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SPOT

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SPOT



ZIP

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ZIP



GIOTTO SERIE

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SMART

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SMART



**MTA - KOMBIINSTRUMENTE
& DISPLAYS**

MTA - CLUSTERS & DISPLAYS



QUIK STANDARD 12 V	QUIK FULL 12 V	QUIK FULL 24 V
P1-5105-0000	P1-5105-2000	P1-5105-3000

Foliendesign foil design



Kontrollleuchten indicator lights



Betriebsspannung operating voltage

9 - 16 V	18 - 32 V
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Geräteabmessung dimensions

224,9 x 114,9 x 59,9 mm

Anzeige display

Bildschirm display	Icon/Segment LCD 2,2" 50 x 24 mm black & white	
Kontrollleuchte indicator lights	18	23 (18 + 5 optional)
Messinstrumente gauges	2x analog, 1x digital	
Hintergrundbeleuchtung backlight	Display, Nadeln = rot, dimmbar LCD, needles = red with dimming function Instrumente, Bargraphen = weiß, dimmbar analog indicators, bar graph = white with dimming function	

Prozessorumgebung processor platform

Controller controller	ST SPC560B54 family
RAM RAM	64 kB
Speicher memory	768 kB

Schnittstellen interface

CAN ISO 11898	CAN bus 2.0 B high speed (up to 1Mb/s), wake-up function	
analog/digital Eingänge analog/digital Input	22x digital (8x high-side/low-side, 8x high-side, 6x low-side), 2x analog, 2x frequency	
digital Ausgänge digital Output	-	1x 500 mA low-side

Signale/Sensoren indicators/sensors

Beeper beeper	90 dB (A) ±3 dB(A)
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Zulassungen/Schutz certificates/protection

IP-Schutzklasse IP protection class	front IP 66 rear IP 65
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Betriebstemperatur operating temperature

Bereich range	-30 bis +75 °C -30 to +75 °C
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Montage mounting

verbaut in-dash mounting	X
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QUIK PLUS STANDARD 12 V	QUIK PLUS FULL 12 V	QUIK PLUS FULL 24 V
P1-5101-0000	P1-5101-2001 P1-5101-2000	P1-5101-3000

Foliendesign foil design



Kontrollleuchten indicator lights



Betriebsspannung operating voltage

9 - 16 V	18 - 32 V
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Geräteabmessung dimensions

224,9 x 114,9 x 59,9 mm

Anzeige display

Bildschirm display	DotMatrix LCD, 2,7", 128 x 128 pixel, 54,4 mm x 54,4 mm, black & white
Kontrollleuchte indicator lights	19
Messinstrumente gauges	2x analog
Hintergrundbeleuchtung backlight	Nadeln = rot, dimmbar needles = red with dimming function Display, Instrumente = weiß, dimmbar LCD, analog indicators = white with dimming function

Prozessorumgebung processor platform

Controller controller	ST SPC560B54 family
RAM RAM	64 kB
Speicher memory	768 kB

Schnittstellen interface

CAN ISO 11898	CAN bus 2.0 B high speed (up to 1Mb/s), wake-up function	
analog/digital Eingänge analog/digital Input	22x digital (8x high-side/low-side, 8x high-side, 6x low-side), 2x analog, 2x frequency	
digital Ausgänge digital Output	-	1x 500 mA low-side
RTC real time clock	-	± 2,16 Sek/Tag, keine Backup Batterie ± 2,16 sec per day, non-battery powered

Signale/Sensoren indicators/sensors

Beeper beeper	90 dB (A) ±3 dB(A)
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Zulassungen/Schutz certificates/protection

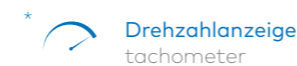
IP-Schutzklasse IP protection class	front IP 66 rear IP 65
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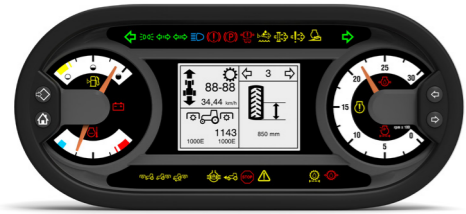
Betriebstemperatur operating temperature

Bereich range	-30 bis +75 °C -30 to +75 °C
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Montage mounting

verbaut in-dash mounting	X
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REVO 12 V

P1-5106-0000



- Foliendesign** foil design
- Kontrollleuchten** indicator lights
- Betriebsspannung** operating voltage
- Geräteabmessung** dimensions
- Anzeige** display

9 - 16 V
152,2 x 317,2 x 72,9 mm

Bildschirm display	DotMatrix LCD, 4,5", 180 x 128 pixel, 84,9 mm x 62,8 mm, black & white
Kontrollleuchte indicator lights	32
Messinstrumente gauges	3x analog (optional 2 or 4)
Hintergrundbeleuchtung backlight	Display, Nadeln, Instrumente = weiß, dimmbar LCD, needles, analog indicators = white with dimming function

Prozessorumgebung processor platform

Controller controller	NXP SPC5606S family
RAM RAM	48 kB + 160 kB (graphics RAM)
Speicher memory	1 MB + 8 MB Flash

Schnittstellen interface

CAN ISO 11898	2x CAN bus 2.0B high speed (up to 1Mb/s)
analog/digital Eingänge analog/digital Input	34x digital (12x high-side, 22x low-side), 4x frequency, 7x analog
digital Ausgänge digital Output	1x low-side 3A, 2x high-side 3A, 1x high-side 0,2A
RTC real time clock	± 2,17 Sek./Tag, keine Backup Batterie ± 2,17 sec per day, non-battery powered
LIN LIN	1x LIN bus, up to 20kBd master possible K-line compatible 2.1/SAE J2602

Benutzeroberfläche user interface

Keys keys	4
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Signale/Sensoren indicators/sensors

Beeper beeper	90 dB (A) ±3 dB(A)
Lichtsensor light sensor	X

Zulassungen/Schutz certificates/protection

IP-Schutzklasse IP protection class	front IP 66 rear IP 65
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Betriebstemperatur operating temperature

Bereich range	-30 bis +85 °C -30 to +85 °C
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Montage mounting

verbaut in-dash mounting	X
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REVO PLUS 12 V

P1-5102-0000



- Foliendesign** foil design
- Kontrollleuchten** indicator lights
- Betriebsspannung** operating voltage
- Geräteabmessung** dimensions
- Anzeige** display

9 - 16 V
152,2 x 317,2 x 72,9 mm

Bildschirm display	TFT LCD WQVGA, 4,3", 480 x 272 pixel, 16,7 M colors, 95 mm x 53,8 mm
Kontrollleuchte indicator lights	32
Messinstrumente gauges	3x analog (optional 2 or 4)
Hintergrundbeleuchtung backlight	Display, Nadeln, Instrumente = weiß, dimmbar LCD, needles, analog indicators = white with dimming function

Prozessorumgebung processor platform

Controller controller	NXP SPC5606S family
RAM RAM	48kB + 160kB (graphics RAM)
Speicher memory	1 MB + 8 MB Flash

Schnittstellen interface

CAN ISO 11898	2x CAN bus 2.0B high speed (up to 1Mb/s)
Video Eingang video Input	1x analog PAL/NTSC/SECAM with auto-detect
analog/digital Eingänge analog/digital Input	30x digital (11x high-side, 19x low-side), 4x frequency, 7x analog
digital Ausgänge digital Output	1x low-side 0,2A, 2x high-side 3A, 1x high-side 0,2A
RTC real time clock	± 2,17 Sek./Tag, keine Backup Batterie ± 2,17 sec per day, non-battery powered
LIN LIN	1 x LIN bus, up to 20kBd master possible K-line compatible 2.1/SAE J2602

Benutzeroberfläche user interface

Keys keys	4
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Signale/Sensoren indicators/sensors

Beeper beeper	90 dB (A) ±3 dB (A)
Lichtsensor light sensor	X

Zulassungen/Schutz certificates/protection

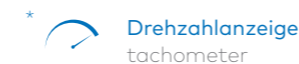
IP-Schutzklasse IP protection class	front IP 66 rear IP 65
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Betriebstemperatur operating temperature

Bereich range	-30 bis +70 °C -30 to +70 °C
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Montage mounting

verbaut in-dash mounting	X
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SPOT 12 V

P1-5103-0000

Foliendesign foil design

Standardfolie mit Kontrollleuchten, ohne analoge Anzeigen
standard foil with indicator lights, without analog gauges

Kontrollleuchten indicator lights



Betriebsspannung operating voltage

9 - 16 V

Geräteabmessung dimensions

Durchmesser 107 mm/Tiefe 66 mm diameter 107 mm/depth 66 mm

Anzeige display

Bildschirm display	DotMatrix LCD, 3,1", 160 x 56 pixel, 71,2 mm x 23,5 mm, black & white
Kontrollleuchte indicator lights	18
Hintergrundbeleuchtung backlight	Display = weiß, dimmbar LCD = white with dimming function

Prozessorumgebung processor platform

Controller controller	ST SPC560B54 family
RAM RAM	64 kB
Speicher memory	768 kB

Schnittstellen interface

CAN ISO 11898	CAN bus 2.0B high speed (up to 1Mb/s), wake-up function
analog/digital Eingänge analog/digital Input	15x digital (6x high-side/low-side, 5x low-side, 4x high-side), 2x analog, 2x frequency
digital Ausgänge digital Output	1x 500mA low-side
RTC real time clock	± 2,16 Sek./Tag, keine Backup Batterie ± 2,16 sec per day, non-battery powered

Signale/Sensoren indicators/sensors

Beeper beeper	90 dB (A) ±3 dB(A)
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Zulassungen/Schutz certificates/protection

IP-Schutzklasse IP protection class	front IP 66 rear IP 65
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Betriebstemperatur operating temperature

Bereich range	-30 bis +75 °C -30 to +75 °C
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Montage mounting

verbaut in-dash mounting	rückseitig verschraubt bolted on the back side
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ZIP 12 V

P1-5107-0000

Betriebsspannung operating voltage

9 - 16 V

Geräteabmessung dimensions

116,1 mm x 116,1 mm x 45,9 mm

Anzeige display

Bildschirm display	TFT QVGA, 3,5", 320 x 240 pixel, 16 M colors, 70 mm x 52,5 mm
Hintergrundbeleuchtung backlight	Display = weiß, dimmbar LCD = white with dimming function

Prozessorumgebung processor platform

Controller controller	NXP SPC5606S family
RAM RAM	48 kB
Speicher memory	1 MB

Schnittstellen interface

CAN ISO 11898	CAN bus 2.0B high speed (up to 1Mb/s)
analog/digital Eingänge analog/digital Input	3x digital/analog (high-side/low-side)

Zulassungen/Schutz certificates/protection

IP-Schutzklasse IP protection class	front IP 67
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Betriebstemperatur operating temperature

Bereich range	-30 bis +80 °C -30 to +80 °C
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Montage mounting

verbaut in-dash mounting	X
freistehend stand-alone mounting	X

**GIOTTO K 12 V**

P1-5109-0000

Betriebsspannung operating voltage

9 - 16 V

Geräteabmessung dimensions

239,5 mm x 145,5 mm x 46 mm

Anzeige display

Bildschirm display	TFT, 8", 800 x 480 pixel, 262k colors (16:9), 176 mm x 107 mm
Hintergrundbeleuchtung backlight	Display = dimmbar LCD with dimming function

Prozessorumgebung processor platform

Controller controller	JACINTO 6 (DRA744x)
RAM RAM	1 GB DDR3
Speicher memory	16 GB Flash

Schnittstellen interface

CAN ISO 11898	2x CAN bus 2.0 B high speed (up to 1Mb/s), wake-up function
Video Eingang video Input	2
Ethernet ethernet	2x BroadR-Reach, wake-up function
analog/digital Eingänge analog/digital Input	3x analog, 3x digital low-side, 2x digital high-side, 2x frequency
digital Ausgänge digital Output	2x high-side max 350mA (optional PWM)
RS232 RS232	X
RTC real time clock	ca. 10 min Backup (kapazitiv) typical retention time 10'
USB Geräteanschluss USB device connection	USB 2.0
LIN LIN	1x LIN 2.2, wake up function
WiFi	optional, 802.11 a/ac/b/g/n hardware supported
Bluetooth	optional, v4.2 and BLE, v2.1+EDR hardware supported

Benutzeroberfläche user interface

Front USB front USB	seitlicher USB 2.0 USB 2.0 lateral
Keys keys	6x front + ON/OFF/Reset rückseitig, weiß, dimmbar 6x front + ON/OFF/Reset rear, white with dimming function

Signale/Sensoren indicators/sensors

Lautsprecher speaker	85 db(A)
Lichtsensor light sensor	X
Status LEDs status LEDs	Rot/Grün red/green

Zulassungen/Schutz certificates/protection

IP-Schutzklasse IP protection class	front IP 66
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Betriebstemperatur operating temperature

Bereich range	-30 bis +70 °C -30 to +70 °C
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Montage mounting

freistehend stand-alone mounting	X
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**GIOTTO 12 V**

P1-5108-0000

Betriebsspannung operating voltage

9 - 16 V

Geräteabmessung dimensions

239,5 mm x 145,5 mm x 46 mm

Anzeige display

Bildschirm display	TFT, 8", 800 x 480 pixel, 262k colors (16:9), 176mm x 107 mm
Hintergrundbeleuchtung backlight	Display = dimmbar LCD with dimming function

Prozessorumgebung processor platform

Controller controller	JACINTO 6 (DRA744x)
RAM RAM	1 GB DDR3
Speicher memory	16 GB Flash

Schnittstellen interface

CAN ISO 11898	2x CAN bus 2.0 B high speed (up to 1Mb/s), wake-up function
Video Eingang video Input	2
Ethernet ethernet	2x BroadR-Reach, wake-up function
analog/digital Eingänge analog/digital Input	3x analog, 3x digital low-side, 2x digital high-side, 2x frequency
digital Ausgänge digital Output	2x high-side max 350mA (optional PWM)
RS232 RS232	X
RTC real time clock	ca. 10 min Backup (kapazitiv) typical retention time 10'
USB Geräteanschluss USB device connection	USB 2.0
LIN LIN	1x LIN 2.2, wake up function
WiFi	optional, 802.11 a/ac/b/g/n hardware supported
Bluetooth	optional, v4.2 and BLE, v2.1+EDR hardware supported

Benutzeroberfläche user interface

Front USB front USB	seitlicher USB 2.0 USB 2.0 lateral
Keys keys	ON/OFF/Reset rückseitig ON/OFF/Reset rear
Touch kapazitiv touchscreen capacitive	Multi Touch bis zu 10 Punkte multi-touch capability (up to 10 points)

Signale/Sensoren indicators/sensors

Lautsprecher speaker	85 db(A)
Lichtsensor light sensor	X
Status LEDs status LEDs	Rot/Grün red/green

Zulassungen/Schutz certificates/protection

IP-Schutzklasse IP protection class	front IP 66
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Betriebstemperatur operating temperature

Bereich range	-30 bis +70 °C -30 to +70 °C
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Montage mounting

freistehend stand-alone mounting	X
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SMART 12 V

P1-5104-0000

Kontrollleuchten indicator lights



Betriebsspannung operating voltage

9 - 16 V

Geräteabmessung dimensions

97 mm x 162 mm x 41,3 mm

Anzeige display

Bildschirm display	TFT LCD WQVGA, 4,3", 480 x 272 pixel, 16,7 M colors, 97 mm x 56 mm
Kontrollleuchte indicator lights	10
Bargraphen bar graph	8
Hintergrundbeleuchtung backlight	Display = weiß, dimmbar LCD = white with dimming function

Prozessorumgebung processor platform

Controller controller	ARM Cypress Traveo S6J32 family
RAM RAM	2112 kB + 128 kB TCRAM
Speicher memory	16 MB Hyper Flash

Schnittstellen interface

CAN ISO 11898	CAN bus FD (up to 5Mb/s), wake-up function optional CAN bus 2.0B high speed (up to 1Mb/s)
Ethernet ethernet	optional BroadR-Reach
analog/digital Eingänge analog/digital Input	10x digital (8x high-side/low-side, 2x low-side), 4x analog
digital Ausgänge digital Output	5x high-side (4x high-side PWM, 1x 2 A full-bridge), 3x low-side
Bluetooth	optional BLE 4.2
RTC real time clock	± 2,17 Sek./Tag, keine Backup Batterie ± 2,17 sec per day, non-battery powered
LIN LIN	optional LIN 2.1

Signale/Sensoren indicators/sensors

Lichtsensoren light sensor	X
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Zulassungen/Schutz certificates/protection

IP-Schutzklasse IP protection class	IP 67
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Betriebstemperatur operating temperature

Bereich range	-30 bis +85 °C -30 to +85 °C
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Montage mounting

freistehend stand-alone mounting	X
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Legende Piktogramme Kontrollleuchten

symbols indicator lights

	Motor engine		Differential differential		Batterie battery
	Motor Stop engine stop		Differential vorne/hinten differential front/rear		Pfeil, oben arrow up
	Motorventil engine valve		Drehzahl Achse rotation speed axles		Blinker links/rechts direction indicator
	Motor Temperatur engine temperature		Hydraulik Öl Füllstand level hydraulic oil		Warnblinken hazard warning light
	Kühlwasserstand level cooling water		Hydrauliköl Achse hydraulic oil axles		Warnblinken 1/2 hazard warning lights 1/2
	Motor Achtung engine danger		Parken parking		Begrenzungsleuchten position light
	Motor Warnung engine alarm		Bremsanlagenstörung brake malfunction		Arbeitsbeleuchtung 1/2 worklighting 1/2
	Motordrehzahl verringern decrease engine speed		Öl Bremssystem level oil brake system		Fernlicht high beam
	Dieselheizung diesel heating		Partikelfilter Reinigung cleaning particle filter		Nebelscheinwerfer fog lights
	Drehzahl erhöhen increase engine speed		Partikelfilter Fehler particle filter malfunction		Lenksäule Fehler steering column malfunction
	Ölstand oil level		Partikelfilter verstopft particle filter blocked		Stütze ausgefahren stabilizer extended
	Getriebe gear		Zusatztank additional tank		STOP stop
	Getriebe Öl druck oil pressure gear		Tank fuel		ACHTUNG danger
	Getriebe Öl Temperatur oil temperature gear		Kraftstofftank Füllstand fuel level		Radar radar
	Getriebe Öl Achse gear-oil axles		Tank leeren empty tank		Hinweis note
	Getriebe Öl Füllstand oil level gear				
	Getriebe Temperatur gear temperature				
	Neutrallauf idle				
	Vorwärts/Rückwärts forward/backward				
	Nebenantrieb hinten auxiliary drive rear				
	Nebenantrieb vorn auxiliary drive front				
	Nebenantrieb hinten langsame Fahrt auxiliary drive rear, slow drive				
	Langsame Fahrt slow drive				

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