•	٠
General information							
LED status display (two colours)	Run - no communication - Error	•	•	•	•	•	
Voltage supply	2028 V DC (Power at bus plug: 5 A max.)		•		•	•	
Voltage supply	1030 V DC (power at bus connector: 5 A max)	•					
Voltage supply	10.812.2 V DC (power at bus plug: 5 A max)			•			
Current consumption, DC	mA typical @ 24 VDC (with all outputs active @ full load)	30	100	100	50	57	
Operating / storage temperature	0 °C to +50 °C / -20 °C to +70 °C	•	•	•	•	•	•
Relative humidity	max. 90 %, non-condensing	•	•	•	•	•	•
The CE label	Low Voltage Directive (LVD) 2014/35/EU, in compliance with EN 50178	•	•	•	•	•	•
Connection cross-section / Stripping	EMC Directive 2014/30/EU, in compliance with EN 55011 and EN 61326-1 0.2 2.5 mm ² screw connection / 6 mm	•	•	•	•	•	•
length Mounting / Installation position	DIN rail TS35 or direct mounting, as desired	•	•	•	•	•	•
Dimensions (L x W x H)	x 95 x 60 mm	53	53	53	53	36	36
Insulating material / Flammability class	Housing and I/O terminals: polycarbonate; Bus connector: Polyamide 6.6 / UL94 V-0	•	•	•	•	•	•
Construction	Can be installed in rows without gap	•	•	•	•	•	•
Protection class (DIN 40050)	IP 20	•	•	•	•	•	•
Weight, g		121	154	154	117	86	64

GSM-PRO Antenna 2G/3G

GSM antenna		GSM-ANTENNA-90°	GSM-ANTENNA-EXTERNAL-SMA-3M	GPS / GSM antenna	GSM-ANTENNA-GPS-3
Weight, g		8	81	Weight, g	53
Туре		GSM-ANTENNA-90°	GSM-ANTENNA-EXTERNAL-SMA-3M	Туре	GSM-ANTENNA-GPS-3M-K
Cat. no.	Qty.	16379.2	1 16061.2 1	Cat. no.	Qty. 16380.2
General information		800 850 000 1000 and 2100 MUL	000 1800 2100 MU-	General information	
Frequency GSM		800, 850, 900, 1900 and 2100 MHz	900, 1800, 2100 MHz	Frequency GSM Frequency GPS	1575.42 ±1 MHz
Frequency GPS Antenna type GPS				Antenna type GPS	Active (power supply 2.5
Max. gain		1.0 dBi (824 960 MHz)	1 dBi	Max. gain GSM/GPS	- / 2 dBic
viax. gaili		2.0 dBi (1710 1990 MHz) 2.5 dBi (1920 2170 MHz)	T UDI	Max. gain OSM/Or S	- / 2 ubic
mpedance		50 Ohm	50 Ohm	Impedance	50 Ohm
Connection type		SMA male	SMA male	Connection type	SMA male
Cable length			3 meters	Cable length	3 meters
Bore hole			17 mm	Bore hole	
Antenna diameter		8 mm	45 mm	Antenna diameter	40.5 x 50.8 mm
Antenna height		41 mm	17 mm	Antenna height	16.8 mm
Total height		49.5 mm	39.5 mm	Total height	16.8 mm
Temperature range		-40 °C +75 °C	-40 °C +85 °C	Temperature range	-40 °C+85 °C
					ABS
Material of antenna housing		PC + PBT	Nylon 6	Material of antenna housing	ADS
		PC + PBT Screw	Nylon 6 Screw	Material of antenna housing Mounting type	
Mounting type Antenna shape			Screw Puck	Material of antenna housing Mounting type Antenna shape	ABS Magnetic Puck
Material of antenna housing Mounting type Antenna shape GSM antenna Weight, g Type Cat. no. General information		Screw Stubby	Screw Puck	Mounting type	Magnetic
Mounting type Antenna shape CSM antenna Weight, g Type Cat. no. General information	Qty.	Screw Stubby GSM-ANTENNA-EXTERNAL-SMA-5M	Screw Puck GSM-ANTENNA-EXTERNAL-SMA-10M	Mounting type	Magnetic
Mounting type Antenna shape GSM antenna Weight, g Type <i>Cat. no.</i> General information Frequency GSM Frequency GSM Frequency GPS	Qty.	Screw Stubby GSM-ANTENNA-EXTERNAL-SMA-5M	Screw Puck GSM-ANTENNA-EXTERNAL-SMA-10M	Mounting type	Magnetic
Mounting type Antenna shape CSM antenna Weight, g Type Cat. no. General information Frequency GSM Frequency GPS	Qty.	Screw Stubby GSM-ANTENNA-EXTERNAL-SMA-5M	Screw Puck GSM-ANTENNA-EXTERNAL-SMA-10M	Mounting type	Magnetic
Mounting type Antenna shape GSM antenna Weight, g Type <i>Cat. no.</i> General information Frequency GSM Frequency GSM Frequency GPS Antenna type GPS	Qty.	Screw Stubby GSM-ANTENNA-EXTERNAL-SMA-5M	Screw Puck GSM-ANTENNA-EXTERNAL-SMA-10M	Mounting type	Magnetic
Mounting type Antenna shape CSM antenna Weight, g Type Cat. no. General information Frequency GSM Frequency GPS Antenna type GPS Max. gain	Qty.	Screw Stubby GSM-ANTENNA-EXTERNAL-SMA-5M GSM-ANTENNA-EXTERNAL-SMA-5M 16172.2 800, 850, 900, 1900 and 2100 MHz - 1 dBi 50 Ohm	Screw Puck CSM-ANTENNA-EXTERNAL-SMA-10M Image: Comparison of the system of the sy	Mounting type	Magnetic
Mounting type Antenna shape CSM antenna Weight, g Type Cat. no. General information Frequency GSM Frequency GPS Antenna type GPS Max. gain Impedance Connection type	Qty.	Screw Stubby GSM-ANTENNA-EXTERNAL-SMA-5M GSM-ANTENNA-EXTERNAL-SMA-5M 16172.2 800, 850, 900, 1900 and 2100 MHz - 1 dBi 50 Ohm SMA male	Screw Puck GSM-ANTENNA-EXTERNAL-SMA-10M	Mounting type	Magnetic
Mounting type Antenna shape CSM antenna GSM antenna CSM antenna Suppe Cat. no. General information Frequency GSM Frequency GPS Antenna type GPS Antenna type GPS Max. gain Impedance Connection type Cable length	Qty.	Screw Stubby GSM-ANTENNA-EXTERNAL-SMA-SM GSM-ANTENNA-EXTERNAL-SMA-SM 16172.2 800, 850, 900, 1900 and 2100 MHz - 1 dBi 50 Ohm SMA male 5 meters	Screw Puck GSM-ANTENNA-EXTERNAL-SMA-10M A80 GSM-ANTENNA-EXTERNAL-SMA-10M 1 A80 SSM-ANTENNA-EXTERNAL-SMA-10M 1 1 50 Ohm SMA male 10 meters	Mounting type	Magnetic
Mounting type Antenna shape CSM antenna GSM antenna CSM antenna Superative Su	Qty.	Screw Stubby GSM-ANTENNA-EXTERNAL-SMA-5M GSM-ANTENNA-EXTERNAL-SMA-5M 16172.2 800, 850, 900, 1900 and 2100 MHz - 1 dBi 50 Ohm SMA male 5 meters 17 mm	Screw Puck GSM-ANTENNA-EXTERNAL-SMA-10M GSM-ANTENNA-EXTERNAL-SMA-10M 1 A80 GSM-ANTENNA-EXTERNAL-SMA-10M 1 1 A80 GSM-ANTENNA-EXTERNAL-SMA-10M 1 A800, 850, 900, 1900 and 2100 MHz - 1 1 B800, 850, 900, 1900 and 2100 MHz - 1 1 B800, 850, 900, 1900 and 2100 MHz - 1 1 B800, 850, 900, 1900 and 2100 MHz - 1 1 B800, 850, 900, 1900 and 2100 MHz - 1 1 B800, 850, 900, 1900 and 2100 MHz - 1 1 B800, 850, 900, 1900 and 2100 MHz - 1 1 B800, 850, 900, 1900 and 2100 MHz - 1 1 B800, 850, 900, 1900 and 2100 MHz - 1 B800, 850, 900, 1900 and 2100 MHz - 1 B800, 850, 900, 1900 and 2100 MHz - 1 B800, 850, 900, 1900 and 2100 MHz - 1 B800, 850, 900, 1900 and 2100 MHz - 1 B800, 850, 900, 1900 and 2100 MHz - 1 B800, 850, 900, 1900 and 2100 MHz - 1 B800, 850, 900, 1900 and 2100 MHz - 1 B800, 850, 900, 1900 and 2100 MHz - 1 B800, 850, 900, 1900 and 2100 MHz - 1 B800, 850, 900, 1900 and 2100 MHz - 1 B800, 850, 900, 1900 and 2100 MHz - 1 B800, 850, 900, 1900 and 2100 MHz 1 B800, 850, 900, 1900 and 2100 MHz	Mounting type	Magnetic
Mounting type Antenna shape CSM antenna GSM antenna System	Qty.	Screw Stubby GSM-ANTENNA-EXTERNAL-SMA-5M GSM-ANTENNA-EXTERNAL-SMA-5M 16172.2 800, 850, 900, 1900 and 2100 MHz - 1 dBi 50 Ohm SMA male 5 meters 17 mm 80.0 mm	Screw Puck GSM-ANTENNA-EXTERNAL-SMA-10M GSM-ANTENNA-EXTERNAL-SMA-10M 1 6 6 7 7 7 800, 850, 900, 1900 and 2100 MHz 7 1 1 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Mounting type	Magnetic
Mounting type Antenna shape CSM antenna GSM antenna Weight, g Type Cat. no. General information Frequency GSM Frequency GSM Frequency GPS Antenna type GPS Max. gain Impedance Connection type Cable length Bore hole Antenna diameter Antenna diameter Antenna height	Qty.	Screw Stubby GSM-ANTENNA-EXTERNAL-SMA-5M GSM-ANTENNA-EXTERNAL-SMA-5M 16172.2 800, 850, 900, 1900 and 2100 MHz - 1 dBi 50 Ohm SMA male 5 meters 17 mm 80.0 mm 23.0 mm	Screw Puck GSM-ANTENNA-EXTERNAL-SMA-10M Image: Constraint of the system of the sy	Mounting type	Magnetic
Mounting type Antenna shape CSM antenna CSM antenna Weight, g Type Cat. no. General information Frequency GSM Frequency GSM Frequency GPS Antenna type GPS Max. gain Impedance Connection type Cable length Bore hole Antenna diameter Antenna diameter Antenna height Total height	Qty.	Screw Stubby GSM-ANTENNA-EXTERNAL-SMA-5M GSM-ANTENNA-EXTERNAL-SMA-5M 16172.2 800, 850, 900, 1900 and 2100 MHz - 1 dBi 50 Ohm SMA male 5 meters 17 mm 80.0 mm 23.0 mm 23.0 mm	Screw Puck CSM-ANTENNA-EXTERNAL-SMA-10M Image: Comparison of the system of the sy	Mounting type	Magnetic
Mounting type Antenna shape CSM antenna CSM antenna Weight, g Type Cat. no. General information Frequency GSM Frequency GPS Antenna type GPS Antenna type GPS Max. gain Impedance Connection type Cable length Bore hole Antenna diameter Antenna height Total height Total height	Qty.	Screw Stubby GSM-ANTENNA-EXTERNAL-SMA-5M Contemporation of the second	Screw Puck CSM-ANTENNA-EXTERNAL-SMA-10M Image: Comparison of the system of the sy	Mounting type	Magnetic
Mounting type Antenna shape CSM antenna GSM antenna Weight, g Type Cat. no. General information Frequency GSM Frequency GPS Antenna type GPS Antenna type GPS Max. gain Impedance Connection type Cable length Bore hole Antenna diameter Antenna height Total height Temperature range Material of antenna housing	Qty.	Screw Stubby GSM-ANTENNA-EXTERNAL-SMA-5M Contemporation of the second	Screw Puck CSM-ANTENNA-EXTERNAL-SMA-10M CSM-ANTENNA-EXTERNAL-SMA-10M 480 CSM-ANTENNA-EXTERNAL-SMA-10M 1 <i>16173.2</i> 1 800, 850, 900, 1900 and 2100 MHz - 1 dBi 50 Ohm SMA male 10 meters 17 mm 80.0 mm 23.0 mm 45.0 mm 45.0 mm 40 °C+85 °C Nylon 6	Mounting type	Magnetic
Mounting type Antenna shape CSM antenna Weight, g Type Cat. no.	Qty.	Screw Stubby GSM-ANTENNA-EXTERNAL-SMA-5M Contemporation of the second	Screw Puck CSM-ANTENNA-EXTERNAL-SMA-10M Image: Comparison of the system of the sy	Mounting type	Magnetic

S-3M-K	GSM-ANTENNA-EXTERNAL-GSM+GPS
	158
1-K	GSM-ANTENNA-EXTERNAL-GSM+GPS-SMA-3M
1	16381.2 1
	800, 850, 900, 1900 and 2100 MHz
	1575.42 ±1 MHz
5 V DC)	Active (power supply 2.5 5 V DC)
	1 dBi / 2 dBic
	50 Ohm
	two SMA male
	3 meters
	13 mm
	81.3 mm
	14.6 mm
	29.6 mm
	-40 °C+85 °C
	ABS
	Screw
	Puck

GSM-PRO Antenna 4G / LTE

GSM antenna		GSM-ANTENNA-4G							
Weight, g		9							
Туре		GSM-ANTENNA-4G							
Cat. no.	Qty.	16450.2 1							
General information									
Frequency GSM		800, 850, 900-1700, 1800, 1900, 2100-2600 MHz							
Frequency GPS									
Antenna type GPS									
Max. gain		0.1 dBi (689 960 MHz)							
		2.9 dBi (1710 2170 MHz)							
		4.6 dBi (2500 2700 MHz)							
Impedance		50 Ohm							
Connection type		SMA male							
Cable length									
Bore hole									
Antenna diameter		10 mm							
· · · · · · · · · · · · · · · · · · ·		49 mm							
Antenna height		71							
Antenna height Total height		71 mm							
Antenna height Total height Temperature range		-20 °C+65 °C							
Total height Temperature range									
Total height		-20 °C+65 °C							

Screw Puck

GSM antenna	GSM-ANTENNA-EXTERNAL-4G-3M	GSM-ANTENNA-EXTERNAL-4G-5M								
		198								
Weight, g	122									
Туре	GSM-ANTENNA-EXTERNAL-4G-3M	GSM-ANTENNA-EXTERNAL-4G-5M								
Cat. no. Qty.	16451.2 1	16452.2 1								
General information										
Frequency GSM	689 – 960/1710 – 2690 MHz	689 – 960/1710 – 2690 MHz								
Frequency GPS										
Antenna type GPS										
Max. gain	2.5 dBi	2.5 dBi								
Impedance	50 Ohm	50 Ohm								
Connection type	SMA male	SMA male								
Cable length	3 meters	5 meters								
Bore hole	13 mm	13 mm								
Antenna diameter	81.3 mm	81.3 mm								
Antenna height	14.6 mm	14.6 mm								
Total height	29.6 mm	29.6 mm								
Temperature range	-40 °C+85 °C	-40 °C+85 °C								
	-40 C+05 C	-10 C105 C								
Material of antenna housing	ABS	ABS								

Screw Puck

Notes

	-		-														
					 			 	 		 	 	 		 	 , 	

Mounting type Antenna shape



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