

ENGINEERING DATA SHEET

PULSAR

GPS CURRENT INTERRUPTER

Rechargeable GPS-synchronised current interruption for cathodic protection survey work, available in 20A and 50A handheld models.

60+ DAYS

Minimum deployment endurance

NON-POLARITY-SENSITIVE

Connect in either direction

PROGRAMMABLE CALENDAR

Daily, weekly or monthly schedules

LOW-POWER STANDBY

Protection maintained between surveys

**PULSAR 20****75 V / 20 A**

Maximum switching capacity · 20 A continuous

PULSAR 50**150 V / 50 A**

Maximum switching capacity · 50 A continuous

Built around the survey schedule.

Program survey days and switching windows before deployment. Outside those windows the output remains closed to maintain cathodic protection while the electronics enter a low-power state, reducing unnecessary interruption and extending time between charges.

SURVEY SCHEDULING

Plan the survey once. Let Pulsar manage the timing.

Pulsar combines user-programmable switching cycles with calendar-based scheduling so interruption occurs only when the survey requires it.

CALENDAR CONTROL

Choose daily, weekly or monthly operation and assign switching programs, start times and stop times to the days or dates required.

- Daily - repeat the same switching program every day.
- Weekly - assign programs across a 7-day cycle.
- Monthly - program individual dates from 1 to 31.

Schedule

Date	Start Time	Stop Time	Switch Prog
1st	07:00	19:00	5
2nd	07:00	19:00	5
3rd	07:00	19:00	5
4th	07:00	19:00	5
5th	07:00	19:00	5
6th	07:00	19:00	5
7th	07:00	19:00	5
8th	07:00	19:00	5
9th	07:00	19:00	5
10th	07:00	19:00	5
11th	07:00	19:00	5
12th	07:00	19:00	5
13th	07:00	19:00	5
14th	07:00	19:00	5
15th	07:00	19:00	5

Default Clear Edit

Monthly schedule view in the Pulsar PC utility

DEPLOYMENT WORKFLOW

01 PROGRAM	02 DEPLOY	03 SYNC	04 SURVEY	05 STANDBY
Set cycle + calendar	Install in DC circuit	Acquire GPS/GNSS time	Run selected program	Maintain CP + low power

OPERATIONAL BENEFITS

MAINTAIN CATHODIC PROTECTION Outside the programmed switching window the connection remains closed, maintaining continuous DC protection.	USE POWER ONLY WHEN NEEDED The device enters a low-power state while not switching, extending deployment time between charges.
SYNCHRONISE MULTIPLE INTERRUPTERS GPS/GNSS timing aligns Pulsar units to approximately ± 1 ms over a one-hour period.	INSTALL WITHOUT POLARITY CONCERNS The switching path is non-polarity-sensitive and can be connected in either direction.

Operational benefit: program the complete survey calendar before deployment, minimise return visits and reduce unnecessary interruption to the protection system.

TECHNICAL DATA

Electrical, switching and timing specifications.

The 20A and 50A handheld units use the same control platform. Select the model to suit the required switching voltage and current.

PULSAR 20 75 V / 20 A 20 A continuous · same scheduling and GNSS platform	PULSAR 50 150 V / 50 A 50 A continuous · same scheduling and GNSS platform
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CORE SPECIFICATION

Specification	20A handheld	50A handheld
ELECTRICAL		
Maximum switching voltage	75 V DC	150 V DC
Maximum switching current	20 A	50 A
Continuous current capability	20 A	50 A
Polarity sensitivity	None - connect either direction	None - connect either direction
Main DC connections	2 x M6 brass studs	2 x M6 brass studs
SWITCHING, TIMING & PROGRAMMING		
Programming & schedule	PC utility; Daily / Weekly / Monthly	PC utility; Daily / Weekly / Monthly
On / off period	0 to 99.9 s in 0.1 s steps	0 to 99.9 s in 0.1 s steps
Switching offset	1 ms to 10 s	1 ms to 10 s
Fastest cycle	0.1 s ON / 0.1 s OFF	0.1 s ON / 0.1 s OFF
Standby behaviour	Output closed; CP maintained; low power	Output closed; CP maintained; low power

Note: Electrical ratings shown above supersede the earlier 100 V figure in the previous Pulsar 20 manual. Current Pulsar 20 rating is 75 V DC / 20 A.

GNSS, POWER AND ENVIRONMENT

One platform across both handheld models.

Both models share the same GPS/GNSS timing, programmable calendar, rechargeable battery system, low-power behaviour and environmental protection.



SHARED PLATFORM

- GPS/GNSS synchronisation to approximately ± 1 ms
- Minimum 60-day rechargeable battery endurance
- Approx. 4-hour recharge time
- Daily / weekly / monthly calendar scheduling
- Low-power standby with CP maintained
- IP65 water and dust resistance

Specification	20A handheld	50A handheld
GNSS, POWER & ENVIRONMENT		
Synchronisation	GPS/GNSS time; ± 1 ms between units over 1 h	GPS/GNSS time; ± 1 ms between units over 1 h
Receiver & antenna	Multi-constellation GNSS; magnetic active SMA antenna	Multi-constellation GNSS; magnetic active SMA antenna
Battery	Rechargeable Lithium-Ion; minimum 60 days	Rechargeable Lithium-Ion; minimum 60 days
Recharge time	Approximately 4 hours	Approximately 4 hours
Environment	IP65; -20°C to +70°C	IP65; -20°C to +70°C
Construction	Rugged aluminium housing; red anodised finish	Rugged aluminium housing; red anodised finish

The 50A model uses a larger handheld enclosure to support the higher 150 V / 50 A continuous rating while retaining the same functional platform.

FIELD DEPLOYMENT

Built for cathodic protection survey work.

Solid-state switching, robust construction and simple in-series installation make Pulsar suitable for demanding CIPS, DCVG and test post polarised survey programs.



Pulsar 50 handheld · 150 V / 50 A

INSTALLATION AND PRODUCT FORMAT

SIMPLE IN-SERIES INSTALLATION

Install Pulsar in the transformer rectifier DC output circuit between the rectifier and the structure / pipeline connection. The switching path can be connected either way round.



Installation safety

- Fully isolate the incoming AC mains supply before installation or removal.
- Connect Pulsar only within the DC output circuitry and replace the terminal insulation cover after connection.

APPLICATIONS

- Close Interval Potential Surveys (CIPS)
- Direct Current Voltage Gradient (DCVG) surveys
- Test post polarised surveys
- Synchronous multi-interrupter survey programs

FIELD-READY DESIGN

- Non-polarity-sensitive solid-state switching
- Highly accurate GPS/GNSS timing
- High-visibility red anodised aluminium housing
- IP65 water and dust resistance
- Programmable firmware and PC utility

20A PRODUCT OUTLINE



20A handheld: 120 mm high × 80 mm wide × 60 mm deep; approx. 1 kg.

SALES, SERVICE AND TECHNICAL SUPPORT



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Specifications may be updated without notice. Refer to the current user guide for installation, charging and safety instructions.